

# Annual Report 2016-2017



**Cochin University of Science and Technology**  
**Kochi - 682 022, Kerala, india**

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Cochin University of Science and Technology  
Kochi - 685 022, Kerala

**Annual Report  
2016-2017**





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- 5 Department of Chemical Oceanography
- 6 Department of Computer Applications
- 7 Department of Computer Science
- 8 Department of Electronics
- 9 Department of English and Foreign Languages
- 10 Department of Hindi
- 11 Department of Instrumentation
- 12 Department of Marine Biology, Micro Biology & Biochemistry
- 13 Department of Marine Geology and Geophysics
- 14 Department of Mathematics
- 15 Department of Physics
- 16 Department of Physical Oceanography
- 17 Department of Polymer Science and Rubber Technology
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- 19 Department of Statistics
- 20 School of Engineering



- 21 School of Environmental Studies
- 22 School of Industrial Fisheries
- 23 School of Legal Studies
- 24 School of Management Studies
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- 26 International School of Photonics
- 27 Cochin University College of Engineering, Kuttanad

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- 17 Cochin University Union
- 18 National Centre for Aquatic Animal Health (NCAAH)
- 19 Inter University Centre for Nanomaterials and Devices (IUCND)
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## ***THE YEAR IN RETROSPECT***

This report presented as required under Section 37 (i) of Chapter V1 of the Cochin University of Science and Technology Act, 1986 covers the academic activities of the University during the period from April 1, 2016 to March 31, 2017.

The year under report witnessed steady progress in the effort of various University Departments / Schools / Institutions towards higher levels of excellence in teaching and research and in organising a series of academic activities.





## AIMS AND OBJECTIVES

The University of Cochin came into being on July 10, 1971 by an ordinance which was replaced by the Cochin University Act 1971. The University of Cochin was re-organised and converted into a full-fledged University of Science and Technology by the Cochin University of Science and Technology Act, 1986 for the promotion of graduate and post graduate studies and advanced research in Applied Sciences, Technology, Industry, Commerce, Management and Social Science.

### The University has the following objectives

- i. To prosecute and promote research in Applied Sciences, Technology, Industry, Commerce, Management and Social Science for the advancement of knowledge and for the betterment of society.
- ii. To provide facilities & offer opportunities for graduate & post-graduate education in Applied Science, Technology, Industry, Commerce, Management and Social Science by Instruction, Training, Research, Development and Extension by such other means as the University may deem fit.
- iii. To devise and implement programmes of education in Applied Sciences, Technology Industry, Commerce, Management and Social Science that is relevant to the changing needs of society in terms of breadth of diversity and depth of specialization.
- iv. To serve as a centre for fostering co-operation and exchanging of ideas between the academic and research community on the one hand and industry on the other.
- v. To organise exchange programme with other institutions of repute in India and abroad with a view to keeping abreast of the latest developments in relevant areas of teaching and research.

The University's basic philosophy and goals find eloquent expression in its coat of arms emblazoning the motto *Tejasvi navadhita mastu*. In essence it means "May learning illumine us both (the teacher and the taught)". The rising sun together with the coconut palm represents the birth of a new centre of learning in the land of Kerala. The book represents learning, the factory, its application and the transmission tower its centre of learning, that of fostering study and research in Applied Science, Technology, Industry, Commerce, Management and Social Science and the transference of such knowledge for the betterment of humanity.



## **UNIVERSITY AUTHORITIES**

VICE CHANCELLOR

Dr. J. Letha

PRO-VICE CHANCELLOR

Prof. Dr. K. Poulouse Jacob

REGISTRAR

Prof. Dr. S. David Peter

FINANCE OFFICER

Sri. Sebastian Ouseph



## MEMBERS OF SYNDICATE

1. The Vice-Chancellor
2. The Pro-Vice-Chancellor
3. The Director of Technical Education, Directorate of technical Education, Padmavilasam Road, Thiruvananthapuram
4. The Secretary to Government, Higher Education Department, Government Secretariat, Thiruvananthapuram – 695 001
5. The Executive Vice-President, Kerala State Council for Science and Technology & Environment, Sasthra Bhavan, Pattom P.O., Thiruvananthapuram – 695 004

### **Deans of Faculties**

6. Dr. N. Mohanan, Professor, Dept. of Hindi, CUSAT, Kochi-22
7. Dr. K. Vanaja, Professor, Dept of Hindi, CUSAT, Kochi-22
8. Dr. N.S. Soman, Director, School of Legal Studies, CUSAT, Kochi-22
9. Dr. V.S. Sebastian, Associate Professor (Retd), School of Legal Studies, CUSAT, Kochi-22
10. Dr. A.N. Balachand, Department of Physical Oceanography, CUSAT, Kochi-22
11. Dr. M. Bhasi, Professor, SMS, CUSAT, Kochi-22
12. Dr. M.R. Prathapchandra Kurup, Professor, Department of Applied Chemistry, CUSAT, Kochi-22

### **Industry and Commerce Expert**

13. Sri. George Paul, Managing Director, Synthite Industries Limited, Corporate House, Kadayiruppu, Kolenchery-682 311

### **Members of the Senate**

14. V.P. Sajeendran MLA, Vallothiyamala, Kolenchery, Ernakulam - 682 311
15. Dr. R. Sasidharan, Professor, Dept. of Hindi, CUSAT, Kochi-22
16. Dr. A. Mohammuda Beegum, Praveen', Near St. Antony's Church, Perinna, Changanaceherry, Pin-686 102
17. Dr. Poornima Narayan R., Rajini, Pozhoth Lane, Kaloorkadavanthara Road, Kochi-17



18. Dr. M.R. Anantharaman (Professor), Department of Physics, CUSAT, Kochi-22
19. Dr. M.K. Jayaraj, Professor, Department of Physics, CUSAT, Kochi-22
20. Sri. R.S. Sasikumar, 'Nirmalayam', KRA-7, Nemom P.O., TVM-695 020
21. Dr. A. Sabu, Associate Professor, Department of Biotechnology and Micro Biology, School of Life Sciences, Kannur University, Thalassery Campus, Palayad P.O., Kannur-670 661
22. Dr. Joseph John, Professor, Dept. of Chemistry, Sacred Heart College, Thevara-682 013
23. Prof. Alexander K. Samuel, Kattunilam, Muthoor P.O., Thiruvalla, Pathanamthitta, Dist. Pin-689 107
24. Dr. Chandramohanakumar, Vasudevam, 48/1681/B, Elamakkara, Kochi-682 026
25. Dr. Zakkariya K.A., Associate Professor, School of Management Studies, CUSAT, Kochi-682 022.

#### **UGC Representative**

26. Dr. V.S. Chauhan, Former Director, ICGEB, Member, UGC B-23 Geethanjali Enclave, New Delhi – 110 117
27. Prof. Sanjay Deshmukh, Vice Chancellor, University of Mumbai, M.G. Road, Fort Mumbai-400032

#### **Members of the Legislative Assembly of Kerala**

28. Sri. K.M. Shaji MLA, Kalathodika House, Kaniyabatta P.O., Wayanad-673 124
29. Sri. Joseph Vazhakkam, MLA, MMC, 18/237, College Road, Moovattupuzha, Ernakulam, Pin-686 661
30. M. Swaraj, MLA, 202, Periyar Block, MLA Quarters, Palayam, Thiruvananthapuram-685 034
31. Eldho Abraham, MLA, Mepurath House, Thrikkalathur P.O., Muvattupuzha
32. Prof. D.K. John (Rtd. Principal, St. Cyril's College, Adoor), Kottamukalil (H) Kannamcode, Pathanamthitta

#### **An expert from Information Technology**

33. Dr. A. Mujeeb, Joint Director, LBS Centre for Science & Technology, Nandavanam, Palayam, Thiruvananthapuram-33
- Dr. N.V. Joshy, Nedumparambil, Moolepadam, Kalammassery, Kochi-683 104

#### **Student Representative**

34. Sri. Irfan Habeeb, B.Tech, SOE, CUSAT, Kochi-22



## MEMBERS OF SENATE

1. **The Chancellor**
2. **The Pro-Chancellor**
3. **The Vice-Chancellor**
4. **The Pro-Vice-Chancellor**
5. **The Mayor of Cochin ; and The Chairperson of the Municipality.**
6. **Sri. Shinemon M.K.**, Deputy Director of Education, Ernakulam.
7. **Sri. N.L. Sivakumar**, Section Officer (Higher Grade), Agriculture College, Kerala Agricultural University, Vellayani, Thiruvananthapuram. Pin – 695 522.
8. **The Chairman, State Advisory Board of Education**
9. **Dr. G Raju**, Professor, Department of Commerce, University of Kerala, Kariavattom, Thiruvananthapuram
10. **Prof. (Dr.) Sabu Thomas**, Hon. Director, International & Inter University, Centre for Nano Science & Technology, Mahatma Gandhi University, Priyadarsini Hills, P.O. Kottayam (Dist.), Pin – 686 560
11. **Dr. M.I. Joseph**, Associate Professor, Dept. of Psychology, Sree Sankaracharya University of Sanskrit, Kalady-683574.
12. **Dr. Roy Stephen**, Associate Professor, Dept. of Plant Physiology College of Agriculture Vellayani, Thiruvananthapuram-695 522
13. **Dr. P.R. Sreemahadevan Pillai**, Dean Faculty of Engineering, Professor & Head Department of Civil Engineering, NSS College of Engineering Akathathara, Palakkad-678 008
14. **Dr. N.K. Deepak**, Assistant Professor, Department of Physics, Swami Anandatheertha Campus, Kannur University, Payyannur, Edat P.O., Kannur – 670 327
15. **Dr. V.S. Sebastian**, Dean, Faculty of Law, CUSAT, Naduvelikutt House, Cochin University P.O., Kochi-682 022
16. **Sri. K. Harilal**, Systems Manager, Kerala University of Health Sciences Thrissur- 680 596



17. **Dr. Ambilikumar**, Associate Professor, School of Management Studies & Entrepreneurship, Directorate of Entrepreneurship, KUFOS, Panangad PO, Kochi-682 506
18. **Dr. T.P. Sethumadhavan**, Director of Entrepreneurship, Directorate of Entrepreneurship, Kerala Veterinary and Animal Sciences University, Lakkidi PO, Pookode, Wayanad-673 576
19. **Prof. (Dr.) M. Sreenathan**, Dean Faculty of Linguistics, Thunchath Ezhuthachan Malayalam University, Vakkad P.O, Thirur, Malappuram, Pin-676 502
20. **Members of the Syndicate who are not members of the Senate.**
21. The Director of Technical Education, Directorate of Technical Education, Padmavilasom Road, T.V.M-695 023
22. The Secretary to Govt, Higher Edn. Dept.
23. The Executive Vice-President, Kerala State Council for Science, Technology and Environment.
24. Sri. K.M. Shaji MLA, Kalathodika House Kaniyabatta P.O., Wayanad-673 124
25. Sri. Joseph Vazhakkam, MLA, MMC, 18/237, College Road, Moovattupuzha, Ernakulam, Pin-686 661
26. **Prof. D.K. John**, (Rtd. Principal, St. Cyril's College, Adoor), Kottamukalil (H) Kannamcode, Pathanamthitta
27. The Secretary to Govt, Finance Dept.
28. **Sri. George Paul**, Managing Director, Synthite Industries Limited, Corporate Office, Kadayiruppu Post, Kolencherry, Pin-682 311
29. **Prof. (Rtd) N. Mohanan**, The Dean, Faculty of Humanities Department of Hindi CUSAT, Kochi-22
30. **Dr. A. Mujeeb**, The Director, LBS Centre for Science and Technology Nandavanam, Extra Police Road, Palayam Thiruvananthapuram – 695 033
31. **Dr. V.S. Chauhan**, (Former Director, ICGEB) Member, UGC, B-23, Geethanjali Encalve, New Delhi – 110 017
32. **Prof. Sanjay Deshmukh**, Vice-chancellor University of Mumbai, M.G. Road Fort Mumbai - 400 032
33. Sri. V.K. Ibrahim Kunju, MLA (Hon'ble Minister), Thaikattukara P.O., Aluva - 6838



34. Sri. K.V. Thomas, MP (Hon'ble Union Minister), Karuppassery House, 20/191, Kochuppally Road, Thoppumpady, Kochi-682 005
35. The Chairman, University Students Union, University Union Office CUSAT, Kochi-682 022
36. Dr. V.H. Abdul Salam, Principal MES College of Engineering, Kuttippuram, Thrikkanapuram PO, Malappuram.
37. Dr. P.G. Sankaran, Professor & Head, Dept. of Statistics, CUSAT, Kochi-22
38. Dr. P. Suresh Kumar, Principal, College of Engineering, Ottapunna, Pallippuram P.O., Cherthala-688 541
39. Dr. K. Vanaja, Professor & Head, Dept. of Hindi, CUSAT, Kochi-22
- 40. Dr. A.N. Balchand**, Head, Depat. Of Physical Oceanography, CUSAT, Kochi-22
- 41. Dr. A.A. Mohammed Hatha**, Head, Department of Marine Biology, Microbiology & Biochemistry CUSAT, Kochi-16
- 42. Sri. V.T. Balram MLA**, Ratnalayam, Othaloor PO, Thrithala (Via), Palakkad-683546
- 43. Sri. Saju Paul, MLA**, Panthalingal Veedu, Vengoor PO, Perumbavoor, Ernakulam-683 546–Failed in Election
- 44. Sri. N. Samsudheen, MLA**, Kolappatt Veedu, Paravanna PO, Thirur, Malappuram- 676 502
- 45. Sri. E.K. Vijayan, MLA**, E.K. House, Muthuvana PO Payyoli, Angadi (Via) Kozhikode- 673 523
- 46. Sri. V.P. Sajeendran, MLA**, (To the Seat Reserved for Scheduled Caste) Vallothyamala, Kollencherry PO, Ernakulam- 682 311
47. Dr. Godfrey Louis, Dean Faculty of Science, Professor, Dept. of Physics, CUSAT, Kochi-22
- 48. Dr. Anantharaman M.R.**, Professor, Dept. of Physics, CUSAT, Kochi-22
- 49. Sri. Jabir K.V.T.**, Assistant Professor, Cochin University College of Engineering Kuttanad, Pulincunoo, Alappuzha- 688 504
- 50. Dr. James Varghese**, Lecturer (Senior Scale), ME. Division, SOE, CUSAT, Kochi-22
- 51. Dr. Jayaraj M.K.** Professor, Department of Physics, CUSAT, Kochi-22
- 52. Sri. Josephkutty Jacob**, Reader, CUCEK, Pulincunoo, Alappuzha.



53. **Saji P.K.**, Lecturer, Department of Physical Oceanography, CUSAT, Kochi-16
54. **Dr. Sivanandanachari V.**, Lecturer (Sr. Scale), School of Environmental Studies, **CUSAT, Kochi-22**
55. **Dr. Supriya M.H.**, Associate Professor, Department of Electronics, CUSAT, Kochi-22
56. **Sri. Vinod Kumar P. P.**, Lecturer (Sel.Grade), CS & ENGG. Division, SOE, CUSAT, Kochi-22
57. **Dr. Zakkariya K.A.**, Associate Professor, School of Management Studies, CUSAT, Kochi-22
58. **K.J. Jacob**, Ernakulam Jilla Head Load & General Workers Union, REG. NO. 388/1974, P.Krishnapilla Bhavan, Kochi – 682 018
59. **K. Vijayan Pillai**, Kerala Security Employees Union, REG. NO. 07-36-1999, Chadayanmuri Smaraka Mandiram, Judges Avenue, Kaloor, T.U. House, C.S. Road, Kochi- 682 011
60. **Sri. Anil Radhakrishnan**, Assistant Librarian, University Library, CUSAT, Kochi-22
61. **Sri. Anson P. Antony**, Assistant Section Officer, Dept. of Polymer Science & Rubber Technology, CUSAT, Kochi-22
62. **Amrith Babu V.**, 2ND ST Year CSE, B TECH, CE Trikkarippur
63. **Jithesh P.**, 3<sup>rd</sup> Semester, B.TECH. SE SOE, CUSAT, Kochi-22
64. **Praveen P.**, PH.D, School of Industrial Fisheries, CUSAT, Kochi-16 (continuing
65. **Shyamraj P**, 5th Semester, B.TECH. CE SOE, CUSAT, Kochi-22.
66. **Thanseem K.**, V Sem, B. TECH., Department of Instrumentation, CUSAT, Kochi-22
67. **Sri. Sharan Kartha**, Joint Managing Director, CMRL, Poorna Nagar, No. 73, Market Road, Aluva – 1.
68. **Sri. K.K. Kabeer Kadppally**, Techno Cartons, Moolayil House, South Kalamassery, Kochi – 682 033
69. **Sri. Antony Thomas**, Director, Kerala Chamber of Commerce, Kottaram Agencies, Payyappilly Road, Kochi – 35.
70. **Sri. Russel M.**, Managing Director, Forefront Solutions & Consultancies Pvt. Ltd., Special Economic Zone (SEZ) Kakkanad, Kochi-682 037
71. **Dr. K. Hariharan**, Principal, MES College of Engineering & Technology,





- Kunnukara P.O., (Via) Changamanadu, North Paravur, Kochi- 683 578
72. **Sri. K.K. Radhakrishnan**, Head, Department of Civil Engineering, Maharajas Technical Institute, Thrissur.
  73. **Dr. P.K. Dinesh Kumar**, Senior Principal Scientist, CSIR- National Institute of Oceanography (NIO), Regional Centre, Kochi- 682 018
  74. **Smt. Shyamala Surendran**, Dharani School of Performing Arts, Dr. Palpu Road, Kaloor – 682 018
  75. **Smt. Priya A.S**, Assistant Section Officer, University Library, Cochin University of Science and Technology, Kochi-682 022
  76. **Sri. Rajendran Puthiyedath**, Assistant Editor, Mathrubhumi, Kochi- 682 017
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  79. **Dr. Dayanada Babu**, Professor of Surgery & HOD, Sree Gokulam Medical College & Research Foundation, Venjaranmudu, Thiruvananthapuram – 695 607
  80. **Dr. M. K. Muhammed Aslam**, Associate Professor, School of Management Studies, Cochin University of Science and Technology, Kochi – 22.
  81. **Dr. N. Chandramohanakumar** Vasudevam, 48/1681/B, Elamakkara, Kochi- 682 026
  82. **Dr. A. Mohamuda Beegum Parveen**, Near St. Antony's Church, Perunna, Changanacherry – 686 102.
  83. **Dr. Poornima Narayanan**, Rajini, Pozhoth Lane, Kaloor-Kadavanthara Road, Kochi-17
  84. **Sri. R.S. Sasikumar**, Nirmalyam, Nemom, Thiruvananthapuram – 695 020.
  85. **Dr. R. Sasidharan**, Professor, Department of Hindi, CUSAT, Kochi-22
  86. **Dr. Junaid Bushiri**, Professor, Department of Physics, Cochin University of Science and Technology, Kochi -22.
  87. **Prof. Alexander Samuel**, Kattunilam, Muthoor P.O., Thiruvalla, Pathanamthitta Dist. Pin-689 107
  88. **Dr. Vasudevan**, Former Regional Director, IGNOU, 33/3032, Kavitha House, Perandoor, Elamakkara, Kochi -26.



89. **Dr. K.N. Madhusoodanan**, Professor, Dept. of Instrumentation, CUSAT, Kochi-22
90. **Dr. Joseph John**, Associate Professor of Chemistry, Sacred Heart College, Thevara - 682 013
91. **Dr. A. Sabu**, Associate Professor, Department of Biotechnology and Micro Biology, School of Life Sciences, Kannur University, Thalassery Campus, Palayad P.O., Kannur-670 661



## MEMBERS OF ACADEMIC COUNCIL

1. **The Vice- Chancellor**
2. **The Pro-Vice-Chancellor**
3. **Prof. (Dr.) R. Vijayakumar**, Head of the Department, School of Computer Sciences, M.G. University Priyadarshini Hills P.O., Kottayam (Dist.), Pin-686 560
4. **Dr. V. Ambilikumar**, Associate Professor, School of Management Studies and Entrepreneurship, Kerala University of Fisheries and Ocean Studies, Panangad P.O., Kochi-682 506
5. **Dr. K.M. Bharathan**, Associate Professor, Samskara Pythruka Padana Vibhagam (Department of Culture and Heritage Studies), Thunchath Ezhuthachan Malayalam University, Vakkad P.O., Tirur, Malappuram-676 502
6. **Prof. Shaji T.L.**, Professor, Department of Architecture, College of Engineering, Trivandrum, Pin-695 016
7. **Dr. K. Anil**, Associate Professor, Department of Zoology, Sree Narayana College, Kannur-670 007
8. **Dr. T.V. Aravindakshan**, Director, Centre for Advanced Studies in Animal Genetics and Breeding, Kerala Veterinary & Animal Sciences University, Mannuthy P.O., Thrissur-680 651
9. **Dr. Baiju K.C.**, Associate Professor, Head, Department of Economics & Dean in Charge, School of Humanities & Social Sciences, Central University of Kerala, Tejeswini Hills, Periyar P.O., Kasargod-671 316
10. **Dr. Jose Antony**, Associate Professor, Department of Social Work, Sree Sankaracharya University of Sanskrit, Ernakulam Dist., Kalady Post – 683 574
11. **Dr. M.C. Valson**, Professor, The National University of Advance Legal Studies, NUALS Campus, HMT Colony P.O., Kalamassery, Kochi – 683 503
12. **Dr. G. Madhu**, Professor & Head, Division of Safety and Fire Engineering, School of Engineering, CUSAT, Kochi-22
13. **Prof. (Dr.) P.S. Sreejith**, Principal, Cochin University College of Engineering, Kuttanad, Pulincunnoo, Alappuzha, Pin-688 504



- 14 **Dr. K. Mohan Kumar**, Professor, Department of Atmospheric Science Cochin University of Science and Technology, Kochi-16
- 15 **Dr. K. Poullose Jacob**, Professor, Department of Computer Sciences, Cochin University of Science and Technology, Kochi-22
- 16 **Dr. Sunil K. Narayankutty**, Professor, Department of Polymer Science and Rubber Technology, CUSAT, Kochi-22
- 17 **Prof. P.R. Poduval**, No.11, Vidya Nagar, Cochin University P.O., Kochi-22
- 18 **Dr. N. Mohanan**, Professor, Department of Hindi, Cochin University of Science and Technology, Kochi-22
- 19 **Dr. A.N. Balchand**, Professor, Department of Physical Oceanography, Cochin University of Science and Technology, Kochi-16
- 20 **Dr. V.S. Sebastian**, Associate Professor (Retd), School of Legal Studies, Cochin University of Science and Technology, Kochi-22
- 21 **Dr. Godfrey Louis**, Professor, Department of Physics, Cochin University of Science and Technology, Kochi-22
- 22 **Dr. Benny Mathews Abraham**, Professor and Head, Division of Civil Engineering SOE, Cochin University of Science and Technology, Kochi-682 022
- 23 **The Director of Technical Education**, Directorate of Technical Education, Padmavilasom Road, Thiruvananthapuram-695 023
- 24 **The Secretary to Government**, Higher Education Department, Government Secretariat, Thiruvananthapuram – 695 001
- 25 **The Secretary to Government**, Finance Department, Government Secretariat, Thiruvananthapuram–695 001
- 26 **The Executive Vice-President**, Kerala State Council for Science Technology and Environment, Sasthra Bhavan, Pattom P.O., Thiruvananthapuram – 695 004
- 27 **Dr. Zakkariya K.A.**, Associate Professor, School of Management Studies, Cochin University of Science and Technology, Kochi-22
- 28 **Dr. A. Mujeeb**, Joint Director, LBS Centre for Science and Technology, Nandavanam, Extra Police Road, Palayam, Thiruvananthapuram-695 033
- 29 **Dr. Joshy N.V.**, Nedumparambil, Moolepadam, Kalammassery, Kochi-683104
- 30 **Prof. D.K. John**, (Rtd.Principal, St.Cyrils College, Adoor), Kottamukalil(H) Kannamcode, Pathanamthitta-689645



- 31 **Sri. Joseph Vazhachan**, MLA, (MMC, 18/237), College Road, Moovattupuzha, Ernakulam, Pin – 686 661
- 32 **Shri. K.M. Shaji M.L.A.** Thekeel House, Opp:Hero Honda, Kannur P.O., Kannur-01
- 33 **Dr. V.S. Chauhan**, (Former Director, ICGEB), Member, University Grants Commission B-23 Geethanjali Enclave, New Delhi-110117
- 34 **Prof. Sanjay Deshmukh**, Vice –chancellor University of Mumbai, M.G Road Fort Mumbai 400 032
- 35 **Sri. George Paul**, Managing Director, Synthite Industries Limited, Corporate House, Kadayiruppu, Kolenchery-682 311.
- 36 **Sri V.P. Sajeendran MLA**, Kunnathunad MLA), Vallothiyamala, Kolenchery, Ernakulam-682 311
- 37 **Dr. R. Sasidharan**, Professor, Department of Hindi, Cochin University of Science and Technology, Kochi-22
- 38 **Dr. Joseph John**, Professor, Department of Chemistry, Sacred Heart College, Thevara-682 013
- 39 **Alexander Samuel**, Kattunilam, Muthoor P.O., Thiruvalla, Pathanamthitta Dist. Pin- 689107
- 40 **Dr. A. Mohammuda Beegum**, ‘Praveen’, Near St. Antony’s Church, Perinna, Changanaceherry, Pin-686 102
- 41 **Poornima Narayanan**, Rajini, Pozhoth Lane, Kaloorkadavanthara Road, Kochi-17
- 42 **Sri. R.S. Sasikumar**, ‘Nirmalayam’, KRA-7, Nemom P.O., TVM-695 020
- 43 **Dr. A. Sabu**, Associate Professor, Department of Biotechnology and Micro Biology, School of Life Sciences, Kannur University, Thalassery Campus, Palayad P.O., Kannur-670 661
- 44 **Sri. Irfan Habeeb**, School of Engineering, Cochin University of Science and Technology Kochi-22
- 45 **Sri. Jithesh P.**, 7<sup>th</sup> Sem. B.Tech, Safety and Fire Engineering, School of Engineering Cochin University of Science and Technology Kochi-22
- 46 **The Director**, Kunjali Marakar School of Marine Engineering, Cochin University of Science and Technology, Kochi-22
- 47 **The Director**, School Of Environmental Studies, Cochin University of Science and Technology, Kochi-22



- 48 **The Director**, School of Legal Studies, Cochin University of Science and Technology, Kochi-22
- 49 **The Director**, International School of Photonics, Cochin University of Science and Technology, Kochi – 22
- 50 **The Head**, Physical Education Department, Cochin University of Science and Technology, Kochi-22
- 51 **The Director**, School of Management Studies, Cochin University of Science & Technology, Kochi – 22.
- 52 **The Director**, School of Industrial Fisheries, Cochin University of Science and Technology, Kochi – 16.
- 53 **The Director**, School of Marine Sciences, Cochin University of Science and Technology, Kochi – 16.
- 54 **The Principal**, Cochin University College of Engineering, Kuttanad, Pulincunnu, Alappuzha, Pin-688 504
- 55 **The Principal**, School of Engineering, Cochin University of Science & Technology Kochi – 22
- 56 **The Head**, Department of Computer Applications, Cochin University of Science & Technology, Kochi-22
- 57 **The Head**, Department of Hindi, Cochin University of Science & Technology, Kochi – 22
- 58 **The Head**, Department of English and Foreign Languages, Cochin University of Science and Technology, Kochi – 22
- 59 **The Head**, Department of Statistics, Cochin University of Science and Technology, Kochi – 22.
- 60 **The Head**, Department of Mathematics, Cochin University of Science and Technology, Kochi – 22.
- 61 **The Head**, Department of Biotechnology, Cochin University of Science and Technology, Kochi – 22.
- 62 **The Head**, Department of Physics, Cochin University of Science and Technology, Kochi – 22
- 63 **The Head**, Department of Applied Chemistry, Cochin University of Science and Technology, Kochi – 22
- 64 **The Head**, Department of Applied Economics, Cochin University of Science and Technology, Kochi – 22.



- 65 **The Head**, Department of Ship Technology, Cochin University of Science and Technology, Kochi – 22.
- 66 **The Head**, Department of Electronics, Cochin University of Science and Technology, Kochi – 22.
- 67 **The Head**, Department of Instrumentation, Cochin University of Science and Technology, Kochi – 22.
- 68 **The Head**, Department of Polymer Science and Rubber Technology, Cochin University of Science and Technology, Kochi – 22
- 69 **The Head**, Department of Computer Sciences, Cochin University of Science and Technology, Kochi – 22
- 70 **The Head**, Department of Marine Biology, Microbiology & Biochemistry, Cochin University of Science and Technology, Kochi – 16.
- 71 **The Head**, Department of Marine Geology & Geophysics, Cochin University of Science and Technology, Kochi – 16.
- 72 **The Head**, Department of Physical Oceanography, Cochin University of Science and Technology, Kochi – 16.
- 73 **The Head**, Department of Atmospheric Science, Cochin University of Science and Technology, Kochi – 16.
- 74 **The Head**, Department of Chemical Oceanography, Cochin University of Science and Technology, Kochi – 16.
- 75 **Dr. P.R. Geetha**, Professor of Physiology & Principal, Cochin Medical College, HMT Colony P.O., North Kalamassery, Pin. 683 503
- 76 **Dr. Jacob Chacko**, Caleekkal, Changampuzha Nagar P.O., Kochi-682 033
- 77 **Dr. A.Vijayakumar**, Professor, Department of Mathematics, Cochin University of Science & Technology, Kochi-22
- 78 **Dr. C.S. Paulose**, Professor (Retd), Department of Biotechnology, Cochin University of Science & Technology, Kochi-22
- 79 **Dr. Saritha G. Bhatt**, Professor, Biotechnology, CUSAT, Kochi-22
- 80 **Dr. K.E. George**, Professor, AISAT, Cochin University P.O, Kochi -22
- 81 **Dr. Thomas Kurian**, Professor, Polymer Science & Rubber Technology, Cochin University of Science & Technology, Kochi-22
- 82 **Dr. P. Radhakrishnan**, Professor, International school of Photonics Cochin University of Science & Technology, Kochi-22



- 83 **Dr. K.V. Pramod**, Professor, Department of Computer Application Cochin University of Science & Technology, Kochi-22
- 84 **Rear Admiral George Kuruvilla**, VSM (Retd.), HB-66, Panampilly Nagar, Kochi-682 036
- 85 **Dr.V.K.Ramachandran Nair**, Professor, Dept.of Statistics, CUSAT,Kochi-22.
- 86 **Dr.I.S.Bright Singh**, Coordinator, NCAAH, CUSAT,Kochi-16
- 87 **Ar. (Prof.) K.K. George**, 13/828, NH Bypass Junction, Thrissur-680651
- 88 **Dr. M.R. Anantharaman**, Professor, Department of Physics, CUSAT, Kochi-22
- 89 **Dr. K. Rajeev Kumar**, Associate Professor& Head, Department of Instrumentation, CUSAT-Kochi-22
- 90 **Dr. Sumam Mary Idicula**, Professor and Head, Department of Computer Science, CUSAT, Kochi-22
- 91 **Dr. Annie Kurian**, Kochuparambil House, University Road, Kochi-22
- 92 **Dr. K. Vanaja**, Professor, Department of Hindi, CUSAT, Kochi-22
- 93 **Dr. Tide P.S.**, Professor, Division of Mechanical Engineering, School of Engineering, CUSAT, Kochi-22
- 94 **Dr. R. Gopikakumari**, Professor, Division of Electronics Engineering, School of Engineering, Cochin University of Science & Technology, Kochi-22
- 95 **Dr. Sheena Mathew**, Professor, Division of Computer Science & Engineering, School of Engineering, CUSAT, Kochi-22
- 96 **Dr. N.S. Soman**, Director, School of Legal Studies Cochin University of Science & Technology, Kochi-22
- 97 **Dr. D. Rajasenan**, Professor, Dept. of Applied Economics, CUSAT, Kochi-22
- 98 **Dr. M. Bhasi**, Professor, SMS, CUSAT, Kochi-22
- 99 **Dr. R. Sajeev**, Associate Professor, Department of Physical Oceanography, Kochi-22
- 100 **Dr. M.R. Prathapachandra Kurup**, Professor, Department of Applied Chemistry, Cochin University of Science & Technology, Kochi-22
- 101 **Dr. C.K. Aanandan**, Professor, Department of Electronics, Cochin University of Science & Technology, Kochi-22
- 102 **Dr. A.A. Mohammed Hatha**, Associate Professor, Department of Marine Biology, Microbiology and Biochemistry, School of Marine Sciences, CUSAT,





Kochi – 16.

- 103 Dr. K. Sajan**, Professor, Department of Marine Geology and Geophysics, School of Marine Sciences, CUSAT, Kochi – 16.
- 104 Dr. A. Ramachandran**, Professor, School of Industrial Fisheries, School of Marine Sciences, CUSAT, Kochi-16.
- 105 Dr. Saleena Mathew**, Professor, School of Industrial Fisheries, School of Marine Sciences, CUSAT, Kochi-22
- 106 Dr. A.B. Bhasi**, Associate Professor, Division of Mechanical Engineering, SOE, CUSAT, Kochi-22
- 107 Dr. D. Mavoothu**, Associate Professor, School of Management Studies, CUSAT, Kochi-22
- 108 Dr. Mariamma Chacko**, Associate Professor, Department of Ship Technology, CUSAT, Kochi-22
- 109 Prof. (Dr.) Jaspal Singh Sandhu**, Fellow National Academy of Medical Sciences, Secretary, University Grants Commission, Bahadur Shah Zafar Marg, New Delhi-110 002.
- 110 Prof. R.C. Kuhad**, Vice Chancellor, Central University of Harayana, Mahendragarh, Harayana, Pin -123 029
- 111 Prof. Anil Kumar Tyagi**, Fellow, Indian Academy of Sciences, Vice-Chancellor, GGS Indraprastha University, Sector 16C, Dwaraka, Delhi-110 078
- 112 Prof. R.N.K. Bamezai**, Fellow National Academy of Sciences School of Life Sciences, Jawaharlal Nehru University, New Delhi-110 067
- 113 Dr. P.D. Gupta**, Director & Distinguished Scientist, Raja Ramanna Centre for Advanced Technology Indore-452 013
- 114 Dr. Asha V.**, Director and Associate professor, SDE, University of Kerala, Trivandrum-34
- 115 Dr. P.S. Sreemahedaranpillai**, (Dean Faculty of Engineering University of Calicut) Professor & Head, Civil Engineering Department NSS College of Engineering, Akathethara, Palakkad-678008
- 116 Sri. George Thomas**, Professor, Department of Agronomy College of Horticulture Vellanikkara, Thrissur-680 656



## DEANS OF FACILITIES

### 1. Engineering

Dr. Sreejith P.S. Professor, Division of Mechanical Engg., CUSAT, Kochi- 682 022

### 2. Environmental Studies

Dr. A. Ramachandran, Vice Chancellor, KUFOS, Kannadi Kadu Service Rd., Near Madavana Junction, Panangad, Kochi-682 506

### 3. Humanities

Dr. K. Vanaja Professor & Head Department of Hindi, CUSAT, Kochi – 682 022

### 4. Law

Dr. N.S. Soman Visiting Professor, Tamil Nadu National Law School, Dindigal Main Road, Navalur Kuttappattu, Thiruchirapalli- 620 009

### 5. Science

Dr. M.R. Prathapachandrakurup Professor (Rtd.) 'Prayag', Ashan Colony, Aluva- 683 101

### 6. Social Sciences

Dr. M. Bhasi, Professor, School of Management Studies CUSAT, Kochi – 682 022

### 7. Technology

Dr. Sunil K. Narayanankutty, Professor, Department of Polymer Science and Rubber Technology, CUSAT, Kochi – 682 022

### 8. Marine Sciences

Dr. Rosamma Philip, Professor, Department of Marine Biology, Microbiology and Biochemistry, CUSAT, Kochi-16

### 9. Medical Science

Dr. Praveenlal K., Principal, Jubilee Mission Medical college & Research Centre, Thrissur-680 006

### 10. Architecture

Dr. Ranjini Bhattathiripad, Professor, Govt., Engineering College Thrissur-680 009



## DEPARTMENT OF APPLIED CHEMISTRY

Established : 1976

### 1. Brief History of the Department

The Department of Applied Chemistry was established in 1976 with the support of UGC envisaged to play an important role in the further development of the industrial belt in the Greater Cochin area by providing scientific support and trained personnel to the existing industries and by acting as a catalyst for starting up of new industries. The Department started M.Sc. programme in Applied Chemistry in 1977 (since 2015, the course has been renamed as M. Sc. Chemistry), M. Phil. programme in Chemistry in 1986, and M.Tech. programme in Industrial Catalysis in 1996 (approved by UGC and AICTE).

The Department has acted as a nucleus for starting the Department of Polymer Science and Rubber Technology and the Department of Biotechnology by initiating B.Tech. and M.Sc. course in the respective areas. After the initial problems of infancy, the Department has grown and emerged as one of the best centres of Chemistry and has been fortunate to produce the first Bhatnagar Award Winner in Chemical Sciences in the entire State of Kerala. The UGC has identified it as one of the national centres to conduct refresher courses for University and College teachers in Chemistry.

The Department has been receiving support under the “Fund for improvement of S&T Infrastructure” (FIST) programme of Department of Science and Technology, Government of India Special Assistance Programme” (SAP) of University Grants Commission. The Department is now selected for funding at the third level of support under SAP programme.

The Department has carried a number of research projects, supported by Central and State Government agencies such as DST, MHRD, UGC, AICTE, CSIR, DRDO and KSCSTE. In the last five years department has received research schemes stand completed valued at Rs.368 lakhs.

The Department has conducted several national seminars/symposia, the major ones being, a Seminar and Mass Education programme in Environmental Awareness (1988), the National Symposium on Current Trends in Co-ordination Chemistry (1995), CTRIC (2004, 2008, 2011- 2014, 2015) Frontiers in Chemistry (2006) and International Seminar series,



MATCON (2001, 2007 and 2010, 2016). The Department is currently organizing two series of conferences, MATCON (the international conference series) and CTRIC (a national conference series). The Department has over 180 research publications to its credit during the last five years in addition to a few monographs. In the last five years, 46 students have taken their Ph.D. from the department. Almost all the students who had successfully completed the M.Sc. Applied Chemistry and M.Tech Industrial Catalysis courses have found employment in industries, R & D institutions or colleges, some of them have pursued a career in research and have been awarded Ph.Ds. A few of them have also gone abroad and are well settled in industrial establishments, universities and other institutions.

## 2. Programmes of Study/Research

1. M.Sc. (Applied Chemistry)
2. M.Phil. (Chemistry)
3. M.Tech. (Industrial Catalysis)
4. Ph.D.

## 3. Faculty Members

Sl. No.	Name	Designation	Qualification	Specialization
1.	Dr.M.R. Prathapachandra Kurup	Professor	M.Sc., Ph.D.	Inorganic Chemistry
2	Dr. K.Girish Kumar	Professor & Head of the Department	M.Sc., Ph.D.	Analytical Chemistry
3	Dr. K.Sreekumar	Professor	M.Sc., Ph.D.	Industrial Catalysis
4	Dr. S. Prathapan	Associate Professor	M.Sc., Ph.D.	Organic Chemistry
5	Dr. N. Manoj	Associate Professor	M.Sc., Ph.D.	Organic Chemistry
6	Dr. P.M. Sabura Begum	Associate Professor	M.Sc., M.Phil., Ph.D.	Organic Chemistry
7	Dr. P.V. Mohanan	Assistant Professor	M.Sc., Ph.D.	Enzyme Technology & Bio inorganic Chemistry
8	Dr. P.A. Unnikrishnan	Assistant Professor	M.Sc., Ph.D.	Organic Chemistry



#### 4. Emeritus Professor/Scientist (if any)

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. K.K. Mohammed Yusuff	Adjunct Faculty	M.Sc., Ph.D.	Co-ordination Chemistry & Catalysis
2	Dr. S. Sugunan	Adjunct Faculty	M.Sc., Ph.D.	Physical Chemistry & Catalysis

#### 5. Research staff/Project Staff

Sl.No.	Name	Designation	Qualification	Specialization
1	Dr. Jintha Thomas	UGC Kothari PDF	Ph.D.	Inorganic Chemistry
2	Sanu K. Anand	KSCSTE Project Assistant	M.Sc. Chemistry	Analytical Chemistry
3	Kiran James	UGC-MRP Project Assistant	M.Phil Chemistry	Organic Chemistry

#### 6. Research scholars

Sl. No	Name	Funding Agency	Guide	Area of work
1	Vineetha M.C.	-	Dr. M.R.P. Kurup	Structures and Spectral Characterization of Co-ordination compounds
2	Ambili Aravindakshan A	CSIR	Dr. M.R.P. Kurup	Transition metal complexes of aroyl hydrazones
3	Ambili K.U.	UGC	Dr. M.R.P. Kurup	Coordination chemistry
4	Sajitha N.R.	CSIR	Dr. M.R.P. Kurup	Transition metal complexes of some thiosemicarbazones
5	Fousiamol M.M.	UJRF	Dr. M.R.P. Kurup	Hydrazone complexes
6	Daly Kuriakose	UGC	Dr. M.R.P. Kurup	Hydrazone-Schiff base complexes
7	Lincy Tom	CSIR	Dr. M.R.P. Kurup	Metal organic frameworks
8	Asha T.M.	CSIR	Dr. M.R.P. Kurup	Transition metal complexes of some aroyl hydrazones
9	Zafna Rasheed	-	Dr. K. Girish Kumar	Analytical Chemistry
10	Jesny, S.	FIP	Dr. K. Girish Kumar	Analytical Chemistry
11	Soumya T. Cyriac	-	Dr. K. Girish Kumar	Development of Sensors: Pharmaceutical/Organic Compounds
12	Ambily Thomas	CSIR	Dr. K. Girish Kumar	Development of sensors



13	Ammu Rosin Jose	UGC	Dr. K. Girish Kumar	Development of sensors
14	Shalini Menon	KSCSTE	Dr. K. Girish Kumar	Development of voltammetric sensors
15	Unni Sivasankaran	UJRF	Dr. K. Girish Kumar	Development of sensors
16	Sherly Mole P.B.	-	Dr. K. Sreekumar	Organic Polymers
17	Lecy V. Theresa	UJRF	Dr. K. Sreekumar	Low melting mixture as an efficient catalyst and reaction medium for organic synthesis
18	Anjaly Jacob K.	CSIR	Dr. K. Sreekumar	Solid Phase organic synthesis
19	Sowmya Xavier	UJRF	Dr. K. Sreekumar	Conducting polymer
20	Shaibuna M.	UJRF	Dr. K. Sreekumar	Organic synthesis in alternate reaction media
21	Anjali C. P.	IUCND	Dr. K. Sreekumar	Conjugated polymers
22	Shebitha A. M.	UJRF	Dr. K. Sreekumar	Dendrimer catalysed organic reactions
23	Sinija P.S.	UJRF	Dr. K. Sreekumar	Organic Reactions Catalysed by modified silica
24	Ligi M. L.	UGC	Dr. S. Prathapan	Organic Synthesis
25	Parvathy O. C.	UGC	Dr. S. Prathapan	Organic Synthesis
26	Jisha K.A.	CSIR	Dr. S. Prathapan	Development of Dendritic functionalised mesoporus silica as reusable catalyst for organic synthesis
27	Nithya C.	DST-INSPIRE	Dr. S. Prathapan	Organic chemistry
28	Amrutha U.	UGC	Dr. S. Prathapan	Organic Synthesis
29	Jesna A.	CSIR	Dr. S. Prathapan	Organic Synthesis
30	Senju Devassykutty	-	Dr. N. Manoj	Organic Chemistry
31	Seena Sebastian		Dr. N. Manoj	Organic Chemistry
32	Vineetha P. K.	UGC	Dr. N. Manoj	Organic Synthesis
33	Jith C. J.	CSIR	Dr. N. Manoj	Organic Synthesis
34	Rani Mathew	CSIR	Dr. N. Manoj	Organic Synthesis
35	Kiran James	UJRF	Dr. N. Manoj	Organic Synthesis
36	Aswathy Ajayakumar	UJRF	Dr. N. Manoj	Organic Synthesis



37	Midhun T. R.	CSIR	Dr. N. Manoj	Organic Synthesis
38	Midhun Dominic, C. D.	-	Dr. P.M. Sabura Begum	Polymer Composites
39	Seena K.Thomas	-	Dr. P.M. Sabura Begum	Polymer composites
40	Bhavya Bhadhran	UJRF	Dr. P.M. Sabura Begum	Polymer nano composites
41	Divya P. R.,	CSIR	Dr. P.M. Sabura Begum	Polymer nano composites
42	Sameeha A. P.	CSIR	Dr. P.M. Sabura Begum	Inorganic coordination complexes
43	Nithya Mohan	UJRF	Dr. P.M. Sabura Begum (Dr. M.R.P. Kurup-Co-guide)	Salen- type Schiff base complexes of multidentate ligands
44	Manjari Jayendran	UGC	Dr. P.M. Sabura Begum (Dr. M.R.P. Kurup-Co-guide)	Synthesis of Metal Complexes
45	Maria Augustine	-	Dr.P.V.Mohan	Enzyme Technology
46	Shanty A.A.	UJRF	Dr.P.V.Mohan	Biochemistry
47	Jessica Elizabeth Philip	UGC	Dr.P.V.Mohan	Biochemistry
48	Bindu V.U.	CSIR	Dr.P.V.Mohan	Enzyme technology
49	Sneha Jose E.	CSIR	Dr.P.V.Mohan	Enzyme technology
50	Geetha G.	UJRF	Dr.P.V.Mohan	Biochemistry
51	Tomson Devassia	UGC	Dr. P. A. Unnikrishnan	Synthesis and Transformations of a Few Amine-Appended Anthracenes and Related Compounds.
52	Shandev P. P.	CSIR	Dr. P. A. Unnikrishnan	Design and synthesis of selected targets with desired properties: Bischromophoric systems
53	Aswathi.C. S.	RGNF	Dr. P. A. Unnikrishnan	Synthesis and reaction of enone appended 1,3-dienes
54	Saumya T. S.	CSIR	Dr. P. A. Unnikrishnan	Photochemical and Photophysical studies on a few multichromophoric systems
55.	Soumini, C.	-	Dr. S. Sugunan	Physical Chemistry



56.	Soumya G.	CSIR	Dr. S. Sugunan	Catalysis by metal oxides
57.	Honey Mary Joseph	CSIR	Dr. S. Sugunan	Photo catalysis by TiO <sub>2</sub> -CNT nanocomposites

## 7. Administrative Personnel

Sl. No.	Designation	No. of posts
1	Section Officer	1
2	Assistant Librarian	1
3	Assistant	2+1(dw)
4	Office Superintendent	1
5	Computer Assistant	1
6	Office Attendant	1
7	Sweeper cum Cleaner	1

## 8. Technical Personnel

Sl. No	Designation	No. of posts
1	Technical Assistant	3
2	Storekeeper	1
3	Laboratory Assistant	1

## 9. Student Enrollment

Sl. No.	Programme of Study	Men	Women	Total
1	M.Sc. I Year	7	17	24
2	M.Sc. II Year	8	14	22
3	M.Tech. (Industrial Catalysis) I Year	1	3	4
4	M.Tech. (Industrial Catalysis) II year	3	6	9
5	M.Phil. I Semester	0	8	8

## 10. Research Facilities

### a. Laboratories (Major Equipments Available in the Department)

Sl. No.	Generic Name of Equipment	Model, Make & year of purchase	Remarks including accessories available and current usage of equipment
1.	UV-Vis NIR	Thermo Evolution 220	Accessories for recording UV Visible spectroscopy Working properly
2.	UV-Vis Ocean Optics Spectrophotometer	Ocean Optics Inc	Accessories for recording UV Visible Working properly





3.	Stereoscopic Microscope	Motic	To view the crystal closely Working properly
4.	Magnetic Susceptibility Balance	Sherwood	Measurement of magnetic susceptibility Working properly
5.	Conductivity meter	Conductivity meter-304	Measurement of conductivity of complexes in solution state Working properly
6.	Electrochemical Workstation	BAS	Working properly
7.	Fiber optic Fluorescence Spectrometer	Ocean Optics Inc	Working properly
8.	Electrochemical Workstation (2Nos)	CH Instruments	Working properly
9.	UV-Vis-NIR Ocean Optics Spectrophotometer (Fiber Optic Sensor)	Ocean Optics Inc SD 2000, 2003	Accessories for recording UV Visible, fluorescence, Diffused reflectance spectroscopy Working properly
10.	Atago Polarimeter	Atago AD100, 2004	Measurement of Specific rotation Working properly
11.	HPLC	Shimadzu	Purification of organic compounds Working properly
12.	Xenon Infinite Global Line 2750 HCL workstation.	HCL,2002	Theoretical calculation, Working properly
13.	IBM workstation (Quad Core System X 3400)	IBM, 2007	Theoretical calculation, Working properly
14.	Supermicro Server with 48 Core processor	Supermicro, 2013	Computational chemistry, working properly
15.	Keithley Source meter	Keithley, USA	Conductivity measurement
16.	AFM	Nanosurf Inc, Germany	Material surface study
17.	Solar simulator	Photo emission, USA	Solar cell activity study
18.	Spin Coater	Laurell, USA	Thin film coating
19.	Hall measurement system	Ecopia, Korea	Measurement of Hall coefficient
20.	HPLC-MS	Waters	Working properly



21.	GC-MS	Agilent	Working properly
22.	Atomic Absorption Spectrometer	Thermo	Working properly
23.	FT-IR	Jasco, Thermo	Working properly
24.	Flamephotometer	Elico	Working properly
25.	Electronic Balances	Sartorius	Working properly
26.	Vacuum Ovens, Hot air ovens and Furnaces	Labline, Muffle	Working properly
27.	Vacuum pumps, Chemical Resistant Diaphragm Vacuum pumps	Precivac, Ilvac, Buchi, Vacuubrand, Heidolph	Working properly
28.	Rotary Evaporators	IKA, Buchi, Heidolph	Working properly
29.	Spectroelectrochemical Workstation	CH Instruments Inc., USA	Working properly

## b. Library

No. of books and Journals as on 31 <sup>st</sup> march of the Previous Year	Additions during the current year
Books: 4470 Nos. Journal : 2 Nos.	Books : 67 Nos.

## 11. Distinguished Visitors

1. George John, The City College of New York- CUNP NewYork, NY10031
2. S. Baskaran, IIT Madras
3. M.R. Maurya, IIT Roorkee
4. Praveen Vennula, Institute for Stem Cell Biology (Instem) Bangalore
5. Prof. N. Rajesh, Chemistry Department, BITS Pilani, Hyderabad Campus
6. Dr. M.L.P. Reddy. CSIR-NIIST Trivandrum
7. Dr. Rajasekhara Reddy, Associate Professor, Department of Chemistry, VIT University
8. Dr. Lincy Sara Varghese, Department of Botany, B.K. College for Womens, Amalagiri
9. Dr. Gigi Poulouse, St. Joseph's College, Irinjalakuda-680 121
10. B.R. Jagirdar, Department of IPC, I.I.Sc. Bangalore



11. Dr. N. Rajendran, Professor, Department of Chemistry, Anna University, Chennai-25

12. Prof. P.Selvam, IIT Madras

## 12. Ph.D. Awarded

Sl. No.	Title of thesis	Name of Research Scholar	Supervising Guide
1	"Transition Metal Complexes of ONS and NNS Donor Thiosemicarbazones: Crystal Structures and Spectral Studies"	Nisha K.	Dr. M.R. Prathapachandra Kurup
2	Bicompartamental Salen-type Schiff base complexes with antithetic diimine spacer groups: inclusion, pseudo-inclusion and heterometallic compounds	Sreejith S.S.	Dr. M.R. Prathapachandra Kurup
3	Crystalline architectures of copper(II) complexes based on halogen substituted carbonyl compounds: Interplay of covalent & non-covalent forces	Aiswarya N.	Dr. M.R. Prathapachandra Kurup
4	"Development of Dendrigrft Polymers as Catalysts in organic Synthesis"	Smitha George	Dr. K. Sreekumar
5	"Nucleophilic Addition of Nitrones to Electron Deficient Acetylenes and Related Studies"	Rakesh N.	Dr. S. Prathapan
6	Photovoltaic and nonlinear optical studies of a few Donor-p- Acceptor molecules with s-triazine core	Suma C.S.	Dr. N. Manoj
7	Studies on the photovoltaic and metal ion binding properties of a few heterocyclic donor-p-acceptor systems	Kala K.	Dr. N. Manoj



### 13. List of Publications

#### Dr. M.R.P. Kurup

Sl. No.	Name of the paper
1	Experimental and theoretical investigations on Pd(II) host-guest compound: Deciphering the structural and electronic features of a potential bioactive complex. S.S. Sreejith, Nithya Mohan, M.R. Prathapachandra Kurup, Journal of Molecular Structure 1145 (2017) 170-183
2	Facile synthesis and spectral characterization of 2, 5-bis (cyclohexylamino)-1, 4-benzoquinone polymorphs from methyl and ethyl protocatechuic aldehydes, A. Asha, A. Sheena Mohan, S. Suma, M.R. Sudarsanakumar, M.R. Prathapachandra Kurup, J. Mol. Struct. 1141 (2017) 299-308
3	Structural studies of poly[( $\mu$ 2-acetato)( $\mu$ 3-aminoisophthalato)diaquacerium(III) monohydrate]: A new three dimensional fluorescent metal organic framework constructed from dimers of CeO <sub>9</sub> polyhedra with hydrophilic 'S' shaped channels, P.R. Satheesh Chandran, U.S. Soumya Mol, R. Drisya, M.R. Sudarsanakumar, M.R.P. Kurup, J. Mol. Struct. 1137 (2017) 396-402
4	Synthesis, spectroscopic, crystal structures and photoluminescence studies of cadmium(II) complexes derived from di-2-pyridyl ketone benzoylhydrazone: Crystal structure of a novel eight coordinated cadmium(II) complex, K. Daly, A.A. Aravindakshan, M.R.P. Kurup, Polyhedron 127 (2017) 84-96.
5	Crystal structure, spectral characterization and biological evaluations of vanillin-N4-phenylsemicarbazone, S. R. Layana, V. L. Siji, M. R. Sudarsanakumar, S. Suma, M. R. Prathapachandra Kurup and T. S. Sikha, J. Indian Chem. Soc. 93 (2016) 577.
6	"Molecular trail for the anticancer behavior of a novel copper carbohydrazone complex in BRCA1 mutated breast cancer," has been accepted for publication in Molecular Carcinogenesis, 2017, doi: 10.1002/mc.22610
7	Interplay of bifurcated hydrogen bonds in making of inclusion/pseudo-inclusion complexes of Ni(II), Cu(II) and Zn(II) of a salophen type ligand: Crystal structures and spectral aspects, K.U. Ambili, M. Sithambaresan, M.R.P. Kurup, J. Mol. Struct. 1134 (2017) 687-696
8	Dioxidomolybdenum (VI) complexes of tridentate ONO donor aroylhydrazones: Syntheses, spectral and structural characterization, A.A. Aravindakshan, B. Joseph, U.L. Kala, M.R.P. Kurup, Polyhedron 123 (2017) 206-216
9	Growth and characterization studies of a novel luminescent acetate-bridged barium(II) complex: poly[( $\mu$ -diacetato)(tetraphthalato)pentabarium(II)], Soumya Mol U.S, R.M. Nair, Drisya R., P.R.S. Chandran, M.R. Sudarsanakumar, S.W. Ng, M.R.P. Kurup, Main Group Metal Chemistry, 39 (2016) 157-165



### Dr. K. Girish Kumar

Sl. No.	Name of the Paper
1	S. Jesny, K. Girish Kumar, Non-enzymatic electrochemical sensor for the simultaneous determination of xanthine, its methyl derivatives theophylline and caffeine as well as its metabolite uric acid, <i>Electroanalysis</i> , 29,1, DOI: 10.1002/elan. 201700115 (2017)
2	S. Menon, K. Girish Kumar, Fluorescence Immunosensing of Insulin via Protein Functionalized Gold Nanoclusters, <i>J. Fluoresc.</i> , DOI 10.1007/s10895-017-2093-3(2017).
3	U. Sivasankaran, A. Thomas, A. R. Jose, K. Girish Kumar, Poly (Bromophenol Blue)-Gold Nanoparticle Composite: An Efficient Electrochemical Sensing Platform for Uric Acid, <i>J. Electrochem. Soc.</i> , 164, B292 (2017).
4	S. Jesny, S. Menon, K. Girish Kumar, A biopolymer-based voltammetric sensor for thymine: Elucidation of electrochemical kinetics, <i>Ionics</i> , DOI 10.1007/s11581-016-1958-9 (2017)
5	U. Sivasankaran, S. Jesny, A. R. Jose, K. Girish Kumar, Fluorescence determination of glutathione using paper-derived carbon dots as fluorophores, <i>Anal. Sci.</i> , 33, 281 (2017).
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### Dr. K. Sreekumar

Sl. No	Name of the paper
1	Highly functionalized heterogeneous dendrigraft catalysts with peripheral copper moieties for the facile synthesis of 2-substituted benzimidazoles and 2,2-disubstituted benzimidazoles, G. Smitha and K. Sreekumar, <i>RSC Advances</i> (2016), 6, 18141.
2	Chiral dendrigraft polymer for asymmetric synthesis of isoquinclidines, G. Smitha and K. Sreekumar, <i>RSC Advances</i> (2016), 6, 85643.



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**Dr. N. Manoj**

Sl. No.	Name of the Paper
1.	Kala K, Vineetha P.K, N.Manoj : A simple cost effective carbazole–thiobarbituric acid conjugate as a ratiometric fluorescent probe for detection of mercury(II) ions in aqueous medium New J.Chem (2017) 41, 5176

**Dr. P.M. Sabura Begum**

Sl. No.	Name of the paper
1	Mechanical, thermal and dielectric properties of hybrid composites of epoxy and reduced graphene oxide/iron oxide, T.K. Bindu Sharmila, Jolly V. Antony, M.P. Jayakrishnan, P.M. Sabura Begum, Eby Thomas Thachil, Materials and Design, 90, 66–75, 2016
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**Dr. P.V. Mohanan**

Sl. No.	Name of the paper
1	Synthesis, characterization and biological studies of Schiff bases derived from heterocyclic moiety, Shanty AA, Jessica EP, Sneha EJ, Kurup MRP, Balachandran S, Mohanan P.V, Bioorg Chem. DOI:10.1016/j.bioorg.2016.11.009.
2	Immobilization of diastase a-amylase on nano zinc oxide, Navya Antony, S. Balachandran, P.V. Mohanan, Food Chem. 211 (2016) 624–630.

**14. Participation in Seminar/Conference/Refresher Courses etc by Faculty/Students****Dr. M.R.P. Kurup**

Sl. No.	Title of the paper
1	Investigation of structural aspects of dioxidomolybdenum(VI) complexes of aroylhydrazone incorporating monodentate heterocycles as coligands (A. Ambili Aravindakshan and M.R.P. Kurup, 29th Kerala Science Congress; Mar Thoma College, Thiruvalla, January 2017)



2	Synthesis and characterization of two Zn(II) complexes: Spacer effect on Photoluminescence (K.U. Ambili and M.R.P. Kurup, 29th Kerala Science Congress; Mar Thoma College, Thiruvalla, January 2017)
3	Structure and physicochemical properties of 5-Bromosalicylaldehyde-3-methoxybenzoic hydrazone, Lincy Tom <sup>a</sup> , Anandhu Mohan <sup>b</sup> , M. R. P. Kurup <sup>a</sup> Prof. K.V. Thomas Endowment International Symposium on NEW TRENDS IN APPLIED CHEMISTRY (NTAC-2017); Sacred Heart College, Thevara, February 2017)
4	2-hydroxy-4-methoxy-benzaldehyde-4-hydroxybenzhydrazone: Structural, spectral and antibacterial studies, Sreesha Sasi and Prof. K.V. Thomas Endowment International Symposium on NEW TRENDS IN APPLIED CHEMISTRY (NTAC-2017); Sacred Heart College, Thevara, February 2017)
5	Crystal structure and spectral studies of molybdenum(VI) complex of 3,5-dichloro-2-hydroxybenzaldehyde nicotinoylhydrazone, Asha T.M. and M. R. P. Kurup, Prof. K.V. Thomas Endowment International Symposium on NEW TRENDS IN APPLIED CHEMISTRY (NTAC-2017); Sacred Heart College, Thevara, February 2017)
6	Dioxidomolybdenum(VI) Complex of Tridentate Aroylhydrazone With Heterocyclic Base As Coligand: Synthesis, Spectral And Structural Studies, A. Ambili Aravindakshan and M.R. Prathapachandra Kurup, National seminar on Current trends in Chemistry (Ctric 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
7	Synthesis and Crystal structure of a Schiff Base Derived from 3-ethoxysalicylaldehyde and 2-aminobenzylamine, K. U. Ambili and M.R.P. Kurup, National seminar on Current trends in Chemistry (Ctric 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
8	Third Order NLO Response and Catecholase Activity Studies of A Schiff Base Dimeric Copper(II) Complex, N. Aiswarya, C. Ajina and M.R. Prathapachandra Kurup, National seminar on Current trends in Chemistry (Ctric 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
9	Crystal Structure and Spectral Studies of Molybdenum (VI) Complex of 3-Methoxy-2-Hydroxybenzaldehyde 3-Methoxy Benzhydrazone, Asha T.M. and M. R. Prathapachandra Kurup, National seminar on Current trends in Chemistry (Ctric 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
10	Synthesis and Characterization of Zinc (II) Chelate of a Tridentate Aroylhydrazone Bibitha Joseph and M. R. Prathapachandra Kurup, National seminar on Current trends in Chemistry (Ctric 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
11	Crystal Structure and spectral Aspect of an Eight Coordinated Cadmium(II) Complex Derived from NNO Donor Hydrazone Ligand, Daly Kuriakose and M. R. Prathapachandra Kurup, National seminar on Current trends in Chemistry (Ctric 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017



12	Crystal Structure and Spectral studies of Molybdenum complex of 4-(Diethylamino) Salicylaldehyde-3-Methoxy-Benzhydrazone, <i>Fousiamol M. M. and M. R. Prathapachandra Kurup</i> , National seminar on Current trends in Chemistry (CtriC 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
13	Synthesis, Characterization and Crystal Structure of an Acyl Hydrazone : Weak C-H...H-C Interactions, <i>Jessy Emmanuel and M. R. Prathapachandra Kurup</i> , National seminar on Current trends in Chemistry (CtriC 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
14	Synthesis and Spectral Studies of Cd(II) Complexes of N(4)-HexamethyleneiminyI Thiosemicarbazones, <i>Dr. Leji Latheef, Dr. M. R. Prathapachandra Kurup</i> , National seminar on Current trends in Chemistry (CtriC 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
15	Polymorphs of 4-hydroxybenzaldehydeisonicotinic Hydrazone and its Polymeric Copper Complexes, <i>Lincy Tom, M. R. Prathapachandra Kurup, Jerry P. Jasinski</i> , National seminar on Current trends in Chemistry (CtriC 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
16	Spectral and Structural Characterization of Copper and Nickel Complexes of Acylhydrazones, <i>Neema Ani Mangalam, M.R.P. Kurup</i> , National seminar on Current trends in Chemistry (CtriC 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
17	Trimetallic Bicompartamental Schiff base complexes: A potential sensitizer for lanthanide luminescence, <i>Nithya Mohan, Sreejith S.S. and M.R. Prathapachandra Kurup</i> , National seminar on Current trends in Chemistry (CtriC 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
18	Cadmium (II) Complex of 6-bromopyridine-2-carbaldehyde-N <sup>4</sup> - cyclohexylthiosemicarbazone: Synthesis, Spectral and Structural Studies, <i>N.R. Sajitha and M.R. Prathapachandra Kurup</i> , National seminar on Current trends in Chemistry (CtriC 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
19	Structure NLO Activity Relationship of Four Salen-Type Schiff Base Complexes: Evidence for Reverse Saturable Absorption, <i>Sreejith S S, Nithya Mohan and M R Prathapachandra Kurup</i> , National seminar on Current trends in Chemistry (CtriC 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
20	A One-Dimensional Coordination Polymer of Copper(II): Structure and Spectra, <i>Sreesha Sasi and M.R. Prathapachandra Kurup</i> , National seminar on Current trends in Chemistry (CtriC 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
21	Syntheses and Spectral Characterization of Manganese(II) and Iron(III) Chelates of NNO Donor Aroylhydrazones, <i>Yamuna Nair, M.R. Prathapachandra Kurup and Aatika Nizam</i> , National seminar on Current trends in Chemistry (CtriC 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017





## Dr. K. Girish Kumar

Sl. No.	Title of the paper
1	Ultra-sensitive fluorescence assay for Pralidoxime (Ammu Rosin Jose and K. Girish Kumar, Prof. K.V. Thomas Endowment International Symposium on NEW TRENDS IN APPLIED CHEMISTRY (NTAC-2017); Sacred Heart College, Thevara)
2	Colorimetric sensing of Cysteine and Cysteamine (Ambily Thomas and K. Girish Kumar, Prof. K.V. Thomas Endowment International Symposium on NEW TRENDS IN APPLIED CHEMISTRY (NTAC-2017); Sacred Heart College, Thevara)
3	Voltammetric determination of propyl gallate using SAM modified glassy carbon electrode (UnniSivasankaran and K. Girish Kumar, Prof. K.V. Thomas Endowment International Symposium on NEW TRENDS IN APPLIED CHEMISTRY (NTAC-2017); Sacred Heart College, Thevara)
4	Fluorescence sensing of xanthine via enzymatically generated uric acid (Shalini Menon and K. Girish Kumar, Prof. K.V. Thomas Endowment International Symposium on New Trends In Applied Chemistry (NTAC-2017), Sacred Heart College, Thevara, February 2017).+
5	Voltammetric determination of Melatonin using Poly (p-Toluenesulfonic acid) modified glassy carbon electrode (Zafna Rasheed and K. Girish Kumar, Prof. K.V. Thomas Endowment International Symposium on NEW TRENDS IN APPLIED CHEMISTRY (NTAC-2017); Sacred Heart College, Thevara)
6	Polymer modified electrode as multianalyte sensor for Theophylline and Caffeine (Jesny S. and K. Girish Kumar, Prof. K.V. Thomas Endowment International Symposium on NEW TRENDS IN APPLIED CHEMISTRY (NTAC-2017); Sacred Heart College, Thevara, February 2017)
7	Polyethyleneimine-coated CdS/ZnS quantum dots: A fluorescent sensor for Anthrax Biomarker Detection (Gopika Bhaskar and K. Girish Kumar, Prof. K.V. Thomas Endowment International Symposium on NEW TRENDS IN APPLIED CHEMISTRY (NTAC-2017); Sacred Heart College, Thevara, February 2017)
8	Fluorimetric determination of 2-PAM (Ammu Rosin Jose and K. Girish Kumar, A National Seminar on Current Trends in Chemistry CTriC 2017; Cochin University of Science and Technology, Kochi)
9	Fluorescence Immunosensor for Insulin (Shalini Menon and K. Girish Kumar, A National Seminar on Current Trends in Chemistry CTriC 2017, Cochin University of Science and Technology, Kochi, January 2017)
10	Biothiol induced color change of Ag NPs: Colorimetric Sensing Strategy. (Ambily Thomas and K. Girish Kumar, A National Seminar on Current Trends in Chemistry CTriC 2017; Cochin University of Science and Technology, Kochi)
11	Poly (p-Toluenesulfonic acid) based sensor for the determination of Melatonin. (Zafna Rasheed and K. Girish Kumar, A National Seminar on Current Trends in Chemistry CTriC 2017; Cochin University of Science and Technology, Kochi)



12	Quantification of Propyl Gallate in Food samples using Differential Pulse Voltammetry, (UnniSivasankaran and K. Girish Kumar, A National Seminar on Current Trends in Chemistry CTriC 2017; Cochin University of Science and Technology, Kochi)
13	Development of Voltammertic Sensor for the Determination of Green S Using Poly (glycine) Modified Glassy Carbon Electrode (Soumya T. Cyriac and K Girish Kumar, A National Seminar on Current Trends in Chemistry CTriC 2017; Cochin University of Science and Technology, Kochi)
14	Polymer Modified Electrode for the Simultaneous Sensing of Adenine and Guanine in DNA Samples (Jesny S. and K Girish Kumar, A National Seminar on Current Trends in Chemistry CTriC 2017; Cochin University of Science and Technology, Kochi, January 2017)
15	Rapid onsite determination of Dipicolinic acid by fluorescent CdS/ZnS quantum dots. (Gopika Bhaskar and K Girish Kumar, A National Seminar on Current Trends in Chemistry CTriC 2017; Cochin University of Science and Technology, Kochi, January 2017)
16	“Turn off” fluorescence biosensor for xanthine and its use in food and clinical monitoring (Shalini Menon and K. Girish Kumar, 29th Kerala Science Congress; Mar Thoma College, Thiruvalla, January 2017)
17	A dual channel optical sensor for norepinephrine (Shalini Menon and K. Girish Kumar, World Congress on Drug Discovery & Development; J.N. Tata Auditorium, Indian Institute Of Science, Bengaluru, September 2016).
18	Poly (bromophenol blue) modified glassy carbon electrode for the voltammetric determination of Epinephrine (Ammu Rosin Jose and K. Girish Kumar, World Congress on Drug Discovery & Development; J.N. Tata Auditorium, Indian Institute of Science, Bengaluru, 2016)
19	A colorimetric and fluorometric sensor for noradrenaline via insitu generated silver nanoparticles (Shalini Menon and K. Girish Kumar, 26 <sup>th</sup> Swadeshi Science Congress, A National Seminar, Central Marine Fisheries Research Institute, Kochi, November 2016).
20	Voltammetric determination of Guanine and its primary metabolite Uric Acid, simultaneously in body fluids (Jesny S. and K. Girish Kumar, 26 <sup>th</sup> Swadeshi Science Congress, A National Seminar, Central Marine Fisheries Research Institute, Kochi, November 2016)
21	Poly (bromophenol blue) modified glassy carbon electrode for the voltammetric determination of Adrenaline (Ammu Rosin Jose and K. Girish Kumar, 26 <sup>th</sup> Swadeshi Science Congress, A National Seminar; Central Marine Fisheries Research Institute, Kochi, 2016)
22	Determination of cysteamine: A colorimetric approach (Ambily Thomas and K. Girish Kumar, 26 <sup>th</sup> Swadeshi Science Congress, A National Seminar; Central Marine Fisheries Research Institute, Kochi, 2016).
23	Poly (p-Toluenesulfonic acid) modified glassy carbon electrode for the determination of Melatonin (Zafna Rasheed and K. Girish Kumar, 26 <sup>th</sup> Swadeshi Science Congress, A National Seminar, Central Marine Fisheries Research Institute, Kochi, November 2016).



24	Poly (glycine) modified glassy carbon electrode for the determination of Green S (Soumya T. Cyriac and K. Girish Kumar, 26 <sup>th</sup> Swadeshi Science Congress, A National Seminar; Central Marine Fisheries Research Institute, Kochi, 2016).
25	Square wave voltammetric determination of Uric Acid using poly (Bromophenol Blue) film modified glassy carbon electrode (UnniSivasankaran and K. Girish Kumar, 26 <sup>th</sup> Swadeshi Science Congress, A National Seminar; Central Marine Fisheries Research Institute, Kochi, 2016).
26	Polyethyleneimine-Coated CdS/ZnS Quantum Dots: A Fluorescent Sensor for Anthrax Biomarker Detection(Gopika Bhaskar and K. Girish Kumar, 26 <sup>th</sup> Swadeshi Science Congress, A National Seminar; Central Marine Fisheries Research Institute, Kochi, 2016).
27	A dual channel optical sensor for norepinephrine (Shalini Menon and K. Girish Kumar, International Seminar on Recent Advances in Solar Energy Applications (RASE 2016); St. Teresa's College, Ernakulam, December 2016).
28	Evaluation of Kinetic Parameters of Electro Oxidation of Thymine on a Poly (I Glutamic Acid) modified Glassy Carbon Electrode. (Jesny S. and K. Girish Kumar, National Symposium Electrochemical Science and Technology NSEST, IISc Bangalore, July 2016).
29	Electrochemical determination of Uric Acid in alkaline media on a Glassy Carbon electrode modified with poly (p-toluene sulfonic acid). (Shalini Menon, JesnyS. and K. Girish Kumar, National Symposium Electrochemical Science and Technology NSEST, IISc Bangalore, July 2016).

### Dr. K. Sreekumar

Sl. No.	Title of the paper
1	Synthesis, theoretical investigation and nonlinear optical properties of poly(3,4dimethoxythiophene-9,9-bis(4-diphenylaminophenyl fluorene)) and poly(EDOT-9,9-bis(4-diphenylaminophenyl fluorene)) copolymers via Direct Arylation polymerization route, C. P. Anjali and K. Sreekumar, International Conference on "New Trends in Applied Chemistry" (NTAC-2017), Post Graduate and Research Department of Chemistry, Sacred Heart College, Thevara, Cochin, Kerala, India. ISBN:978-81-930558-2-3
2	Theoretical design, synthesis and nonlinear optical properties of two novel thiophene-based polymers via Direct Arylation Polymerization route, C.P.Anjali, Sowmya Xavier, K. Sreekumar, Kerala Science Congress 2017, Mar.Thoma college, Tiruvalla, Pathanamthitta, Kerala.
3	Linear polyglycidyl azide chain grafted Merrifield resin supported dicationic ionic liquid as a novel and efficient heterogeneous catalyst for multicomponent Biginelli reaction, Anjaly Jacob K. and K. Sreekumar, International Conference on "New Trends in Applied Chemistry" (NTAC-2017), Post Graduate and Research Department of Chemistry, Sacred Heart College, Thevara, Cochin, Kerala, India. ISBN:978-81-930558-2-3



4	Glucose: Urea: NH <sub>4</sub> Cl mixture as an efficient solvent / catalyst for organic synthesis, Letcy V. Theresa and Dr. K. Sreekumar, 29th Kerala science congress, Marthoma college Thiruvalla
5	Synthesis of symmetric azines from aromatic aldehydes and hydroxylamine hydrochloride in the presence of Glucose: Urea: NH <sub>4</sub> Cl mixture, Letcy V. Theresa and Dr. K. Sreekumar, International Conference on “New Trends in Applied Chemistry” (NTAC-2017), Post Graduate and Research Department of Chemistry, Sacred Heart College, Thevara, Cochin, Kerala, India. ISBN:978-81-930558-2-3
6	A Comparative Study of Biginelli Reaction in Glucose: Urea: NH <sub>4</sub> Cl and Maltose: Urea: NH <sub>4</sub> Cl mixtures, Letcy V. Theresa and Dr. K. Sreekumar, National conference on “Current trends in Chemistry (Ctric 2017)”, Department of Applied Chemistry, Cochin University of Science and Technology, Cochin
7	Glucose: Urea: NH <sub>4</sub> Cl Mixture as an efficient catalyst and reaction medium for organic synthesis, Letcy V. Theresa and Dr. K. Sreekumar National conference on “Green Chemistry”, Department of Chemistry, Bharatmatha college, Thrikkakara.
8	New Zr- based Deep Eutectic Solvents: Preparation, Characterization and Application as Green Catalyst and Reaction Medium in multicomponent reactions. M. Shaibuna and K. Sreekumar, National conference on “ Current trends in chemistry” Department of Applied Chemistry, Cochin University of Science and Technology, Kochi-682 022, Kerala, India.
9	Synthesis and Solvatochromic Properties of Poly (p-phenylene vinylene) Based Co-polymers: PMECA, PMPH and PMPAN, Sowmya Xavier and K. Sreekumar International Conference on “New Trends in Applied Chemistry” (NTAC-2017), Post Graduate and Research Department of Chemistry, Sacred Heart College, Thevara, Cochin, Kerala, India. ISBN:978-81-930558-2-3
10	Microwave assisted synthesis of p-tert-butylcalix[6]arene, Shebitha A Mohammedali and K. Sreekumar, International Conference on “New Trends in Applied Chemistry” (NTAC-2017), Post Graduate and Research Department of Chemistry, Sacred Heart College, Thevara, Cochin, Kerala, India. ISBN: 978-81-930558-2-3.
11	Synthesis, characterization and solvatochromic studies of donor-acceptor, $\pi$ -conjugated copolymer, Poly (2, 5-(3, 4-ethylenedioxythiophene)-alt-9, 10(anthracene)) Jisha J Pillai, A. Anshad, C.SudhaKartha, K. Sreekumar, Rani Joseph International Conference on “New Trends in Applied Chemistry” (NTAC-2017), Post Graduate and Research Department of Chemistry, Sacred Heart College, Thevara, Cochin, Kerala, India. ISBN: 978-81-930558-2-3.
12	Effect Of Pcbm As An Acceptor On The Photoconducting Behaviour Of P-Aminoazobenzene Based Polybenzoxazine System, Jisha J Pillai, A.Anshad, C.SudhaKartha, K. Sreekumar, Rani Joseph, Kerala Science Congress 2017, Mar.Thoma college, Tiruvalla, Pathanamthitta, Kerala.



## Dr. S. Prathapan and Dr. P.A. Unnikrishnan

Sl. No.	Title of the paper
1	Heterocyclic synthesis via reactions of nitrones with 1,1 diubstituted allenes ; Amrutha U, Prathapan S, Bineesh P B- National Seminar on Current Trends in Chemistry CTric – 2017, Department of Applied Chemistry Cochin University of Science and Technology.
2	Synthesis of a novel 1-azaspiro[4.4]nonane-2,3-dione system via reactions of nitrones with 1,1 disubstituted allene ; Amrutha U, Prathapan S, Bineesh P B- International Symposium on New Trends in Applied Chemistry (NTAC -2017), Department of Chemistry, Sacred Heart College (Autonomous), Thevara, Kochi, India.
3	Synthesis of blue light emitting poly( <i>p</i> -phenylenevinylene) copolymer for optoelectronic applications ; *Ligi M L. <sup>1</sup> , Abhilash A. <sup>2</sup> , Jayalekshmy S. <sup>2</sup> , Unnikrishnan P.A. <sup>1</sup> and Prathapan S. <sup>1</sup> International Symposium on New Trends in Applied Chemistry (NTAC -2017), Department of Chemistry, Sacred Heart College (Autonomous), Thevara, Kochi, India.
4	Concentration and solvent effects in the reaction of 9-( <i>N,N</i> - dimethylaminomethyl) anthracene with dibenzoyl ethylene ; Rani Mathew,* Jomon P. Jacob, Reshma Gopalakrishnan, Unnikrishnan P.A. and S. Prathapan- International Symposium on New Trends in Applied Chemistry (NTAC -2017), Department of Chemistry, Sacred Heart College (Autonomous), Thevara, Kochi, India.
5	Highly facially encumbered porphyrin ; *Jesna A., Unnikrishnan P.A. and Prathapan S.- International Symposium on New Trends in Applied Chemistry (NTAC -2017), Department of Chemistry, Sacred Heart College (Autonomous), Thevara, Kochi, India.
6	Synthesis And Characterizations of diamido substituted dibenzobarrlene ; Rani Mathew, Jomon P.Jacob, Unnikrishnan P.A, Manoj.N and Sreedharan Prathapan - National Seminar on Current Trends in Chemistry CTric-2017, Department of Applied Chemistry Cochin University of Science and Technology
7	Novel poly( <i>p</i> -phenylenevinylene) based segmented block copolymer for optoelectronic applications ; Ligi M L., Abhilash A., Jayalekshmy S., Unnikrishnan P.A. and Prathapan S.- National Seminar on Current Trends in Chemistry CTric-2017, Department of Applied Chemistry Cochin University of Science and Technology
8	Synthesis of 1,3,4-Oxadiazole-Thiophene Hybrid Molecules ; P. P. Shandev, <sup>a</sup> S. Prathapan <sup>a</sup> and P. A. Unnikrishnan <sup>a</sup> - National Seminar on Current Trends in Chemistry CTric-2017, Department of Applied Chemistry Cochin University of Science and Technology.
9	Synthesis and Characterisation of 1,3,4– Oxadiazole - Phenothiazine Conjugated Monomers; T.M. Remya <sup>a</sup> , P.P.Shandev <sup>a</sup> , S. Prathapan <sup>a</sup> , and P.A. Unnikrishnan <sup>a</sup> - National Seminar on Current Trends in Chemistry CTric-2017, Department of Applied Chemistry Cochin University of Science and Technology.



10	Heterocyclic synthesis via reactions of nitrones with 1,1 diubstituted allenes ; Amrutha U, Prathapan S, Bineesh P B- National Seminar on Current Trends in Chemistry CTric – 2017, Department of Applied Chemistry Cochin University of Science and Technology.
11	Synthesis, Characterization and Photophysical Investigation of Covalently-linked 1,3,4-Oxadizole-Carbazole Hybrid Molecules- International Symposium on New Trends in Applied Chemistry (NTAC -2017), Shandev P.P.*, S. Prathapan and P. A. Unnikrishnan <sup>a</sup> Department of Chemistry, Sacred Heart College (Autonomous), Thevara, Kochi, India.
12	Synthesis of a novel 1-azaspiro[4.4]nonane-2,3-dione system via reactions of nitrones with 1,1 disubstituted allene ; Amrutha U, Prathapan S, Bineesh P B- International Symposium on New Trends in Applied Chemistry (NTAC -2017), Department of Chemistry, Sacred Heart College (Autonomous), Thevara, Kochi, India.
13	Synthesis of blue light emitting poly( <i>p</i> -phenylenevinylene) copolymer for optoelectronic applications ; * Ligi M L. <sup>1</sup> , Abhilash A. <sup>2</sup> , Jayalekshmy S. <sup>2</sup> , Unnikrishnan P.A. <sup>1</sup> and Prathapan S. <sup>1</sup> International Symposium on New Trends in Applied Chemistry (NTAC -2017), Department of Chemistry, Sacred Heart College (Autonomous), Thevara, Kochi, India.
14	Concentration and solvent effects in the reaction of 9-( <i>N,N</i> - dimethylaminomethyl) anthracene with dibenzoyl ethylene ; Rani Mathew,* Jomon P. Jacob, Reshma Gopalakrishnan, Unnikrishnan P.A. and S. Prathapan- International Symposium on New Trends in Applied Chemistry (NTAC -2017), Department of Chemistry, Sacred Heart College (Autonomous), Thevara, Kochi, India.
15	Highly facially encumbered porphyrin ; * Jesna A., Unnikrishnan P.A. and Prathapan S.- International Symposium on New Trends in Applied Chemistry (NTAC -2017), Department of Chemistry, Sacred Heart College (Autonomous), Thevara, Kochi, India.
16	Synthesis of anthracene-barrelene dyads with cycloalkanone spacer ; Saumya, T. S. *, Prathapan, S. and Unnikrishnan, P.A. - International Symposium on New Trends in Applied Chemistry (NTAC -2017), Department of Chemistry, Sacred Heart College (Autonomous), Thevara, Kochi, India.
17	Solvent free-green approach in the synthesis of annulated barrelenes ; Tomson Devassia*, Prathapan S., and Unnikrishnan P.A.- International Symposium on New Trends in Applied Chemistry (NTAC -2017), Department of Chemistry, Sacred Heart College (Autonomous), Thevara, Kochi, India.
18	Synthesis And Characterizations of diamido substituted dibenzobarrelene ; Rani Mathew, Jomon P. Jacob, Unnikrishnan P.A, Manoj.N and Sreedharan Prathapan - National Seminar on Current Trends in Chemistry CTric-2017, Department of Applied Chemistry Cochin University of Science and Technology
19	Novel poly( <i>p</i> -phenylenevinylene) based segmented block copolymer for optoelectronic applications ; * Ligi M L., Abhilash A., Jayalekshmy S., Unnikrishnan P.A. and Prathapan S.- National Seminar on Current Trends in Chemistry CTric-2017, Department of Applied Chemistry Cochin University of Science and Technology



20	Photochemical cis-trans isomerization in enone-appended dibenzobarrelenes ; T. S. Saumya, S. Prathapan, P.A. Unnikrishnan- National Seminar on Current Trends in Chemistry CTriC-2017, Department of Applied Chemistry Cochin University of Science and Technology
21	Unusual reactivity of DMAD(Dimethylene Acetylene Dicarboxylate) with a few Anthracene-9-yl-methanamines ; Tomson Devassia., Prathapan S., and Unnikrishnan P.A- National Seminar on Current Trends in Chemistry CTriC-2017, Department of Applied Chemistry Cochin University of Science and Technology

### Dr. N. Manoj

Sl. No.	Title of the paper
1	Synthesis and Study of Ionophoric Pyranilidene Derivatives for Heavy Metal ion Detection; Aswathy Ajayakumar. <sup>a</sup> Ananjana K, <sup>a</sup> Manoj,N. <sup>a</sup> International Seminar on New Trends in Applied Chemistry NTAC-2017, Sacred Heart College Thevara
2	Study of the effect of medium on the absorption and fluorescence spectrum of pyran-pyrimidine trione conjugate dye ; Vineetha P K, Parvathy O C, Manoj N, International Seminar on New Trends in Applied Chemistry NTAC-2017, Sacred Heart College Thevara
3	Synthesis and study of phenothiazine based donor- $\pi$ -acceptor system for heavy metal ion detection; Parvathy O C, Nayana R, Kala K, Vineetha P K, Manoj N, International Seminar on New Trends in Applied Chemistry NTAC-2017, Sacred Heart College Thevara
4	Synthesis and study of new organo catalysts for Michael addition reactions; Kiran James, Manoj N, International Seminar on New Trends in Applied Chemistry NTAC-2017, Sacred Heart College Thevara
5	Synthesis and study of pyran based donor $-\pi$ -acceptor system acceptor system, Vineetha P K, Manoj N, National Seminar on Current Trends in ChemistryCTriC-2017, Department of Applied Chemistry Cochin University of Science and Technology
6	Design, development and study of triazine-based Organic Catalyst for Michael addition reaction, Kiran James, Manoj N, National Seminar on Current Trends in ChemistryCTriC-2017, Department of Applied Chemistry Cochin University of Science and Technology.

### Dr. P.M. Sabura Begum

Sl. No.	Title of the paper
1	Replacing Rubber Grade ZnO with Nano ZnO in Natural Rubber Vulcanization: A Green Approach; Midhun Dominic C. D, P.M. Sabura Begum and Rani Joseph. National Seminar on "Advancements in Polymer Science and Technology" organized by Post Graduate Department of Chemistry, St. Teresa's College, Ernakulam on 24 <sup>th</sup> and 25 <sup>th</sup> January 2017. ISBN no 978-81-7255-079-0 page no 72-93



2	Studies on the influence of nanofillers on the mechanical properties of Nitrile rubber; Bhavya Bhadran, Dhanya Vijayan, Neena George, P.M. Sabura Begum and Rani Joseph. National seminar on Advancements in Polymer Science & Technology, 2017. ISBN No: 978-81-7255-079-0
3	Participated and presented a poster entitled 'Cu(II) Complex of a Novel Salen type Ligand: Synthesis, Spectral Characterization and Computational Studies' in the <i>National seminar on Current Trends in Chemistry 'CTriC'</i> (3 <sup>rd</sup> and 4 <sup>th</sup> February 2017), organized by the Dept. of Applied Chemistry, Cochin University of Science & Technology, Sameeha A.P.
4	Participated and presented a poster entitled 'Synthesis and Characterisation of and therotical study of new Schiff base derived from 4- (diethylamino) salicyladehyde and their Cu(II) Complexes" in <i>Prof. K. V. Thomas Endowment International symposium on New Trends in Applied Chemistry- NTAC 2017</i> , organized by the Dept. of Chemistry, S.H. College, Thevara on 9 <sup>th</sup> -11 <sup>th</sup> February 2017. Sameeha A.P.
5	Midhun Domonic C.D. Participated and Presented a paper in the UGC sponsored National Seminar on " <i>Recent Advances in Chemistry</i> " organized by Post Graduate Department of Chemistry, Vimala College(Autonomous), Thrissur on 9 <sup>th</sup> January 2017
6	Bhavya Bhadran Participated and presented a poster entitled 'A Comparitive Study On The Reinforcing Effect Of Organoclay In Nitrile Rubber Fabricated By Mill Mixing And Latex Compounding Methods' in the <i>29<sup>th</sup> Kerala Science Congress</i> held at Thiruvalla on 28 <sup>th</sup> -30 <sup>th</sup> January 2017.
7	Bhavya Bhadran Participated and presented a paper entitled "Studies on the influence of nanofillers on the mechanical properties of Nitrile rubber", in the <i>National seminar on Advancements in Polymer Science &amp; Technology 2017</i> , organized by the Post Graduate Dept. of Chemistry, St. Therasas College, Ernakulam on 26 <sup>th</sup> and 27 <sup>th</sup> January 2017.
8	Participated and presented a poster entitled ' Reinforcing Effect of Graphene in Nitrile Rubber in the <i>National seminar on Current Trends in Chemistry 'CTriC'</i> (3 <sup>rd</sup> and 4 <sup>th</sup> February 2017), organized by the Dept. of Applied Chemistry, Cochin University of Science & Technology.
9	Participated and presented a paper entitled 'Fabrication of Layered 2D Nitrile Rubber nanocomposites for structural and functional applications' in the <i>Second International Conference on Advanced Polymeric Materials (ICAPM 2017)</i> held at Mahatma Gandhi University, Kottayam on 7 <sup>th</sup> -9 <sup>th</sup> April 2017
10	Studies on the properties of nanoclay reinforced Nitrile rubber; Bhavya Bhadran, Dhanya Vijayan, Neena George, P. M. Sabura Begum and Rani Joseph. International Conference on Materials for the Millennium, 2016. ISBN 978-93-80095-738
11	Midhun Doominic C.D. Participated and presented a paper titled "Activating and Reinforcing Efficiency of Nano ZnO in Natural Rubber : A Green Approach in a session on <i>Applied Rubber Technology</i> organized by RIDT on 6 <sup>th</sup> December 2016 held at Bengaluru.





12	Midhun Doominic C.D. Participated and presented a paper titled “Studies on the properties of HDPE/Rice husk nanocellulose composite” and won the second prize at the UGC sponsored National Seminar on Recent Trends in Chemistry, RTIC-2016 organized by the Department of Chemistry St. Paul’s College, Kalamassery.
13	Bhavya Bhadran Participated and presented a poster entitled ‘Tailored Graphene Mechanical Nitrile Rubber nanocomposites for High Performance Applications’ in the International conference on ‘ <i>First International conference on Advanced materials</i> ’- SCICON 2016, (19 <sup>th</sup> to 21 <sup>st</sup> December 2016), organized by the Dept. of Science, Amrita Viswavidyapeetham, Coimbatore.

### Dr. P.V. Mohanan

Sl. No.	Title of the paper
1	Synthesis and evaluation of Cu (II) Heterocyclic Schiff base Complexes as non-nucleoside HIV-1 RT inhibitors, A.A. Shanty and P.V. Mohanan, Kerala Science Congress 2017, Mar.Thoma college, Tiruvalla, Pathanamthitta, Kerala.
2	Synthesis And Anti-Diabetic Activity Of 3-Formyl Chromone Derived Hydrazone And Their Zinc (II) Complex, Jessica Elizabeth Philip and Puzhavorparambil Velayudhan Mohanan, Kerala Science Congress 2017, Mar.Thoma college, Tiruvalla, Pathanamthitta, Kerala.
3	Antimicrobial Studies of Zn (II) complexes Incorporating 2-Methoxy-4-Chromanones, Sneha Jose E and P.V. Mohanan, National seminar on Current Trends in Chemistry (Ctric 2017), Cochin University of Science and Technology, Cochin
4	Synthesis and characterization of poly(aniline-Co-o-toluidine) copolymer and its utility in enzyme immobilization, Geetha G., P. V. Mohanan. National seminar on Current Trends in Chemistry (Ctric-2017), Cochin University of Science and Technology, Cochin
5	Synthesis and characterization of poly meta- aminophenol magnetite nanocomposites, 26th Swadeshi Science Congress, 2016 Geetha G., P. V. Mohanan
6	Immobilization of $\alpha$ -amylase onto chitosan-TiO <sub>2</sub> nanocomposite: Optimization of immobilization parameters, Bindu Vadakethil Unniganapathi, Mohanan Puzhavorparambil Velayudhan, 26th Swadeshi Science Congress, 2016.
7	Activity of diastase $\alpha$ -amylase immobilized on chitosan metal oxide nanocomposites, World Congress on Drug Discovery & Development- 2016, IISc Bengaluru, V.U. Bindu and P.V. Mohanan
8	Antioxidant activity of phenolic schiff bases- Solvent effect, structure activity relationship and mechanism of action. Shanty A.A, P.V. Mohanan, World Congress on Drug Discovery & Development- 2016, IISc Bengaluru.



9	Immobilization of $\alpha$ -amylase onto chitosan-ZnO nanocomposite, <i>V.U. Bindu and P.V.Mohanan</i> National seminar on Current Trends in Chemistry (Ctric-2017), Cochin University of Science and Technology, Cochin.
10	DNA binding and cytotoxicity studies of Zn (II) complex Derived from Heterocyclic Schiff base, <i>A.A. Shanty and P.V.Mohanan</i> , National seminar on Current Trends in Chemistry (Ctric-2017), Cochin University of Science and Technology, Cochin.
11	Synthesis and DNA Binding Studies of Cu (II), Zn (II) and Ni (II) Chelates Based on tri-dentate NOO imine Ligand, <i>Jessica Elizabeth Philip and P.V. Mohanan</i> , National seminar on Current Trends in Chemistry (Ctric-2017), Cochin University of Science and Technology, Cochin.
12	Alpha amylase inhibition and antimicrobial studies of 2-Methoxy-4-Chromanones, <i>Sneha Jose Eettinilkunnathil and Puzhavorparambil Velayudhan Mohanan</i> , Prof. K V Thomas Endowment International Symposium On New Trends In Applied Chemistry (NTAC - 2017), 09 – 11 February 2017, Sacred Heart College (Autonomous), Thevara, Kochi.
13	Magnetic nano particles: synthesis and surface modification using meta-aminophenol, <i>Geetha G., P. V. Mohanan Prof. K V Thomas</i> Endowment International Symposium On New Trends In Applied Chemistry (NTAC - 2017), 09 – 11 February 2017, Sacred Heart College (Autonomous), Thevara, Kochi.
14	Chitosan-TiO <sub>2</sub> nanocomposite as the potential carrier for efficient enzyme immobilization, <i>V.U. Bindu, P.V. Mohanan, Prof. K V Thomas</i> Endowment International Symposium On New Trends In Applied Chemistry (NTAC - 2017), 09 – 11 February 2017, Sacred Heart College (Autonomous), Thevara, Kochi.
15	HIV-RT inhibitory activity of Heterocyclic Schiff base Complex, <i>A.A. Shanty and P.V.Mohanan</i> , Prof. K V Thomas Endowment International Symposium On New Trends In Applied Chemistry (NTAC - 2017), 09 – 11 February 2017, Sacred Heart College (Autonomous), Thevara, Kochi.
16	6-methyl-3-formyl chromone based hydrazones as inhibitors of $\alpha$ -glucosidase: Synthesis, characterization, in vitro evaluation, <i>Jessica Elizabeth Philip and Puzhavorparambil Velayudhan Mohanan</i> , Prof. K V Thomas Endowment International Symposium On New Trends In Applied Chemistry (NTAC - 2017), 09 – 11 February 2017, Sacred Heart College (Autonomous), Thevara, Kochi.

### Dr. S. Sugunan

Sl. No.	Title of the paper
1	Synthesis and Characterisation of Mesoporous SBA-15 Modified with Copper Oxide, <i>Soumini C, Sugunan S</i> , National seminar on Current trends in Chemistry (CtriC 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017
2	Ultra Sound Assisted Preparation of Graphene-Titania with Ag Interface with Improved Photocatalytic Efficiency, <i>Soumya G., Sugunan S</i> , National seminar on Current trends in Chemistry (CtriC 2017), Department of applied Chemistry, CUSAT, 02-03 Feb 2017



### 15. Role of Faculty in International/National Organizations/Institutions/ Editorial Boards

Sl. No.	Name of Faculty	Name of Organization	Role
1.	Dr. K. Girish Kumar	India Poland Programme 2017 – DST Polish Academy of Sciences	Principal Investigator

### 16. Fellowships

Sl. No.	Name of Recipient	Name of Fellowship/ Honour/ Award	Awarding Agency
1.	Manjari Jayendran	UGC-JRF	UGC
2.	Ranjana Venugopal	UGC-JRF	UGC
3.	Manna Rachel Mathew	UGC-JRF	UGC
4.	Remya T.M.	CSIR -JRF	CSIR

### AWARDS and Honors

1	Ammu Rosin Jose – Newton Bhabha Placement Scheme 2016-17 – University of Leeds from 1st June 2017 to September 30, 2017.
2	HotArticle - U.Sivasankaran, S. Jesny, A. R. Jose, <b>K. Girish Kumar</b> , Fluorescence determination of glutathione using paper-derived carbon dots as fluorophores, <i>Anal. Sci.</i> , <b>33</b> , 281 (2017).
3	Cover page article - S. Menon, A. R. Jose, S. Jesny, <b>K. Girish Kumar</b> , A colorimetric and fluorometric sensor for the determination of norepinephrine, <i>Anal. Methods</i> , <b>8</b> , 5801 (2016).
4	Young Scientist Award – Shalini Menon, International Seminar on Recent Advances in Solar Energy Applications (RASE 2016); St. Teresa's College, Ernakulam, December 2016.
5	Best paper award- – Shalini Menon, 26th Swadeshi Science Congress 2016, A National Seminar; Central Marine Fisheries Research Institute, Kochi, November 2016.
6	Best oral presentation award – Shalini Menon, World Congress on Drug Discovery & Development 2016; J.N. Tata Auditorium, Indian Institute of Science, Bengaluru September 2016
7	Shanty A. A, Certificate of Excellence at World Congress on Drug Discovery & Development- 2016.
8	Bindu V.U, Certificate of Excellence at World Congress on Drug Discovery & Development- 2016

**17. Sponsored research projects**

Sl. No.	Title	Sponsoring Agency	Amount in Lakhs	Status of the Project	Investigator (s)
1	Development of Fluorescent sensors for pharmaceutical and clinical analysis	KSCSTE-SRS	32 lakhs	Ongoing	Dr. K. Girish Kumar
2	Energetic Propellant binders based on polyphosphazenes	ISRO	21.28 lakhs	Ongoing	Dr. K. Sreekumar
3	Synthesis and study of new organocatalysts for asymmetric Michael addition reaction	UGC-MRP PROJECT	13.03 lakhs	Ongoing	Dr. N. Manoj

**18. Research programmes and Activities**

Sl.No.	Problem/Topics	Investigator(s)
1	Synthesis and Spectral Characterization of Metal complexes of multidentate ligands	Ambili Aravindakshan A. & M.R.P. Kurup
2	Salen- type Schiff base complexes of multidentate ligands	Ambili K.U. & M.R.P. Kurup
3	Spectral Studies and structure of Transition Metal complexes of multidentate ligands	Sajitha N.R. & M.R.P. Kurup
4	Spectral Studies and structure of Hydrazone complexes	Fousiamol M.M. & M.R.P. Kurup
5	Hydrazone-Schiff base complexes	Daly Kuriakose & M.R.P. Kurup
6	Metal organic frameworks and its Applications	Lincy Tom & M.R.P. Kurup
7	Spectral Studies and structure of Molybdenum complexes	Asha T.M. & M.R.P. Kurup
8	Structures and Spectral Characterization of Coordination compounds	Vineetha M.C. & M.R.P. Kurup
9	Development of sensors	Ambily Thomas & Dr. K. Girish Kumar
10	Development of sensors	Zafna Rasheed & Dr. K. Girish Kumar
11	Development of Sensors: Pharmaceutical/Organic Compounds	Soumya T. Cyriac & Dr. K. Girish Kumar



12	Development of sensors	Ammu Rosin Jose & Dr. K. Girish Kumar
13	Development of Sensors/biosensors	Shalini Menon & Dr. K. Girish Kumar
14	Development of Sensors/biosensors	Jesny S. & Dr. K. Girish Kumar
15	Development of Sensors	Unni Sivasankaran & Dr. K. Girish Kumar
16	Polymer supported solid phase peptide synthesis	Anjaly Jacob K. & Dr. K. Sreekumar
17	Organic Polymers	Sherly Mole P.B. & Dr. K. Sreekumar
18	Conducting Polymers	Sowmya Xavier & Dr. K. Sreekumar
19	Organic Syntheses in alternate reaction media	Shaibuna M. & Dr. K. Sreekumar
20	Heterogeneous catalysis by polymer supported metal catalyst.	Anjali C. P. & Dr. K. Sreekumar
21	Dendrimer catalysed organic reactions	Shebitha A. M. & Dr. K. Sreekumar
22	Catalysis by mesoporous Silica	Sinija P.S. & Dr. K. Sreekumar
23	Low melting mixture as an efficient catalyst and reaction medium for organic synthesis	Lecy V. Theresa & Dr. K. Sreekumar
24	Macromolecular architecture of new soluble conjugated- non conjugated polymers via introduction of solubilizing groups	Ligi M. L. & Dr. S. Prathapan
25	Study of energy transfer phenomena in bridged donor-acceptor systems	Parvathy O. C. & Dr. S. Prathapan
26	Catalysis by functionalised mesoporous silica	Jisha K.A. & Dr. S. Prathapan
27	Improved method for synthesis of blue light emitting poly (p-phenylene vinylene) derivatives bearing highly phenylated pendants	Nithya C. & Dr. S. Prathapan
28	Organic Synthesis	Amrutha U & Dr. S. Prathapan
29	Organic Synthesis	Jesna A. & Dr. S. Prathapan
30	Synthesis of heteroatom bridged triaryl cations: Application of radical cyclisation and dehydration strategies	Vineetha P. K. & Dr. N. Manoj
31	Development of novel synthetic methods via C-H bond activation strategy	Jith C. J. & Dr. N. Manoj



32	Synthesis of thio ethers and Photophysical Studies	Rani Mathew & Dr. N. Manoj
33	Synthesis and Study of Organo Catalysts for asymmetric Michael addition reactions	Kiran James & Dr. N. Manoj
34	Organic Synthesis	Senju Devassykutty & Dr. N. Manoj
35	Organic Synthesis	Seena Sebastian & Dr. N. Manoj
36	Synthesis and study of donor-acceptor system	Aswathy Ajayakumar & Dr. N. Manoj
37	Organic Synthesis	Midhun T.R. & Dr. N. Manoj
38	Polymer nano composites	Bhavya Bhadhran & Dr. P.M. Sabura Begum
39	Polymer nano composites	Divya P. R., & Dr. P.M. Sabura Begum
40	Studies on the synthesis, characterization and applications of some new schiff base complexes of transition metals	Sameeha A. P. & Dr. P.M. Sabura Begum
41	Polymer composites	Midhun Dominic & Dr. P.M. Sabura Begum
42	Polymer composites	Seena K. Thomas & Dr. P.M. Sabura Begum
43	Salen- type Schiff base complexes of multidentate ligands	Nithya Mohan & Dr. P.M. Sabura Begum & Dr. M.R.P. Kurup (Co-guide)
44	Synthesis of Metal Complexes	Manjari Jayendran Dr. P.M. Sabura Begum & Dr. M.R.P. Kurup (Co-guide)
45	Studies of metal complexes of Schiff base	Shanty A.A. & Dr. P. V. Mohanan
46	Synthesis, characterization and biological studies of metal complexes of Schiff base	Jessica Elizabeth Philip & Dr. P.V. Mohanan
47	Enzyme immobilization on biopolymer nano composite	Bindu V.U. & Dr. P. V. Mohanan
48	Enzyme Technology	Maria Augustine & Dr. P. V. Mohanan
49	Synthesis, characterization and biological studies of metal complexes of amino acid Schiff base	Sneha Jose E. & Dr. P. V. Mohanan
50	Preparation of nano composites and its utility in enzyme immobilization	Geetha G. & Dr. P. V. Mohanan
51	Synthesis and transformations of a few amine-appended anthracenes and related compounds	Tomson Devassia & Dr. P.A. Unnikrishnan



52	Design and synthesis of selected targets with desired properties: Bichromophoric systems	Shandev P. P. & Dr. P. A. Unnikrishnan
53	Synthesis and reaction of enone appended 1,3-dienes	Aswathi.C. S. & Dr. P. A. Unnikrishnan
54	Photochemical & photophysical studies on a few multichromophoric arrays	Saumya T. S. & Dr. P. A. Unnikrishnan
55	Photocatalysis by TiO <sub>2</sub> /Graphene composites	Soumya G. & Dr. S.Sugunan
56	Photocatalysis by TiO <sub>2</sub> /carbon nano tubes	Honey Mary Joseph & Dr. S.Sugunan
57	Synthesis of nanogold supported over mesoporous Ti/Zr-SBA 15 materials and their catalytic performance	Soumini C. & Dr. S.Sugunan

### 19. Seminar/Conference/Workshop/Refresher Course conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1.	CTRIC-2017	03.02.2017 to 04.02.2017	Dr. P.A. Unnikrishnan	KSCSTE, DST, UGC



## DEPARTMENT OF APPLIED ECONOMICS

### 1. Brief History of the Department

The Department of Applied Economics was established in the University in the year 1979. It was originally envisaged primarily as a research-oriented department with its focus on applied economic problems. Situated in a Science and Technology academic environment, the Department promotes studies and research pertaining to the economic dimensions of science, technology and society as also the economic problems of the region.

### 2. Programmes of Study/Research

The candidates for the Ph.D and M.Phil programmes are admitted on the basis of an entrance test and an interview. The dates of which are notified by the University during the month of December. Candidates eligible for the Junior Research Fellowship from the UGC are exempted from the entrance test for the Ph.D programme.

The M A Applied Economics programme at the department is designed to provide advance theoretical and applied economics education, involving:

- A grounding in the principles of microeconomics
- An understanding of different schools of thought in macroeconomic theory and policy
- An appreciation of the nature of business and its role within the private enterprise system.
- The ability to use basic economic principles to analyse decision- making within the firm and identify and explain the impact of key governmental policies on business
- A familiarity with recent developments in economic approaches to business strategy.
- A range of transferable skills in task-planning, communication, research, information analysis and interpretation and team-working.





### 3. Faculty Members

Sl. No	Name	Designation	Qualification	Specialization
1	Dr.S.Harikumar	Professor and Head	MA, Ph.D	Development Economics, Environmental Economics
2	Dr.P.Arunachalam	Professor	M.A.,M. Phil.,Ph.D.	Quantitative Methods, International Economics
3	Dr.D.Rajasenani	Professor	M A, Ph.D.	Econometrics, Fisheries Economics
4	Dr.M.MeeraBai	Professor	<u>M.A. (Eco).</u> <u>M.A. History).</u> <u>Ph.D.</u>	Industrial Economics, Gender Economics
5	Sri. P.K. Manoj	Asst. Professor	B.Tech., MBA, MA (Eco), M.Com., M.Phil., M.Com. LL.B; Ph.D; CAIIB; AMT (Fin.); AMIE	Finance and Accounts, Business Strategy, Operations Management

### 4. Research Scholars

S. No	Name	Year	Area of Work	Supervising Guide	Funding Agency
1	Dhanya A	2011	Foreign Direct Investment in India	Dr. Manoj P K	JRF
2	Dhanya C	2012	Women Empowerment in Coastal Areas of Malabar	Dr. M. MeeraBai M	
3	Emilson V.V.	2010	International Container Transshipment Terminal, Vallarpadam: The Port Based Special Economic Zone with Boundless Economic Possibilities and Opportunities	Dr. P. Arunachalam	
4	Freedav. Simon	2010	Informal labour market in Kerala: A study of female labourers	Dr. K. C. Sankaranarayanan	



5	Haseena C A	2011	Occupational pattern of women Migrants from Kerala to Middle East	Dr. MeeraBai M	
4	JayeshBalan	2009	A study on socio-economic impact of AIDS on AIDS affected people in Kerala	Dr. P. Arunachalam	
5	Jaheer Mukthar K P	2011	Housing situation in India – significance of affordable housing	Dr. P.K.Manoj	
6	Jayson Jacob	2008	Retail Industry in globalized scenario – a Study of Kerala	Dr. P.K.Manoj	
7	Jayasree Paul	2006	Substainability of the Kerala Model of Economic Growth	Dr. Mary Joseph	
8	Justine Joseph	2009	The role of self help groups in Community Development: A case study of self help groups.	Dr. P. Arunachalam	
9	Keerthan Rose Alexon P	2011	MGNREGS – Its Impat on Women Empowerment and povery alleviation in Kerala	Dr. Manoj P K	
10	Mohammed Kasim.C	2010	Determinants of food security and nutritional status in Kerala A comparative study of Urban and Rural areas	Dr. S.Harikumar	
11	Nalinam.M.	2009	Poverty and child morbidity	Dr. S.Harikumar	
12	Praveena K	2009	Economic Inequality in Kerala: An Inter-District Analysis	Dr. S.Harikumar	
13	Premkumar M P	2009	Unorganised work force and social security: a study of Kerala	Dr. S.Harikumar	



14	Rajeev.B.	2010	SHGs and Cooperatives as social security options for traditional fishing communities in Kerala – An analysis in the context for globalization	Dr. D.Rajaseenan	
15	Rajesh.R.	2010	The Dynamics of social exclusion a probe into the livelihood and employment of workers in plantation sector in Kerala	Dr. D.Rajaseenan	
16	Remya Mohandas	2006	Kudumbashree: A study of selected districts in Kerala	Dr. M.Meerabai	
17	Saritha C K	2010	Socio economic mobility of the employees in the IT sector	Dr. Meera Bai M	
18	Shihabudheen N	2011	Efficacy of micro finance in Women Empowerment: A study with special reference to 'Kudumbashree'	Dr. Manoj P K	
19	Subhash K	2012	A study on Socio-economic Impact of Agricultural Price Instability and Income Uncertainty in Kerala	Dr. M.Meera Bai M	
20	Soumya K M	2009	Economics of organic farming in Kerala: Scope and Constraints	Dr. K.C. Sankaranarayanan	
21	Vinod.K.U.	2007	An economic analysis of special economic zones in Kerala	Dr. M.Meerabai	
22	Ajay Singh O T	2012	Socio-economic conditions of women in self help grounds with special reference to Kumbalam Panchayath	Dr. P.K.Manoj	



23	SancyK.Jose	2012	An Analysis of Consumption Expenditure Pattern of fixed income households in Kerala	Prof. K.C. Sankaranarayanan	
24	Jinto John	2012	Land Acquisition and evictee's settlement packages for infrastructural developments in Ernakulam district since 2000: A case study of Moolampilli rehabilitation package	Dr. M.Meerabai	
25	Sachin Pavithran A.P	2012	Socio Economic impact of the CRZ notification on the coastal community of Kerala	Prof. K.C. Sankaranarayanan	
26	Reni Sebastian	2012	Migration: An Economic and Social Analysis with special reference to United States of America	Dr.M.Meerabai	
27	Shaimon Joseph	2012	Decentralized Planning: Impact on the Living Conditions of Tribals in Kerala	Dr. K.C. Sankaranarayanan	
28	Abdul Sameer P M	2012	Industrial growth under economic liberalization: A study of organized manufacturing sector in Kerala	Dr.S.Harikumar	
29	Nishamol M	2013	Tribal Sub Plan (TSP) and its impact on Education and Health of Indigenous People in Kerala with Special Reference to Wayanad and Idukki	Dr.D.Rajasenana	RGNF



30	Sajida P	2013	Capacity Expansion and Women Development	Dr.S.Harikumar	JRF
31	Sajeevan G	2015	Role of MSME Sector in Inclusive Development	Dr.D.Rajasenana	
32	Sheeba K H	2015	Changing Phase of gold from an asset of Security to an asset of investment	Dr. K.C. Sankaranarayanan	
33	Renjit N R	2015	Food and Nutritional Security among Tribal Women in Kerala	Dr.D.Rajasenana	
34	Sunitha A S	2015	An assessment of social progress in the context of social exclusion: A study of tribal communities in Kerala	Dr.D.Rajasenana	RGNF
35	Priyanka T R	2016	Food inflation and its impact on urban poor in India	Dr. S.Harikumar	JRF
36	Sanoj Raju	2016	An interpolative analysis on budget allocation, expenditure evaluation and development of SC/ST community	Dr. D.Rajasenana	JRF
37	Jayasree Kuniyath	2016	Role of Social enterprises on the socioeconomic empowerment of beneficiaries on rural Bangalore	Dr. K.C. Sankaranarayanan	JRF
38	Firos Khan	2016	Personal loans by commercial banks and its impact on the living standards of the beneficiaries	Dr. K.C. Sankaranarayanan	



39	Shanoj C	2016	Solid waste management broad area	Dr. P. Arunachalam	
40	Ramees Rehman	2016	Impact of climate change over the marine fisher folks across Kerala	Dr. M.Meerabai	
41	Saritha A K	2016	Dalit Entrepreneurship	Dr. D.Mavoothu	RGNF
42	Megha Sara Thomas	2016	Socio economic status of visually challenged persons in Kerala	Dr. S.Harikumar	RGNF
43	Aravind P	2016		Dr. S.Harikumar	JRF
44	Aparna S	2016	The dynamics of social inclusion of the scheduled castes in Kerala: A study based on SC development	Dr. D.Rajasenana	

### 5. Administrative Personnel

Sl.No.	Designation	No. of Posts
1	Section Officer Hr. Gr.	1
2	Assistant Section Officer	1
3	Computer Assistant Sel. Gr.	1
4	Office Attendant	1
5	Sweeper cum cleaner	1
6	Asst. Librarian	1

### 6. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1	MA I	2	13	17
2	MA III	3	12	15
3	M.Phil. I	4	8	12
4	Ph.D	5	4	9

### 7. Research Facilities

#### a. Library

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
Books : 13,157, Journals : 2029	Books : 1204, Journals: 55



## 8. Distinguished visitors

Sl.No.	Name	Affiliation	Remarks
1.	Dr. Biswajith Dhar	JNU	Invited Lecture
2.	Dr. Keshava	Bangalore University	„

## 10. Ph.Ds Awarded

Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Abdul NazarVallasser	Trends and patterns of agricultural credit in India during the post reforms period.	Dr. P. Arunachalam
2	Bijith George Abraham	Community participation in Ecotourism and inclusive development in Kerala	Dr. D. Rajasenan
3	Y C Ibrahim	Export performance for Indian traditional items of exports in the WTO regime – A study of prices exports	Dr. P. Arunachalam
4	P.R.Suresh	Social structural determinant of education among tribes in Kerala	Dr. D. Rajasenan
5	Shelly M K	A comparative study on the economic impact of self-financing courses at higher education	Dr. George Varghese
6	Sebastian Thomas	Industrial Economics – Kerala	Dr. Meera Bai M

## 11. Participation in Seminar/Conference/Refresher Courses etc. by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr.S.Harikumar	Migration and Human Resources Development, Second Annual conference of KEA, Farrok College, May 2016	Resource Person
Dr.S.Harikumar	Empowering the teaching of Econometrics, KEA, October 2016, Ernakulam.	Resource Person
Dr.S.Harikumar	Demonetization Emerging Questions, Panelist in Demonetization: A Surgical Strike on Black Money or the people?, M E S KVM College Vallancherry, December 2016	Resource Person
Dr.S.Harikumar	Some Emerging issues, National Seminar on Twenty Five Years of Economic Reforms in India: Retrospect and Prospects, C K G Memorial government College, Perambra December 2016	Resource Person



Dr.S.Harikumar	Impact of Financial Sector reforms on the banking sector, Twenty Five Years of Economic Reforms in India: Development Vs Disposition, Goivernment College, Kodencherry, December 2015	Resource Person
Dr.S.Harikumar	Finance for Regional Development,,: Status of Kasaragod District, Kasaragod: Twoards a New Regional Development Agenda, Seminar organized jointly by Nehru Arts and Science College and KILA, Trichur, January 2017	Resource Person
Dr.S.Harikumar	Resource person for the Three Days workshop on Research methodology in Social Sciences, Sree Sankara College, Kalady, January 2017.	Resource Person
Dr.S.Harikumar	Reforms in Agriculture: Kerala Agriculture : Opportunities and Challenges, Nirmala College, Muvattupuzha. March 2017	Resource Person
Dr.P.Arunachalam	ICSSR sponsored National Conference organised by the Department of Economics, Kandaswamy Kandars College, Karur, Tamil Nadu held on 23 <sup>rd</sup> , June, 2016.	Panel Member
Dr.P.Arunachalam	National Seminar on “Make in India: Road Ahead” Organised by SRM University, Delhi NCR Campus, Ghaziabad in Association with Indian Economic Association, held on June 27, 2016.	Executive Council Member
Dr.P.Arunachalam	International Conference on “Applied Business and Economic Research” Organized by the Serials Publications Pvt.Ltd., New Delhi, India, held on 30-31 July 2016	Key Note Speaker, Chairman of a Session and also a Co-Coordinator
Dr.P.Arunachalam	National Seminar on “Problems and Prospects of Indian Economy” organized by the P.G. Department of Economics, Rani Anna Government College for Women, Tirunelveli – 8 held on 15 <sup>th</sup> September, 2016.	Resource Person
Dr.P.Arunachalam	“Rev. Fr.M.D. Varkey S.J Memorial Lecture” on Goods and Services Tax in Today's Context of India’s Federal System’ organised by the Department of Economics, St.Xaviers College, Palayamkottai held on 3 <sup>rd</sup> October, 2016.	Resource Person
Dr.P.Arunachalam	“Marginalized Women” organized by Women’s Study Center”, Cochin University of Science and Technology, Kochi-22, held on 15 and 16 December, 2016.	Resource Person





Dr.P.Arunachalam	International Conference on Business, Management, Economics, Finance and Social Sciences” Organized by Serial Publications Pvt. Ltd, New Delhi, held on 17 <sup>th</sup> and 18 <sup>th</sup> December, 2016.	Keynote Speaker and also as a Co-Ordinator
Dr.P.Arunachalam	Research Methodology in Social Science Research, organized by the Department of Economics, and the Department of Commerce, V.O.Chidambaram College, Thoothukdi, Tamil Nadu held on 21 <sup>st</sup> and 22 <sup>nd</sup> December, 2016.	Guest Speaker
Dr.P.Arunachalam	Two day ICSSR sponsored National Seminar on “Impact of Globalization on Rural Livelihood: Opportunities and Challenges, organized by post Graduate and Research Department of Economics, Muthurangam Government Arts College, Vellore 632 002 held on 2 <sup>nd</sup> and 3 <sup>rd</sup> February, 2017.	Special Address
Dr.P.Arunachalam	National Seminar on Rural Development: A Strategy for Poverty Alleviation in India, Organized by Department of Economics, Government Arts College (MEN), Krishnagiri – 635001. Tamil Nadu, held on 3 <sup>rd</sup> and 4 <sup>th</sup> February, 2017.	Key Note Address
Dr.P.Arunachalam	International Conference on “Functional Innovations in Commerce and Management” Organised by Annai Vailankanni Arts and Science College, Thanjavur-7 held on 8 <sup>th</sup> February, 2017.	Valedictory Address
Dr.P.Arunachalam	UGC Sponsored one day State Level Workshop on Challenges and Opportunities of Goods and Service Tax (GST) in India, Organized by the PG and Research Department of Economics, Erode Arts and Science College, Erode held on 14 <sup>th</sup> February, 2017	Invited Talk
Dr.P.Arunachalam	GST, organized by the Department of Economics, Erode Government Arts College, Erode, Tamil Nadu to be held on 14 <sup>th</sup> February, 2017.	Resource Person
Dr.P.Arunachalam	Women and Crimes, organized by the Center for Women Studies, Cochin University of Science and Technology, Kochi-22 held on 27-2-2017	Delivered a talk



Dr.P.Arunachalam	Tribal Women and Health With Special Reference to Attapadi Tribal Women in Kerala, in a National Conference on Gender and Health, Organised by the Department of Sociology, University of Madras, Chennai 600 005 to be held on 03-03-2017	Resource Person
Dr.P.Arunachalam	“GST: Opportunities and Challenges” in a National Seminar organised by Saratha College, Palayamkottai held on 7-3-2017.	Key Note Address
Dr.P.Arunachalam	Interdisciplinary National Workshop on Intrinsic Competition of Indian Market, Organized by the Department of Economics, Sri Parasakthi College for Women, Courtallam in Collaboration with Competition Commission of India Delhi – 110 019 held on 7-3 -2017.	Valedictory Address
Dr.P.Arunachalam	Capacity Building and Career Opportunities for the Economic Graduates, Organized by the Department of Economics, Government Arts College, Salem, Tamil Nadu held on 09-03-2017.	Invited Talk
Dr.P.Arunachalam	Women Empowerment organized by the Department of Commerce, Sri Sankara Arts and Science College, Kachipuram, held on 18 <sup>th</sup> March, 2017.	National Level Conference
Dr.P.Arunachalam	National conference on “ <i>Demonetisation in India: The Road Ahead</i> ” organised by the <i>Department of Social Sciences</i> , Punjabi University, Patiala, Punjab on March 21-22, 2017.	Panel Member
Dr.P.Arunachalam	National Workshop on “Impact of Demonetization on Indian Economy, organized by the Arulmigu Palaniandava College of Arts and Culture, Panali, held on 24 <sup>th</sup> March, 2017.	Expert
Dr.P.Arunachalam	UGC Sponsored one day National Workshop on “Economic Impacts of Demonetisation” organized by the Department of Economics, Devanga Arts College, Aruppukottai held on 28-03-2017.	Resource Person



## DEPARTMENT OF ATMOSPHERIC SCIENCES

### 1. Brief History of the Department:

The Department of Atmospheric Sciences was formed in 1996 by bifurcating the erstwhile Physical Oceanography and Meteorology Division of the School of Marine Sciences. The Department started offering a 4-semester M. Sc programme in Meteorology since 1975 and a 4-semester M. Tech in Atmospheric Science since 1989.

Apart from teaching activities, research works in observational, diagnostic, theoretical and modeling studies in the field of Meteorology/Atmospheric Sciences are in full swing. The Department had successfully completed the phase I & II of the ambitious project under the *New Millennium Indian Technology Leadership Initiative (NMITLI)* of CSIR.

The University Grants Commission has selected the Department of Atmospheric Sciences under its Special Assistance Programme (SAP) based on the quality of teaching, academic achievements, research in thrust area and viable potential for future development. The essence and primary aim of SAP of the UGC is the combination of teaching and research to encourage group research efforts. The project entitled, Monsoon Cloud Characteristics under UGC – SAP - Level DRS Phase III was granted in 2013 with a financial support of Rs.64 lakhs for five years is expected to develop the Department into a Centre of Excellence.

Department received Rs.20 lakhs as Special Assistance from UGC for Augmentation of Infrastructure to Department of Atmospheric Sciences during 2007-2011.

Department of Science and Technology (DST) identified the Department of Atmospheric Sciences as one of the premier centres in India in the field of Atmospheric Research and Teaching and sanctioned Rs.30 lakhs under its FIST – Level I and another Rs.165 Lakhs has released in December 2016 as Level – II of the FIST Programme.

We are very proud that Ministry of Science and Technology, Government of India has identified CUSAT for installing the most sophisticated and advanced ST radar to study variability of Monsoon over the Kerala region and the regional climate variability. A grant of Rs.25 Crores has sanctioned for this 5-year project. The ST Radar presently commissioned at Kochi is the second in Asia and seventh in the World to study the atmospheric features. It is the first Wind Profiler Radar in the near-



equatorial site to study the monsoon features. This is the highest project funded by Ministry of Science and Technology to a state University. ST Radars are emerging as powerful tools for Atmospheric Research in recent years around the world. They have immense applications in studies in Meteorology, Cloud Physics, Thunderstorms, Convections, Atmospheric Electricity, Climate Change, Environmental Physics, Civil aviation, communications, etc.

Three new faculty members joined the Department and now eight efficient and dynamic faculty are available in the Department. Prestigious awards such as BOYSCAST, Commission of the European Communities (CEC) Fellowships, etc. were awarded to the faculty. International and national awards for the academic excellence and achievements were also received. The Department has produced 44 Ph.D.s and published about 194 research papers in reputed international and national scientific journals. In addition, more than 200 research papers were presented in various national/international scientific conferences in India and abroad. Eminent Scientists and Professors are often invited to the Department for giving lectures in advanced areas.

The Department has high-speed computational facilities and full-fledged surface weather observatory. The Department has started releasing weather balloons into the atmosphere to obtain upper air weather information using Radio Sonde, It has also setup a data bank, which has NCEP/NCAR, ERA-INTERIM reanalysis data, UARS data from NASA, Rocket data, MST Radar data, surface weather observations, TOMS data, IMD gridded data (1901-2013) etc.

## 2. Programmes of Study/Research

- (1) M.Sc. Meteorology
- (2) M.Tech Atmospheric Sciences
- (3) Ph.D Programme in Meteorology/Atmospheric Science

The syllabi for both the M.Sc. Course in Meteorology and the M.Tech Course in Atmospheric Sciences are revised (2015) at par with the syllabi of international standards. Both M.Sc. and M.Tech Courses are in Credit System with 100% internal evaluation.

## 3. Faculty Members (as on 31-03-2017)

Sl. No.	Name	Designation	Qualification	Specilisation
1.	K. Mohankumar	UGC- BSR Fellow	Ph.D	Stratosphere-Troposphere Interactions, Middle Atmosphere
2.	C. A. Babu	Professor	Ph.D	Boundary Layer Meteorology



3.	Santosh K R	Associate Professor	Ph.D	Remote Sensing
4.	B. Chakrapani	Associate Professor & Head	M.Sc.	Numerical Modelling of Atmospheric and Ocean Processes
5.	Ignatius Kunjumon	Associate Professor	Ph.D	Modelling Studies
6.	Satheesan K	Associate Professor	Ph.D	Remote Sensing, Radar Meteorology
7.	V Madhu	Assistant Professor	Ph.D	Middle Atmospheric Dynamics
8.	Abhilash S	Assistant Professor	Ph.D	Tropical Meteorology, Climate Modelling
9.	Lekshmy P R	Assistant Professor	Ph.D	Isotope Hydrology, Tropical Meteorology, Paleo Climatology

#### 4. Research / Project Staff

Sl. No.	Name	Designation	Qualification	Specilisation
1.	Liby Thomas	UGC- Dr. D S Kothari Post Doctoral Fellow	Ph.D	Mesoscale Modelling
2.	Johnson Zacharia	Research Associate - DST-SERB Project	Ph.D	Air-Sea Interaction
3.	Athira Nambeesan	Project Fellow (ISRO)	M.Sc	Meteorology

#### 5. Research Scholars

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Smart K B	DST-PURSE	Dr. C. A. Babu	Meteorology
2	Shinu Sheela Wilson	Nansen- JRF	Dr.K.Mohankumar	Meteorology
3	Anu Xavier	KSCTE	Dr.K.Mohankumar	Meteorology
4	Remya.R	Kerala Govt	Dr.K.Mohankumar	Meteorology
5	Nithya K	UGC-BSR	Dr.K.Mohankumar	Meteorology
6	Sreelekha P N	DST-Inspire	Dr. C.A. Babu	Meteorology
7	Shinto Roose	CSIR	Dr.K.Mohankumar	Meteorology
8	Suresh N	NA	Dr.K.Mohankumar	Meteorology



9	Sivakumar K U	UJRF	Dr.Santosh K R	Meteorology
10	Karthika G	UJRF	Dr.V.Madhu	Meteorology
11	Sabeer V	UJRF	Dr.V.Madhu	Meteorology
12	Vinod Sankar N	NA	Dr.C.A.Babu	Meteorology
13	Suthin Kumar P S	UJRF	Dr. C A Babu	Meteorology
14	Krishnakumar E K	UGC	Dr. Santosh K R	Meteorology
15	Pritam Das Mahapatra	DST-Inspire	Dr. Abhilash S	Meteorology
16	Sudeep Kumar B L	NA	Dr. C A Babu	Meteorology
17	Asif Sha T M	NA	Dr. Santosh K R	Meteorology
18	Vijayakumar P	NA	Dr. Santosh K R	Meteorology
19	Smitha John	NA	Dr. H S Ram Mohan	Meteorology
20	Baburaj P P	NA	Dr.K.Mohankumar	Meteorology
21	Narendra Reddy N	NA	Dr.K.Mohankumar	Meteorology
22	Mohammed Shafi M P	NA	Dr.V.Madhu	Meteorology
23	Sudheesh T M	NA	Dr.Santosh K R	Meteorology
24	Anusha Andrews	NA	Dr. Santosh K R	Meteorology
25	Niyaz N T	NA	Dr. C. Babu	Meteorology
26	Biswarup Das	NA	Dr. C A Babu	Meteorology

## 6. Administrative Personnel

Sl. No.	Name	Designation	No. of Posts
1	Rajesh B	Section Officer	1
2	Shila M	Section Officer (Typist)	1
3	Saraswathi Nirmala Warriar	Senior Grade Assistant	1
4	Selva Kumar K K	Office Attendant	1

## 7. Technical Personnel

Sl. No.	Name	Designation	No. of Posts
1.	Dr. Sreedevi M G	Technical Officer Gr. I (Sr.Scale)	1



## 8. Student Enrollment - 2016

Sl.No.	Programme of Study	Men	Women	Total
1	M.Sc. Meteorology	5	11	16
2.	M.Tech (Atmospheric Sciences)	4	4	8
2	Ph.D.	5	1	6

## 9. Research Facilities

### a. Laboratories

Meteorological Instrumentation Laboratory, Synoptic Lab, Computer Lab, Surface Meteorological Observatory, Modelling Lab, Atmospheric Data Bank.

### b. Major equipments

Sonic Anemometer, Micro Rain Radar, High Resolution GPS Radiosonde (GRAW), Automatic Weather Station, 20 m Meteorological Tower.

A Rack Server is installed in the Modelling lab. There is an atmospheric Data bank in the Department with Meteorological data from IMD, Re analysis Data from NCEP/ NCAR etc.

**a. Library :** Attached to School of Marine Science Library

## 10. Distinguished visitors

Sl.No.	Name	Affiliation	Remarks
1.	Dr. Arun Chakraborty	Associate Professor Centre for Oceans, Rivers, Atmosphere and Land Science, IIT Kharagpur	Visited
2.	Dr. Sijikumar	Scientist, SPL, VSSC, ISRO	Delivered a talk
3.	Dr. Preethy Bhasker	Scientist, IITM, Pune	Delivered a talk
4.	Dr. Susmitha Joseph	Scientist, IITM, Pune	Delivered a talk
5.	Dr. Hamza Varikoden	Scientist, IITM, Pune	Delivered a talk
6.	Dr. Sabin T P	Scientist, IITM, Pune	Delivered a talk
7.	Dr. Resmi E A	Scientist, NCESS, Thiruvananthapuram	Delivered a talk
8.	Dr. John P George	Scientist, NCMRWF, NOIDA	Delivered a talk
9.	Dr. Chandrasekhar	Professor, IIST Thiruvananthapuram	Delivered a talk



## 11. Ph.Ds Awarded

Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1.	Wind induced upwelling and the response of surface chlorophyll in the Bay of Bengal	Smitha A	Dr. H S Ram Mohan

## 12. Publications

### a. Papers

Sl. No.	Name of Paper	Impact Factor, if any
1.	Samson TK, Manoj MG, Ajil K, Rakesh V, Rejoy R, Vasudevan K, Santosh KR, Mohanan P, <b>Mohankumar K</b> (2016) Technical aspects of 205 MHz VHF Mini Wind Profiler Radar for Tropospheric Probing, <i>IEEE Transactions on Geo-science and Remote Sensing</i> , 13(7), 1027-1031	3.514
2.	Ajil Kottayil, Mohankumar K, Titu Samson, Rejoy Rebello, Manoj MG, Rakesh V, Santhosh KR, Mohanan P, Vasudevan K (2016) Validation of 205 MHz Mini Wind Profiler Radar Located at Cochin, India Using Radiosonde Wind Measurements, <i>Radio Science</i> , 51(3), 106-117, DOI: 10.1002/2015RS005836	1.45
3.	V Madhu and Karthika G (2016). Temporal Distribution of total Column Ozone over Cochin – A Study based on in situ Measurements and ECMWF Reanalysis. <i>Open Journal of Marine Science</i> , 2016, 6, 200-209 Published Online April 2016 in SciRes. <a href="http://www.scirp.org/journal/ojms">http://www.scirp.org/journal/ojms</a> <a href="http://dx.doi.org/10.4236/ojms.2016.62016">http://dx.doi.org/10.4236/ojms.2016.62016</a>	
4.	A. K. Sahai, N. Borah, R. Chattopadhyay, S. Joseph, S. Abhilash, 2016: A bias-correction and downscaling technique for operational extended range forecasts based on self organizing map, <i>Climate Dynamics</i> , 1-15, DOI 10.1007/s00382-016-3214-4	4.602
5.	S Chatterjee, M Nuncio and K Satheesan, ENSO Related SST Anomalies and Relation with Surface Heat Fluxes over South Pacific, doi:10.1007/s00382-016-3349-3, <i>Climate Dynamics</i> , 2016	4.602
6.	M Nuncio, S Chatterjee, K Satheesan, Sheeba N C, Interaction of Atlantic Multi Decadal Oscillation and Cyclones and its influence on the temperature and precipitation variability in an Arctic Archipelago during boreal winter, Under Review, <i>Climate Dynamics</i> , 2017	
7.	R. Remya, Ajil Kottayil and K Mohan Kumar, Influence of Sudden Stratospheric Warming and Quasi Biennial Oscillation on Western Disturbance over North India, <i>J. of Atm &amp; Solar Terrestrial Physics</i> , 160, 1-10 <a href="https://doi.org/10.1016/j.jastp.2017.05.011">https://doi.org/10.1016/j.jastp.2017.05.011</a>	1.463





8.	K. Nithya, M.G. Manoj, K. Mohankumar (2017) Effect of El Niño/La Niña on tropical easterly jet stream during Asian summer monsoon season" Int. J. Climatol. doi : 10.1002/joc.5137	3.609
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### b. Books

Sl.No.	Name of Book
1.	Oceans in the Outer Solar System : Emerging Perspectives. C A Babu and Smart Kundassery, Published by the Directorate of Public Relation and Publications, CUSAT, January 2017. ISBN 978-93-80095-83-7

### 13. Participation in Seminar/Conference/Refresher Courses etc by Faculty/Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. Babu C A	Advanced Meteorology Training Course organized by the School of Naval Oceanology and Meteorology (SNOM), Indian Navy, 7 October 2016	Resource Person
Dr. Babu C A	Workshop on "Climate Variability in Kerala: Climate Change perspectives" organized by the Institute of Climate Change Studies, Thiruvananthapuram, 21 November 2016	Chaired Session
Dr. Babu C A	International Conference, ISTAM-2016 at VIT, Vellore during 11-14 December 2016.	Invited Talk
Dr. Babu C A	National Symposium, TROPMET 2016 at Siksha 'O' Anusandhan University, Bhubaneswar during 16-21 December, 2016.	Presented paper
Dr. Babu C A	Advanced Meteorology Training Programme of the Indian Air Force organized at the Air Force Administrative College, Coimbatore on 24 January, 2017.	Delivered Talk
Dr. Babu C A	National Workshop on "Mud Banks of Kerala : Status, Issues and Societal Concerns" organized by the National Institute of Oceanography Regional Centre Kochi, 10-11 February, 2017	Participated
Dr. Babu C A	National Workshop on Indian Summer Monsoon : Recent Advances, Dept. of Atmospheric Sciences, CUSAT Kochi, 3-4 March 2017	Coordinator
Dr. Satheesan K	ROYAL COLLEGE OF ENGINEERING & TECHNOLOGY, Akkikavu, Thrissur – 680604 on 20th August 2016	Delivered Talk



Dr. Madhu V	Quadrennial ozone Symposium, Edinburgh, UK during 04-09-2016 to 10-09-2016	Presented paper
Dr. Abhilash S	Smart Cities Workshop, “ <i>The role of Meteorology in Urban Planning and Identifying the Renewable energy potential in and around Kochi</i> “ held at Holiday Inn, Kochi organized by Heidelberg University, Germany and CUSAT, 11 August 2016	Invited Talk
Dr. Abhilash S	CLIVAR Open Science conference organized by World Climate Research Program (WCRP) at Qingdao, China, during 18-26 September, 2016.	Presented paper
Dr. Abhilash S	4th Retreat of Belmont Forum Research Project Adaptation Research: ARTISTICCC) jointly organized by School of Industrial Fisheries, CUSAT and Belmont Forum CUSAT, Kochi, during 4-7 October 2016.	Presented paper
Dr. Abhilash S	Workshop on climate variability in Kerala: climate change perspectives, held at Mascot Hotel, Thiruvananthapuram organized by Institute for Climate Change Studies, India Meteorological Department & Kerala State Disaster Management Authority, 21 November 2016.	Presented paper
Dr. Abhilash S	Indo-UK workshop on Developing Hydro-Climate Science, Information and Services for Water Management, held at IITM Pune, jointly organized by IITM and Center for Ecology and Hydrology, UK during 29 November - 1 December 2016.	Presented paper
Dr. Abhilash S	Indian Radar Conference 2017 (iRAD—2017) at IIT Kharagpur during 8-11 January, 2017.	Presented paper
Dr. Abhilash S	Indo-Dutch International conference in Climate and Atmospheric Sciences & Applications, organized at IIT Delhi, jointly organized by DST (Govt. of India) and the Dutch Embassy at New Delhi during 20 21 February, 2017,	Presented paper
Dr. Lekshmy P R	International Conference on Geology: Emerging Methods and Applications (GEM-2017), Thrissur, Kerala, India, 6-7 February 2017	Invited Talk
All research Scholars/ Students and Faculty	National Workshop on Indian Summer Monsoon : Recent Advances, Dept. of Atmospheric Sciences, CUSAT Kochi, 3-4 March 2017	Participated



All research Scholars/ Students and Faculty	National Workshop on Emerging Trends in Atmospheric and Climate Sciences – E-Tracs organize to honour Dr. Santosh K R, Department of Atmospheric Sciences & IMS Cochin Chapter, 3-4 April 2017.	Participated
Vinod Sankar N	International Conference, ISTAM-2016 at VIT, Vellore during 11-14 December 2016.	Presented paper
Vinod Sankar N	National Symposium, TROPMET 2016 at Siksha 'O' Anusandhan University, Bhubaneswar during 16-21 December, 2016.	Presented paper
Vinod Sankar N	ST Radar User Scientist –Workshop held at ACARR, CUSAT, 9-10 February 2017	Participated
Shinu Sheela Wilson	ST Radar User Scientist –Workshop held at ACARR, CUSAT, 9-10 February 2017	Participated
Krishna Kumar E K	National Symposium, TROPMET 2016 at Siksha 'O' Anusandhan University, Bhubaneswar during 16-21 December, 2016.	Presented Poster
Krishna Kumar E K	ST Radar User Scientist –Workshop held at ACARR, CUSAT, 9-10 February 2017	Participated
Krishna Kumar E K	INTROSPECT 2017 conducted by IITM Pune, during 13th to 16th February 2017	Participated
Shinto Roose	ST Radar User Scientist –Workshop held at ACARR, CUSAT, 9-10 February 2017	Participated
Shinto Roose	A training course entitled "Advanced School on Earth System Modelling" jointly organized by the Abdus Salam International Centre for Theoretical Physics (ICTP) and the Indian Institute of Tropical Meteorology (IITM) held at IITM, Pune during 18-27 July 2016.	Attended
Shinto Roose	A training course entitled: Introduction to Satellite Scatterometry with special emphasis on ScatSat-1" organized by Indian Space Research Organisation (ISRO) held at SAC, ISRO, Ahmedabad during 19-21 October 2016	Attended
Shinu Sheela Wilson	A training course entitled: Introduction to Satellite Scatterometry with special emphasis on ScatSat-1" organized by Indian Space Research Organisation (ISRO) held at SAC, ISRO, Ahmedabad during 19-21 October 2016	Attended



Shinu Sheela Wilson	ST Radar User Scientist –Workshop held at ACARR, CUSAT, 9-10 February 2017	Participated
Sabeer V	ST Radar User Scientist –Workshop held at ACARR, CUSAT, 9-10 February 2017	Participated
Karthika G	ST Radar User Scientist –Workshop held at ACARR, CUSAT, 9-10 February 2017	Participated
Anu Xavier	ST Radar User Scientist –Workshop held at ACARR, CUSAT, 9-10 February 2017	Participated
Nithya K	National Symposium, TROPMET 2016 at Siksha ‘O’ Anusandhan University, Bhubaneswar during 16-21 December, 2016.	Presented poster
Nithya K	ST Radar User Scientist –Workshop held at ACARR, CUSAT, 9-10 February 2017	Participated
Remya R	ST Radar User Scientist –Workshop held at ACARR, CUSAT, 9-10 February 2017	Participated
Suresh N	ST Radar User Scientist –Workshop held at ACARR, CUSAT, 9-10 February 2017	Participated
Sivakumar K U	ST Radar User Scientist –Workshop held at ACARR, CUSAT, 9-10 February 2017	Participated
Smart K B	National Seminar on Emerging Trends in Atmospheric and Climate Sciences, Department of Atmospheric Sciences, Cochin University of Science and Technology, Kochi, May 3-4, 2017	Presented paper
Liby Thomas	INTROSPECT 2017 conducted by IITM Pune, during 13th to 16th February 2017	Participated

#### 14 Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization/Institution	Role
Santosh K R	SPL, VSSC	Panel Member, Research Advisory Committee
B. Chakrapani	SPL, VSSC	Member, Research Committee
B. Chakrapani	Central University, Hyderabad	Visiting Professor
K Mohan Kumar	SPL, CMFRI, CIFT, CESS, CWRDM, KFRI	Panel Member, Research Advisory Committee
K. Mohan Kumar	Indian Academy of Science, Bangalore	Teacher Fellow
K Mohan Kumar	International Association of Geomagnetism and Aeronomy	Member
K Mohan Kumar	Solar Terrestrial Energy Program	Member



K Mohan Kumar	Stratospheric Processes on Climate (SPARC)	Member
K Mohan Kumar	Ministry of Earth Sciences, Government of India	Member of Project Monitoring and Advisory Committee
K Mohan Kumar	Ministry of Science and Technology, DST, Government of India	Member of Project Advisory Committee
Babu C A	School of Naval Oceanology and Meteorology	Resource Person for Advanced Meteorology Course conducted for Naval Officers
Babu C A	M G University, KUFOS, Kerala University	Examiner
Satheesan K	WMO Panel of Experts on Polar and High Mountain Observations, Research and Services	Member
Satheesan K	Atmospheric Flagship Programme: Ny Alesund Scientific Management Committee	Member
Satheesan K	Strategy Plan-Committee for Polar Sciences and global change in water cycle	Member

### 15. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour / Award	Awarding Agency
Dr. Madhu V	Post Doctoral Fellowship	Nagoya University, Japan
Aparna Ravi	Summer Research Internship	Indian Academy of Sciences, Bangalore
Sahla Sherin A P	Summer Research Internship	Indian Academy of Sciences, Bangalore
Amal John	Summer Research Internship	Indian Academy of Sciences, Bangalore
Jeev Dain Varughese	Summer Research Internship	Indian Academy of Sciences, Bangalore
Thara Anna Mathew	Summer Research Internship	Indian Academy of Sciences, Bangalore
Chaitra S T	Summer Research Internship	Indian Academy of Sciences, Bangalore
Gayathri E M	Summer Research Internship	Indian Academy of Sciences, Bangalore



Anjali Thomas	Summer Research Internship	Indian Academy of Sciences, Bangalore
Devika M V	Summer Research Internship	Indian Academy of Sciences, Bangalore

## 16. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	Studies on the Troposphere features and Stratosphere Troposphere Coupling Processes over the Monsoon region using Stratosphere Troposphere (ST) Radar at Cochin	DST	25 Crores	K. Mohankumar
3.	Atmospheric Boundary layer & Cloud Characteristics and monitoring of aerosol over Cochin	ISRO-RESPOND	9.31 Lakhs	C. A. Babu
4.	Temporal variability and Spatial Variability of Total ozone over the Tropical region-Special reference to Indian Scenario	ISRO-RESPOND	5.50 Lakhs	V. Madhu
5.	Integrated Atmosphere Ozone Variability over Lakshadweep & Cochin in the present climate change scenario – Observations & Modelling Studies	DST-SERB	52 lakhs	V. Madhu
6.	Role of Ocean in the Extended Range Prediction of Monsoon's Active Break Cycle Improving Hindcast Skill of the NCEP-CFS Modeling System	IITM- MoES	30.60Lakhs	B. Chakrapani
7.	Monsoon Cloud Characteristics	UGC-DRS-Ph III	62 Lakhs	C.A.Babu
8.	Theoretical Modelling of Soft X-Rays from the veneer of Galilean Satellites	ISRO-PLANEX	14.51 lakhs	C. A. Babu
9.	Development of an Improved Cyclogenesis Potential Parameter over North Indian Ocean and Probabilistic Prediction of Cyclogenesis using a Multi Model Ensemble Prediction System	UGC-Start up	10 lakhs	Abhilash S



10.	Understanding the physical processes associated with tropical intraseasonal oscillations and Cyclogenesis over Indian Ocean regions using SCATSAT-1 Data	ISRO	32.43 lakhs	Abhilash S
11.	Features of Indian Ocean SST during the recent decades and their impact on Indian summer monsoon rainfall and circulation pattern	DST-SERB	24.8 lakhs	C A Babu
12.	Diurnal Variation of Deep Convective Clouds over Indian Region and its Association with Monsoon Rainfall	DST-SERB	30 lakhs	Satheesan K
13	High Resolution Climate Modelling for Southern Peninsular India-National Mission on Strategic Knowledge for Climate Change (NMSKCC).	DST	99 lakhs	Satheesan K
14	Radiative Impact of Clouds: Assessment of the Intraseasonal and Interannual Variability during Indian Summer Monsoon Season	ISRO - PLANEX	25.85 lakhs	C A Babu
15	Impact of the Indian Monsoon convection on the Tropical Tropopause Layer and Climate	DST/ IFCPAR	112 lakhs	K Mohan Kumar

### 17. External Funding

Programme	Funding Agency	Amount
FIST	DST	165 Lakh

### 18. Research Programmes and Activities:

Sl.No.	Problem / Topic	Investigator (s)
1	Numerical Study of the Dynamics of severe thunderstorms over Indian region using the WRF model	Smitha John A / <i>Dr.H.S.Ram Mohan</i>
2	Evolution of Atmosphere on a natural satellite harboring subsurface ocean	Smart K B <i>Dr. C. A. Babu</i>
3	Interannual Variability of Monsoon over India	Shinu Sheela Wilson <i>Dr. K. Mohankumar</i>
4	Characteristics of Monsoon Boundary Layer	Sudeep Kumar B L <i>Dr. C A Babu</i>



5	Study of Vapour transport from Troposphere to Stratosphere	Suresh N <i>Dr. K. Mohankumar</i>
6	Dynamical and Physical Forcing of Tropical Cyclones	Baburaj P P <i>Dr. K. Mohankumar</i>
7	Characteristics of Monsoon Organized Convections Associated with Indian Summer Monsoon	Sreelekha P N Dr.C.A. Babu
8	Stratospheric QBO and Asian Summer Monsoon	Nithya K. Dr. K. Mohan Kumar
9	Monsoon Variability and Role of Ocean	Shinto Roose Dr.K.Mohan Kumar
10	Stratosphere-Troposphere Coupling and its Role in Climate Change	Remya R Dr.K.Mohan Kumar
11	Jet Streams and Indian Summer Monsoon	Anu Xavier Dr.K.Mohan Kumar
12	Troposphere - Stratosphere Exchanges and its Relation to the Indian Summer Monsoon	Asif Sha/ Dr.Santosh K R
13.	Study of Monsoon Clouds using Satellite Data	Vijayakumar P/ Dr. Santosh. K. R
14.	Upper Tropospheric process over the Northern Arabian Sea and its impact on the Indian Summer Monsoon	Sivakumar U/ Dr.Santosh K R
15.	Measurement and Modelling of Atmospheric Ozone to Study the Dynamics of the Lower and Middle Atmosphere in the Tropics	Karthika G/ Dr. V. Madhu
16.	Stratosphere-Troposphere Coupling	Sabeer V/ Dr. V. Madhu
17.	Investigation of the Vertical Profile of Upper Atmosphere using Radars and Predictability of Monsoon and Thunderstorms	Sudheesh T M / Dr. Santosh K R
18.	Study on Weather System Affecting North India during Winter Season	N. Vinod Sankar/ Dr. C. A. Babu
19.	Impact of Mesoscale Convective Systems of the Indian Summer Monsoon on the Surface Layer and the UTLS region using PRWONAM Measurements	Narendra Reddy/ Dr.K.Mohan Kumar
20.	Extreme Climate Events over South Asian Region in a Climate Change Perspective	Krishna Kumar E K/ Dr. Santosh K R
21.	Aerosol and Climate over Lakshadweep Islands	Mohammed Shafi M P/ Dr. V. Madhu
22.	Climate Variability, Change and their Impact over south India	Niyaz T M/ Dr. C A Babu





23.	Rainfall characteristics and associated cloud and circulation features	Suthin Kumar P S/ Dr. C A Babu
24.	Forecast of Rice Production using Multi Ensemble Model	Anusha Andrews / Dr. Santosh K R
25.	Aerosol Studies during Monsoon	Pritam Das Mahapatra Dr. Abhilash S
26.	Air-Sea interaction process over Indian Ocean region	Biswarup Das/ Dr. C A Babu

**19. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department :**

Sl. No.	Title	Duration	Coordinator (s)	Funding Agency
1	National Workshop on Indian Summer Monsoon : Recent Advances, Dept. of Atmospheric Sciences, CUSAT Kochi, 3-4 March 2017	3-4 March 2017	Dr. C A Babu	UGC-SAP DRS Ph III
2	WMO Day 2017 Theme : "Understanding Clouds"	23 March 2017	Abhilash S	IMS Cochin Chapter & Dept. of Atmospheric Sciences, CUSAT
3	National Level Students workshop : Emerging Trends in Atmospheric and Climate Sciences	3-4 May 2017	Abhilash S	IMS Cochin Chapter & Dept. of Atmospheric Sciences, CUSAT



## DEPARTMENT OF BIOTECHNOLOGY

### 1. Brief History of the Department :

The mandate of the Department is to train human resources in Biotechnology and to cater to the needs of the Nation in harnessing the vast biodiversity and to promote bioindustries, not only in the state of Kerala but also in the Nation. The M.Sc. programme in Biotechnology offers comprehensive education in all aspects of modern applied biology. The programme has been designed in such a way that the students are well trained in state-of-the-art techniques in the world of fermentation, molecular biology, genetic engineering, plant biotechnology, bio-informatics, molecular neurobiology and immunology. The theoretical and practical knowledge acquired by the student during the first three semesters is perfected through an intensive dissertation work during the fourth semester. Topically relevant problems are identified for the purpose so as to impart training in identification and execution of research problems and interpretation of data.

Most of the M. Sc. students opt for research programmes in national/international laboratories after they complete their programme. They also find employment in industries, educational institutions and other organizations involved in R and D and also in medical, pharmaceutical, agricultural and environmental biotechnology sectors.

Research activities of the Department are presently centered on areas such as Microbial Technology, Medical Biotechnology, Genetic Engineering, Molecular Neurobiology, Cell Biology and Plant Biotechnology. The research students generally get absorbed as Scientists in different national and international laboratories and as lecturers in Universities/ Colleges.

On an average, about 70% of the M.Sc. students clear the NET and 80% pass the GATE.

87 students have so far taken their doctoral degrees from the Department, with about

251 scientific publications from the Department.

In addition the department also conducts collaborative research with other sister Departments in the University like Dept. of Applied Chemistry, Dept. of Physics, International School of Photonics., and Dept of Polymer and Rubber Technology as well as the Inter University centre for Nanomaterials and devices, and has



published several papers in international and National journals.

## 2. Programmes of Study/Research: M. Sc. and Ph.D.

## 3. Faculty Members

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. SaritaG.Bhat	Professor & Head	M.Sc. Ph.D	Microbial Genetics
2	Dr Padma Nambisan	Professor	M.Sc., Ph.D	Plant Biotechnology
3	Dr.AjithVengellur	Assistant Professor	M.Sc., Ph.D	Genetics and Cell Signaling
4	Dr. Baby Chakrapani P.S	Assistant Professor	M.Sc., Ph.D	Molecular neurobiology
5	Dr. AnushaAshokan	DST Inspire Faculty	B.Tech, M.Tech.,Ph.D.	Cancer Nano medicine
6	Dr. MohananV. Veettil	DBT-RLF Faculty	M.Sc.,Ph.D.	Virology

## 4. Emeritus Professor/Scientist (if any)-2

Sl. No.	Name	Designation	Qualification	Specilisation
1	Dr. P. M. Sherief	Adjunct Faculty	M.Sc., Ph.D	Biochemistry
2	Dr. K.P. Joy	INSA Senior Scientist	M.Sc., Ph.D	Endocrinology

## 5. Research Staff

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. Sreekanth PM	SERB-DST Young Scientist& PI	M.Sc., Ph.D	Plant biotechnology
2	Dr. Anju T.R.	UGC-Research Associate	M.Sc., Ph.D	Neuroscience
3	Dr.Deepa Narayanan	UGC-Kothari Fellow	M.Sc., Ph.D	Stem cell research
4	Dr. Soumaya K.K	CUSAT Post doctoral Fellow	M.Sc., Ph.D	Plant Biotechnology
5	Dr. Sreeja Narayanan	UGC-Kothari Fellow	M.Sc, M.Tech, PhD	Nanobiotechnology

**6. Research Scholars**

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Anu M.A.	UGC	Dr. Sarita G.Bhat	Studies on Microbial EPS(LEVAN)
2	Bindiya E.S.	UJRF	Dr. Sarita G.Bhat	Bacteriocins from Fish gut
3	Tina K.J	UGC	Dr. Sarita G.Bhat	Metagenomics of fish gut microflora
4	Nayana P.	KSCSTE	Dr.Padma Nambisan	Study of laccases
5	Aiswarya C.	KSCSTE	Dr.Padma Nambisan	Study of lignin peroxidases
6	Nandita M.	U-JRF	Dr. Sarita G.Bhat	Vibriophages
7	RinuMadhu Puthussery	U-JRF	Dr. Sarita G.Bhat	Soil metagenomics
8	Venetia 'D' Rose	UGC	Dr. Sarita G.Bhat	Metagenomics of fish gut microflora
9	Sritha K.S.	U-JRF	Dr. Sarita G.Bhat	Salmonella Phages
10	Honey G.	CSIR	Dr. Sarita G.Bhat/Dr. Sunil Narayanakutty	Biofilm Formation in urinary catheter
11	Bins K.C	KSCSTE	Dr.PadmaNambisan	CNTF induced adult Neurogenesis
12	Prabha Prakash	KSCSTE	Dr.Padma Nambisan	Derivation of neurons from peripheral blood mononuclear cells
13	Kiran Lakshmi M.S.	CSIR	Dr.Padma Nambisan	Study of Ligninolytic Enzymes
14	Sreelakshmi Sadanandan	DST-INSPIRE	Dr.Ajith Vengellur	Hypoxia and its effect on neurons
15	Cikesh C	Part-time	Dr. Sarita G.Bhat	Studies on Endotoxins
16.	Sajan V.L.	Part-time	Dr. M. Chandrasekaran/ Dr.Sarita G Bhat	Development of Microbial process for waste water management
17.	Ramesh Kumar S.	Part-time	Dr. Elyas KK/ Dr. Padma Nambisan	



## 7. Administrative Personnel

SI.No.	Designation	No. of Posts
1	Section Officer	1
2	Office Supdt.	1
3	Sl. Gr. Assistant.	1
4	Sr. Gr. Assistant	1
5	Peon	1
6	Sweeper-cum-cleaner	1

## 8. Student Enrollment

SI.No.	Programme of Study	Men	Women	Total
1	M.Sc.	1	11	12
2	Ph.D.	1	2	3

## 9. Research Faculty

### (b) Library :

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
Books: 1855	32
Journals :6	Nil

## 10. Research Facility

### (a) Laboratories (List out Major equipments available)

1. PCR unit-Automatic Thermocycler (Eppendorf) – 2 no.s
2. Gel Documentation system (Amersham Pharmacia)
3. Gel documentation system (Biorad)
4. HPLC –preparative and analytical (Shimadzu)
5. Liquid Scintillation Counter (Wallac 1409)
6. Protein gel electrophoretic systems (Amersham Pharmacia)
7. Chromatographic columns (Amersham Pharmacia)
8. Refrigerated Centrifuge (Heraeus)
9. Spectrophotometer (Spectronic Genesis 5, Milton Roy (USA))
10. Spectrophotometer (Shimadzu 3, ELICO)
11. Hybridization oven (Amersham Pharmacia) 2 no.s
12. Fermenter 14 litre - Fully automated (Scigenics)
13. Mini jar fermenter (Eyela Inc. Japan)



14. Gamma Counter (ECI)
15. Phase contrast microscope (Nikon, Japan)
16. Inverted Phase Contrast Microscope (Olympus CK 40)
17. Lyophilizer (YamataNeocool, Japan)
18. Electronic balance (Mettler) 2no.s
19. UV Cross linker (Hoefler)
20. Gel documentation system
21. Ice flaker (Sanyo)
22. Refrigerated Centrifuge (Sigma)
23. Real Time PCR
24. Confocal Microscope
25. Nanospectrophotometer
26. Cryostat
27. -86°C Freezer
28. FPLC
29. Ultra Centrifuge.
30. HPLC Waters
31. Pulse field gel electrophoresis (PFGE)
32. Level II-Biosafety cabinets
33. Fluorescent microscope
34. Walk –in –cold room

**(b) Small Animal facility**

**(c) Cell culture facility**

**11. Distinguished visitors**

Sl. No.	Name	Affiliation	Remarks
1.	Dr. Ajith Kumar	Scientist 'F' NPOL	National Science Day 2016 Celebrations including talks
2.	Mr. Manoj C.N	CEO, Pelican Biotech & chemical labs	National Science Day 2016 Celebrations including talks
3.	Dr. R.S Anand	IIT Rookee	Erudite Program
4.	Dr. T Ramamurthy	THSTI, Faridabad	Examiner Ph.D viva and gave a talk



5.	Dr. KshetishMajumdar	Central Univeristy Tripura	Examiner Ph.D viva and gave a talk
6.	Dr. InduShekar Thakur	Professor, JNU, NewDelhi	Examiner Ph.D viva
7.	Dr. S Venkata Mohan	Principle Scientist, BEES CSIR Hyderabad	Examiner Ph.D viva
8.	Dr. Easwar H. V.	Professor, Neurosurgery, SCTIMST, Trivandrum	Silver jubilee celebrations-talk
9.	Dr. M.N.Venugopal	Professor and Head, Department of Microbiol., College of Fisheries, Mangalore	Examiner Ph.D viva
10	Dr. AtayaKapley	CSIR-NEERI, NehurMarg	Examiner Ph.D viva
11.	Dr. G.S Selvam	Madurai Kamaraj University	Examiner Ph.D viva
12.	Dr. Nandini K. Kumar	Manipal University	Examiner Ph.D viva
13.	Prof. S.K. Khare	Professor of Biochemistry Enzyme and Microbial Biochemistry lab	Examiner Ph.D viva
14.	Dr. Manzoor. A.	Professor, AIMS. Kochi	Silver jubilee celebrations-talk
15.	Dr. NagendraPrabhu	Professor, SD College, Alappuzha	Silver jubilee celebrations-talk

## 12. Ph.Ds Awarded

Sl. No.	Topic	Name	Guide
1	Melanin from Marine Bacteria: Characterization, Production and Applications	NobleK Kurian	Dr. Sarita G. Bhat
2	Metagenomics of marine and Mangrove sediments: Phylogenetic diversity and characterization of amylase obtained by functional screening	Harisree P. Nair	Dr. Sarita G. Bhat
4	Strategies for controlling biofilm using bioagents	Laxmi M.	Dr. Sarita G. Bhat
5	Lipase Production by immobilized marine <i>Bacillus smithi</i> BTMS11	Doles P.E	Dr. M. Chandrasekaran Dr. Sarita G. Bhat



6	Comprehensive Molecular approaches to explore bacteriophage insensitive mutants (BIMS) generated by phage infections in <i>Salmonella</i> Enteritidis S49 and S37	Mridula V.G	Dr. Sarita G. Bhat
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### 13. Publications

#### a. Papers

Sl. No.	Authors/year/Name of Paper/Journal
1	Subin, R. S.; *Bhat, S.G., Chandrasekaran, M. Amplification and sequence analysis of phaC gene of polyhydroxybutyrate producing <i>Vibrio azureus</i> BTKB33 isolated from marine sediments. <i>Ann. Microbiol.</i> 2016, 66:299–306. DOI 10.1007/s13213-015-1109-y. (Impact factor: 1.232)
2	Laxmi, M.; Kurian, N. K.; Smitha, S.; *Bhat S.G. Melanin and bacteriocin from marine bacteria for biocontrol of biofilm forming food pathogens. <i>Indian J. Biotechnol.</i> 2016. (Accepted)(Impact factor: 0.287)
3	Laxmi, M.; *Bhat, S. G. Characterization of pyocyanin with radical scavenging and antibiofilm properties isolated from <i>Pseudomonas aeruginosa</i> strain BTRY1. <i>3 Biotech</i> , (2016) 6(1): 1-5. (Impact factor: 0.992)
4	Mohandas, L., Anju, T. R., & Bhat, S. G. (2016). Confocal and SEM imaging to demonstrate food pathogen-biofilm biocontrol by pyocyanin from <i>Pseudomonas aeruginosa</i> BTRY1. <i>International Journal of Bioassays</i> , 6(01), 5218-5223.
5	1. Anju T R, Akhilraj P R, Paulose C S. (2016) Oxidative stress and cell death in the cerebral cortex as a long term consequence of neonatal hypoglycemia. <i>Canadian Journal of Physiology and Pharmacology</i> . 94(9): 1015-1022.
6	2. Anju T R, Paulose C S. (2016) Role of Neurotransmitters and its signalling in Disease Management: A concise outlook. <i>J. Biomedical Reports</i> . 2(2): 17- 20
7.	Akhilraj PR, Anju T R, Chinthu R, John PS, Paulose CS. Muscarinic receptor regulation in spinal cord by modulating bone marrow with neurotransmitters and citicholine; analysis at micromolecular level. <i>Biomedical Journal</i> (accepted)
8	Soumya, P. S., Lakshmi, M. S. K., & Nambisan, P. (2016). Application of response surface methodology for the optimization of laccase production from <i>Pleurotus ostreatus</i> by solid state fermentation on pineapple leaf substrate.
9	Biofilm mitigation in food industry using bacteriophages. Laxmi, M.; *Bhat, S.G. In 'Handbook of Food Bioengineering', Elsevier publishing group. (Accepted) (2016)





9	Marine bacteriocins-a review. Bindiya, E.S.; *Bhat, S. G. J. <i>Bacteriol. Mycol.</i> 2016, 2(5): 00040. DOI: 10.15406/jbmoa.2016.02.00040 Open Access. (Impact factor: not available)
10	Tina KollannoorJohny, Sarita Ganapathy Bhat (2017). PCR in Metagenomics. Book chapter in Volume 1620 of the series, <i>Methods in Molecular Biology</i> pp 249-265
11	Laxmi M., Anju T.R., Sarita G. Bhat. (2017) Confocal and SEM imaging to demonstrate food pathogen - biofilm biocontrol by pyocyanin from <i>Pseudomonas aeruginosa</i> BTRY1. <i>International Journal of Bioassay</i> . 6.01:5218-5223.
12	R. Chinthu, Anju T R, C.S. Paulose. (2017) Cholinergic receptor alterations in the cerebral cortex of spinal cord injured rat. <i>Biochemistry and Biophysics Reports</i> 10 (2017) 46–51
13	C.S. Paulose, P.S. John, R. Chinthu, P.R. Akhilraj, T.R. Anju. (2017). Spinal cord regeneration by modulating bonemarrow with neurotransmitters and Citicholine: Analysis at micromolecular level. <i>Biomedical Journal</i> . 40 (2): 94–100
14	Manju T, Anju T R. (2017). Oxidative Stress in Liver of Streptozotocin Induced Diabetic Rats: Ameliorating Role of <i>Aegle Marmelos</i> Leaf Extract. <i>Journal of Advances in Molecular Biology</i> , 1(1): 72-79
15	Anju T R, Joy K P. (2017). Long term effects of neonatal hypoglycemia on muscarinic receptor function in the cerebellum. <i>Journal of Pediatric and Neonatal Biology</i> . (Accepted; In Press)
16	Nair, Harisree P., Helvin Vincent, <b>Rinu Madhu Puthusseri</b> , and Sarita G. Bhat (2017). Molecular cloning and characterization of a halotolerant -amylase from marine metagenomic library derived from Arabian Sea sediments. <i>3 Biotech</i> 7, no.1):65.
17	Sreekanth P.M 2016, Promoting the Recovery of a True Mangrove- <i>Avicennia Marina</i> in Ecogeographic Area of Puthuvypeen, Kochi, Kerala. <b><i>Mapana J Sci</i></b> , 14, (4), 31-37



**14. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.**

Sritha K.S.	Participated in a Seminar conducted in DBT, CUSAT, on the occasion of National Science Day Celebrations, Sponsored by Kerala State Council for Science, Technology & Environment and DST on 25 <sup>th</sup> February 2016.	Participant
	As part of In-Service Training Courses (2016-17) for PGTs (Bio) held at KendryaVidyalaya,NAD,Aluva,a class was delivered on the topic “ Protein Translation” on 23 <sup>rd</sup> May 2016.	Resource person
	Participated in Open House held as a part of Silver Jubilee celebrations of the Department of Biotechnology,CUSAT on September 8 <sup>th</sup> 2016	Participant
	Participated in 2016 NextGenGenomics, Biology, Bioinformatics and Technologies (NGBT) Conference organized by Scigenome Research Foundation during October 3 <sup>rd</sup> -5 <sup>th</sup> at Cochin, Kerala	Participant
	Participated in CUSBAN 2016, Joint International Conference On Biotechnology And Neuroscience organized by CUSAT-NUS (National University of Singapore),during December 19 <sup>th</sup> – 21 <sup>st</sup> ,Cochin.	Participant
	Participated and Presented in 29th Kerala Science Congress organized by KSCSTE during 28 <sup>th</sup> -30 <sup>th</sup> January 2017 at Marthoma College, Thiruvalla	Poster presentation
Tina K J	Participated and Presented Paper entitled “Taxonomic profiling of gut microbiota of Indian oil sardine ( <i>Sardinella longiceps</i> ) by amplicon based metagenomic analysis” at 28th Kerala Science Congress organized by KSCSTE during 28 <sup>th</sup> -30 <sup>th</sup> January 2016 at University of Calicut, Malappuram.	Participant, Poster presentation
	Participated in a Seminar conducted in DBT, CUSAT, on the occasion of National Science Day Celebrations, Sponsored by Kerala State Council for Science, Technology & Environment and DST on 25 <sup>th</sup> February 2016.	Participant
	Attended training programme on “Fish cell culture Techniques” organized by Peninsular & Marine fish genetic resources centre of the ICAR –NBFGR during April 1 <sup>st</sup> -7 <sup>th</sup> ,2016.	Participant
	As part of In-Service Training Courses (2016-17) for PGTs (Bio) held at KendryaVidyalaya,NAD,Aluva,a class was delivered on the topic “RNA interference” on 19 <sup>th</sup> May 2016.	Resource person



	Participated in Open House held as a part of Silver Jubilee celebrations of the Department of Biotechnology, CUSAT on September 8 <sup>th</sup> 2016	Participant
	Participated in 2016 NextGen Genomics, Biology, Bioinformatics and Technologies (NGBT) Conference organized by Scigenome Research Foundation during October 3 <sup>rd</sup> -5 <sup>th</sup> at Cochin, Kerala.	Participant
	Participated & presented paper, entitled " <i>In silico</i> characterization of chitinase genes revealed by whole metagenome sequencing of gut of <i>Sardinellalongiceps</i> in 26 <sup>th</sup> Swadesi Science Congress organized by Swadesi Science Movement, Kerala during November 7 <sup>th</sup> -9 <sup>th</sup> at CMFRI, Kochi.	Participant, Poster presentation
	Participated in CUSBAN 2016, Joint International Conference On Biotechnology And Neuroscience organized by CUSAT-NUS (National University of Singapore), during December 19 <sup>th</sup> – 21 <sup>st</sup> , Cochin.	Participant
	Participated and Presented in 29 <sup>th</sup> Kerala Science Congress organized by KSCSTE during 28 <sup>th</sup> -30 <sup>th</sup> January 2017 at Marthoma College, Thiruvalla "Metagenomic mining of Sardinellagut; Insights into composition function and application of genetic potential"	Poster presentation
Venetia D' Rose	UGC Sponsored Two Day National seminar on "Recent Advances in Molecular Medicine" on 17 <sup>th</sup> and 18 <sup>th</sup> February 2016.	Participant
	Participated in a Seminar conducted in DBT, CUSAT, on the occasion of National Science Day Celebrations, Sponsored by Kerala State Council for Science, Technology & Environment and DST on 25 <sup>th</sup> February 2016.	Participant
	As part of In-Service Training Courses (2016-17) for PGTs (Bio) held at Kendrya Vidyalaya, NAD, Aluva, a class was delivered on the topic "RNA interference" on 19 <sup>th</sup> May 2016.	Resource person
	Participated in Open House held as a part of Silver Jubilee celebrations of the Department of Biotechnology, CUSAT on September 8 <sup>th</sup> 2016	Participant
	Participated in 2016 NextGen Genomics, Biology, Bioinformatics and Technologies (NGBT) Conference organized by Scigenome Research Foundation during October 3 <sup>rd</sup> -5 <sup>th</sup> at Cochin, Kerala.	Participant



	Participated in 26 <sup>th</sup> Swadesi Science Congress organized by Swadesi Science Movement, Kerala during November 7 <sup>th</sup> -9 <sup>th</sup> at CMFRI, Kochi.	Participant
	Participated in CUSBAN 2016, Joint International Conference On Biotechnology And Neuroscience organized by CUSAT-NUS (National University of Singapore), during December 19 <sup>th</sup> – 21 <sup>st</sup> , Cochin.	Participant
Nayana P	Participated and Presented Paper entitled “Screening of fungi isolated from western ghats and other regions of Kerala for lignin peroxidase activity” at 28 <sup>th</sup> Kerala Science Congress organized by KSCSTE during 28 <sup>th</sup> -30 <sup>th</sup> January 2016 at University of Calicut, Malappuram.	Participant, Oral presentation
	Participated in a Seminar conducted in DBT, CUSAT, on the occasion of National Science Day Celebrations, Sponsored by Kerala State Council for Science, Technology & Environment and DST on 25 <sup>th</sup> February 2016.	Participant
	Participated in Open House held as a part of Silver Jubilee celebrations of the Department of Biotechnology, CUSAT on September 8 <sup>th</sup> 2016	Participant
	Participated in CUSBAN 2016, Joint International Conference On Biotechnology And Neuroscience organized by CUSAT-NUS (National University of Singapore), during December 19 <sup>th</sup> – 21 <sup>st</sup> , Cochin.	Participant
	Participated and Presented in 29 <sup>th</sup> Kerala Science Congress organized by KSCSTE during 28 <sup>th</sup> -30 <sup>th</sup> January 2017 at Marthoma College, Thiruvalla “Exhibition of Lignin peroxidase like activity by COCOS NUCIFERA Leaflets”	
Kiran Lakshmi M S	Participated and Presented Paper entitled “Synthetic dye decolourization by novel <i>Lenzittes elegans</i> KSG32” at 28 <sup>th</sup> Kerala Science Congress organized by KSCSTE during 28 <sup>th</sup> -30 <sup>th</sup> January 2016 at University of Calicut, Malappuram.	Participant, Poster presentation
	Participated in a Seminar conducted in DBT, CUSAT, on the occasion of National Science Day Celebrations, Sponsored by Kerala State Council for Science, Technology & Environment and DST on 25 <sup>th</sup> February 2016.	Participant
	Participated in Open House held as a part of Silver Jubilee celebrations of the Department of Biotechnology, CUSAT on September 8 <sup>th</sup> 2016	Participant



Aiswarya C	Participated and Presented Paper entitled "Isolation of novel laccase producing fungi from Kerala" at 28th Kerala Science Congress organized by KSCSTE during 28 <sup>th</sup> -30 <sup>th</sup> January 2016 at University of Calicut, Malappuram.	Participant, Oral presentation
	Participated in a Seminar conducted in DBT, CUSAT, on the occasion of National Science Day Celebrations, Sponsored by Kerala State Council for Science, Technology & Environment and DST on 25 <sup>th</sup> February 2016.	Participant
	Participated in Open House held as a part of Silver Jubilee celebrations of the Department of Biotechnology, CUSAT on September 8 <sup>th</sup> 2016	Participant
	Participated and Presented in 29th Kerala Science Congress organized by KSCSTE during 28 <sup>th</sup> -30 <sup>th</sup> January 2017 at Marthoma College, Thiruvalla "Optimization Of Laccase Production From Basidomycetes Fungiby one factor at a time method	Poster presentation
Prabha Prakash	CUSBAN 2016, Joint International Conference On Biotechnology And Neuroscience organized by CUSAT-NUS (December 19 – 21, 2016)	Participant
	Systems Oncology 2017 Integrated Approaches to Understand and Cure Cancer, 10 <sup>th</sup> – 12 <sup>th</sup> March, Hotel Holiday Inn, Cochin	Participant
	Indigenous Technologies for the Growth and Development of Kerala, Organised by SIBB R& D and KSCSTE on May 12 <sup>th</sup> , 2017	Participant
Sreelakshmi Sadanandan	Systems Oncology 2017 Integrated Approaches to Understand and Cure Cancer, 10 <sup>th</sup> – 12 <sup>th</sup> March, Hotel Holiday Inn, Cochin	Participant
	Indigenous Technologies for the Growth and Development of Kerala, Organised by SIBB R& D and KSCSTE on May 12 <sup>th</sup> , 2017	Participant
Bins K C	CUSBAN 2016, Joint International Conference On Biotechnology And Neuroscience organized by CUSAT-NUS (December 19 – 21, 2016)	Participant

### 15. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/Honour/Award	Awarding Agency
Aiswarya C	Best Poster award at 29 <sup>th</sup> Kerala Science Congress, held at Marthoma College, Thiruvalla	Kerala State Council for Science, Technology & Environment

**16. Sponsored Research Projects**

Sl. No.	Title	Sponsoring Agency	Amount (in lakhs)	Investigator(s)
1	Salmonella lytic bacteriophages for application as biocontrol agents	KSCSTE (Govt. of Kerala) PI <b>(Ongoing)</b>	17,40, 600/-	Dr. Sarita G Bhat- PI Dr. AAA Hatha -Col
2	Fine scale genetic structuring of mangrove tree <i>Avicennia marina</i> in ecologically important areas of Kerala coast	DST-SERB <b>(Ongoing)</b>	27,00,000/-	Dr. Sreekanth P.M. (PI)
3	Role of glutamate receptor and associated signaling pathways in Epstein-Barr virus mediated Oncogenesis	Ramalingam Re-entry fellowship <b>(Ongoing)</b>	88,00,000/-	Dr.Mohanan Valiyaveetil
4	Bioengineered calcium phosphate scaffold for T cell mediated immunotherapy of cholangiocarcinoma	DST-INSPIRE Faculty scheme <b>(Ongoing)</b>	35,00,000/-	Dr. AnushaAshokan
5	The role of gp130 - associated cytokines in the regulation of adult Neurogenesis-	KSCSTE <b>(Ongoing)</b>	23,00, 000/-	Dr. AjithVengellur and Dr.BabyChakrapani P S
6	Development of Antibacterial Catheters for Preventing Nosocomial Infections from Therapeutically Modulated Natural Rubber Latex Formulation	DBT-BIOCARE <b>(Ongoing)</b>	54,00,000/-	Dr. Sailaja G. S Dr. Sarita G Bhat Dr. AjithVengellur
7	Characterization of gonadotropin releasing hormone and kipeptin systems in the catfish: <i>Heteropneustess fossilis</i> : crosstalks and interactions in the control of gonadotropin secretion	<b>DST (Ongoing)</b>	49,85,000/-	Dr. K.P Joy with BHU Dr. Sarita G Bhat



8	Search for novel anticancer Secondary metabolite from endophytic fungi of selected marine algae and evaluation of action	<b>DBT (Sanctioned) With IISC Order to be released</b>	<b>30,732,00/-</b>	Dr. Jayabhaskaran (IISc) Dr. Sarita G.Bhat
9	<b>Special Cell culture facility sanctioned</b> by University under the Research intensive departments scheme	<b>University</b>	36,00,000/-	Dr. AjithVengellur and Dr. Baby Chakrapani P S
10	<b>State of the art- Animal house facility-modernization</b>	<b>University</b>	10,00,000/-	Dr. AjithVengellur and Dr. Baby Chakrapani P S
11	Evaluation of the effects of lineage committed progenitor cells upon transplantation in rat spinal cord injury and Parkinson's disease models	<b>KSCSTE (Under Review)</b>		Dr. Lissy Krishnan, Dr. AjithVengellur and Dr. Baby Chakrapani P S
12	Investigating the Role of Hypoxia Inducible Factor alpha in Neuronal Homeostasis under Normoxia using Primary cortical Neuronal Culture -	<b>UGC (Under Review)</b>		Dr. Ajith Vengellur
13	Screening and Isolation of Potential bioactive molecules from the Deep sea organisms including bacteria	(MOES) Govt. of India (2012-2016) Completed	87,50,000/-	Dr. Sarita G Bhat -PI
14	Repressor element-1 silencing transcription factor (REST) in Epstein-Barr virus (EBV) biology and pathogenesis	<b>DST (Under review)</b>		Dr. Mohanan V. Veettil Dr. Sarita G. Bhat

## 17. Others

### A. MoUs signed with the following institutions

1. With Amrita Institute of Medical Science and
2. SreeChitraTirunal Institute for Medical Sciences and Technology (SCTIMST)

### B. Project with private companies: 2

### C. Collaboration



- i. Centre for studies in Advanced Materials-CUSAT and
- ii. Inter University centre for nanomaterials and devices-CUSAT

### 18. Research Programmes and Activities:

S. No.	Problem / Topic	Investigator (s)
1	Plant Biotechnology	Dr. Padma Nambisan
2	Microbial Genetics-Metagenomics for diversity and function, Horizontal Gene Transfer, phage host interactions, CRISPRs, bioactive compounds from marine organisms	Dr. Sarita. G. Bhat
3	Molecular Neurobiology (neural stem cells and Neuro degenerative diseases)	Dr. Baby Chakrapani P. S.
4	Molecular cell biology and applied biotechnology	Dr. AjithVengellur
5	Neuroendocrinology	Dr. K.P. Joy
6	Virology	Dr. Mohanan V. Veetil
7	Application of nanotechnology for cancer immunotherapy	Dr. Anusha Ashokan
8	Population genetics, Molecular ecology, Speciation genetics, Conservation biology and Barcoding	Dr. Sreekanth PM

### 19. Seminar/ Conference/ Workshop/ Refresher Courses/other programs conducted by the Department-

Sl. No.	Title	Duration	Coordinator	Funding Agency
1	Open house and talks to celebrate silver jubilee of Department	8 <sup>th</sup> Sept, 2016	Dr. Sarita G Bhat	UGC
2	CUSAT-NUS-International conference CUSBAN-2016	19-21 <sup>st</sup> Dec, 2016	Dr. Ajith Vengellur	UGC, DST, DBT





## DEPARTMENT OF CHEMICAL OCEANOGRAPHY

### 1. Brief History of the Department:

The Department of Chemical Oceanography is one of the five Departments in the School of Marine Sciences of the Cochin University of Science and Technology. Though the history of School of Marine Sciences starts from 1938 with the establishment of the Oceanographic Laboratory in the erstwhile Travancore University, the Chemical Oceanographic Research was initiated only in 1970s. The present Department of Chemical Oceanography was established in 1996 during the reorganization of the School of Marine Sciences. The first course in the field, the M.Phil. (Chemical Oceanography), was started in 1983. The Department of Chemical Oceanography has excellent facilities for training, research and consultancy in chemical studies on diverse aspects of the environment and has pioneered investigations in areas of nutrient chemodynamics, phase exchange of aquatic pollutants, biogeoorganics, trace metal speciation, marine natural products, aerosols etc., and has contributed valuable inputs into the National/International Database.

The Department of Chemical Oceanography has credentials of rich expertise in hydrochemical analysis for well over two decades. It has well qualified and experienced scientific personnel as well as analytical facilities that include several sophisticated instruments. As part of its extension activities in the context of the national responsibility to provide clean and pure drinking water, the Department is undertaking the testing of river/ well-water samples to enable public to ascertain the potable quality or otherwise of the freshwater sources that punctuate length and breadth of the state.

Sophisticated instrumental facilities available in the Department include UV – VIS Spectrometers, AAS, GC, HPLC, GCMS, LCMS, FTIR, Electrophoresis, High Speed Centrifuge, Rotary Evaporator, ICP AAS etc.

### 2. Programmes of Study/Research:

M.Sc. (Hydrochemistry) M.Phil. (Marine Chemistry)

Doctoral and Post-Doctoral Research

**3. Faculty Members**

Sl. No.	Name	Designation	Qualification	Specilisation
1	Dr. S. Muraleedharan Nair	Professor & Head	M.Sc., Ph.D.	Chemical Oceanography, Marine organic compounds, Chemo-nutrient cycling/speciation, Marine natural products, Mangrove Systems
2	Dr. C.H. Sujatha	Professor	M.Sc., Ph.D	Chemical Oceanography, Marine organic chemistry, Pesticides in the aquatic chemistry, Aerosol Chemistry
3	Dr. Habeeb Rahman K	Assistant Professor	M.Sc., Ph.D	Geochemistry

**4. Emeritus Professor/Scientist (if any)**

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. N. Chandramohanakumar	Emeritus Professor	M.Sc., Ph.D	Chemical Oceanography, Analytical Techniques, Theoretical & Physical Chemistry
2	Dr. Jacob Chacko	Emeritus Professor	M.Sc., Ph.D	Chemical Oceanography, Analytical Techniques, Organic Chemistry

**5. Research Staff**

Sl.No.	Name	Designation	Qualification	Specialisation
1	Dr. Manju Mary Joseph	PDF	M.Sc., Ph.D	Organic Geochemistry
2	Dr. Salas P M	PDF	M.Sc., Ph.D	Marine Chemistry

**6. Research Scholars**

Sl.No.	Name	Funding Agency	Guide	Area of Work
1	Anu Susan Cheriyan	MANF	Dr. N. Chandramohanakumar	
2	Arsha Krishnan	E – Grants	Dr. C.H. Sujatha	



3	Bindu B Nayar	Part – Time	Dr. N. Chandramohanakumar	
4	Dayala V T	CUSAT - UJRF	Dr. C.H.Sujatha	
5	Dibu Divakaran	MoES	Dr. C.H. Sujatha	
6	Divya K R	CUSAT - UJRF	Dr. N. Chandramohanakumar	
7	Eldhose Cheriyan	Full – Time	Dr. C. H. Sujatha	
8	Jacob Joshua	CUSAT – UJRF	Dr. C. H. Sujatha	
9	Leena P P	Part – Time	Dr. S. Muraleedharan Nair	
10	Libin Baby	Part – Time	Dr. T.V.Sankar & Dr. N Chandramohanakumar	
11	M.G. Rajamanickam	Part – Time	Dr. N. Chandramohanakumar	
12	Maneesh T P	Part – Time	Dr. P. Seralathan	
13	Manu Mohan	CUSAT - UJRF	Dr. S Muraleedharan Nair	
14	Mohammed Akber K.I.N	Part – Time	Dr. S. Muraleedharan Nair	
15	Moushmi K S	RGNF	Dr. N. Chandramohanakumar	
16	Movitha M	Part - Time	Dr. S. Muraleedharan Nair	
17	Nisa K G	E-Grants	Dr. C. H. Sujatha	
18	Nisari A R	KSCSTE	Dr. C. H. Sujatha	
19	Ragi A S	DST	Dr. S. Muraleedharan Nair	
20	Renjith P K	Part – Time	Dr. N. Chandramohanakumar	
21	Saritha S	CSIR	Dr. S. Muraleedharan Nair	
22	Shameem K	CUSAT – UJRF	Dr. S. Muraleedharan Nair	
23	Shibini Mol P A	CSIR	Dr. C. H. Sujatha	
24	Sudheesh V	Full – Time	Dr. S. Muraleedharan Nair	

**7. Administrative Personnel**

Sl.No.	Designation	No. of Posts
1	Assistant Section Officer	1
2	Lab Assistant	1
3	Computer Assistant	1
4	Office Attendant	1

**8. Technical Personnel**

Sl.No.	Designation	No. of Posts
1	Technical Assistant(Grade 1)	1

**9. Student Enrollment**

Sl.No.	Programme of Study	Men	Women	Total
1	M.Sc. (Hydrochemistry)	7	21	28
2	Ph.D.	11	13	24
3.	M. Phil. (Marine Chemistry)	2	6	8

**10. Research Facilities****a. Laboratories**

<b>Major Scientific Equipments in the Department of Chemical Oceanography, CUSAT</b>
<b>Instruments</b>
Rotary Evaporators
Atomic Absorption Spectrophotometer
GC Autosystem XL
Flame Photometer
<i>Deep Freezer X 3nos</i>
HPLC
Milli-Q system
Spectrophotometer(UV-VIS)
GC
Electronic Balance
ICP

**b. Library : Common Library for all departments in School of Marine Science Campus**



## 11. Distinguished visitors:

Sl.No.	Name	Affiliation
1	Dr. Sibi Kurian	Senior Scientist, NIO Goa
2	Dr. Renny Mathew	New York University, Abhudabi
3	Dr. A. Ajay Ghosh	Director, CSIR, NIST Trivandrum
4	Dr. P.P. Chandrachoodan	Member, Kerala State Innovation Council
5	Dr. Ashes Ganguly	President, Indian Analytical Association, Mumbai
6	Dr. Daisy Joseph	Scientist, Nuclear Physics Division, BARC
7	Dr. R. Rajeev	Head, Analytical lab Spectroscopy division, VSSC
8	Dr. Pradeep Kumar	Scientist Integrated Fuel Fabrication Facility, BARC
9	Dr. G. Ramakrishnan	President, Chromatographic Society, India
10	Dr. Vishnu Murthy Matta	Professor, Goa University
11	Dr. Nisha Mathew	Scientist, VCRC, Pondicherry

## 12. Ph.Ds Awarded

Sl. No	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Characterization and quantification of major biochemical Components and secondary metabolites of sum green and red seaweeds from the Kerala coast.	Abhilash P Kailas	Dr. S. Muraleedharan Nair
2	Chemical investigations of the Marine sponge <i>Axinella carteri</i> from Lakshadweep Archipelago	Anuradha V	Dr. S. Muraleedharan Nair
3	Chemistry and bioactivity of natural products from the Gorgonian coral <i>subergorgia reticulata</i> .	Byju K	Dr. N. Chandramohanakumar



4	A Breakthrough Investigations in the Assessment of Aerosol Constituents in the reall of Kochi.	Gayathree Devi P K	Dr. C. H. Sujatha
5	Dynamics and fractionation of heavy metals in the upper reaches of Muvattupuzha – A Tropical River.	Josekutty Ozhukayil	Dr. N. Chandramohanakumar
6	Anticancer Potential of Sterols isolated from Turbinaria Caonoides against Lung and Liver Cancer	Kala K Jacob	Dr. N. Chandramohanakumar
7	Biomarker Geochemistry of Core Sediments in the Mangrove Ecosystems along Northern Kerala Coast.	Manju M N	Dr. N. Chandramohanakumar
8	Bioactive Metabolites and Biomarkers from Rhizophoralea Mangroves – a Chemotaxonoxic Approach.	Nebula Murukesh	Dr. N. Chandramohanakumar
9	Fingerprinting of mangrove Ecosystems along Northern Kerala Coast using Biomarker Approach.	Reshmi P	Dr. N. Chandramohanakumar
10	Provenance Isolation and charecterisation of organic matter in the cochin Estoarine sediment – “ a diagenetic amino acid marker scenario”.	Salas P M	Dr. C. H. Sujatha
11	Characterization, sources and potential risk assesment of Aliphatic Hydrocarbons and Polycyclic Aromatic Hydrocarbons in Surface Sediments of Chitrapuzha River of the South Coast of India.	Sanil Kumar K S	Dr. S. Muraleedharan Nair



### 13. Publications

#### a) Papers

Name	Name of Paper
Dr. S. Muraleedharan Nair	<b>1. Sanil Kumar K.S., Nair S. M., Salas P.M. and Eldhose Cheriyan. 2017.</b> Distribution and sources of sedimentary organic matter in Chitrapuzha, a tropical tidal river, south west coast of India. <b>Environmental Forensics.</b> 18:452-146
	<b>2. Ragi A. S., Leena P.P., Eldhose Cheriyan and Nair S. M and N.C. kumar. 2017.</b> Heavy metal concentrations in some gastropods and bivalves collected from the fishing zone of South India. <b>Marine Pollution Bulletin.</b> 118:452-458
	<b>3. Manju Mary Joseph, K.R. Renjith, Gaby John, S.M. Nair and N.C.kumar. 2017.</b> Biodiesel prospective of five diatom strains using growth parameters and fatty acid profiles. <b>Biofuels.</b> 8(1): 81-89
	<b>4. Prashob Peter K.J., Kala K.J., Nair S. M. 2016.</b> Cytotoxic potential of humic acid synthesized silver nano plates against Dalton's Lymphoma Ascites. <b>International Journal of Toxicological and Pharmacological Research,</b> 8(6): 425-429
	<b>5. Abhilash P. Kailas and Nair S.M. 2016.</b> HPLC profiling of antimicrobial and antioxidant phyco sugars isolated from the South West coast of India. <b>Carbohydrate Polymers.</b> 151: 584- 592

Name	Name of Paper
Dr. N. Chandramohana kumar	<b>1. Manju Mary Joseph, K R Renjith, Gaby John, S Muraleedharan Nair, N Chandramohanakumar. 2017.</b> Biodiesel prospective of five diatom strains using growth parameters and fifty acids profiles. 8(1), 81-89.
	<b>1. Ramzi, K. Habeeb Rahman, T.R. Gireeshkumar, K.K.Balachandran, Chacko Jacob, N. Chandramohanakumar. 2017.</b> Dynamics of polycyclic aromatic hydrocarbons (PAHs) in surface sediments of Cochin estuary, India. <b>Marine Pollution Bulletin,</b> 114(2), 1081-1087.
	<b>2. C.S.Ratheeshkumar, N.Chandramohanakumar, K. R. Renjith, V. Sudheesh, Anu Shaji, Ejin George, Manju Mary Joseph. 2016.</b> Geomechanical distribution, bioavailability and potential toxicity of some trace metals in a coplex micro – tidal estuary, South west India <b>K. Toxicological &amp; Environmental Chemistry.</b>



	<p><b>3. K.R. Renjith, Joseph Manju Mary, C.S. Ratheesh Kumar, C.S. Ratheesh Kumar, M.N Manju, N. Chandramohanakumar. 2016. Nutrient Distribution and Bioavailability in a Tropical Microtidal estuary. Journal of Coastal Research, 32(6), 1445 - 1455</b></p>
	<p><b>4. P. Resmi, M.N. Manju, T.R. Gireeshkumar, C.S. Ratheesh Kumar, M. Movitha, K. Shameem, N. Chandramohanakumar.2016. Environmental Monitoring and Assessment, 188(6), 366</b></p>
	<p><b>5. P.Resmi, M.N.Manju, T.R. Gireeshkumar, C.S Ratheesh Kumar, N Chandramohanakumar.2016. Source characterisation if sedimentary organic matter in mangrove ecosystems of northern Kerala, India: Inferences from Bulk characterisation and hydrocarbon biomarkers. Regional Studies in Marine Sciences. 7, 43-54.</b></p>

#### 14. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. C.H. SUJATHA	NATIONAL CONFERENCE AND 33 rd CONVENTION OF INDIAN ASSOCIATION OF SEDIMENTOLOGISTS WITH EMPHESIS IN "ENERGY RESOURCES &CLIMATE CHANGE " (BANARAS HINDU UNIVERSITY,VARANASI)	CO-ORDINATOR
DAYALA V T	NATIONAL CONFERENCE AND 33 rd CONVENTION OF INDIAN ASSOCIATION OF SEDIMENTOLOGISTS WITH EMPHESIS IN "ENERGY RESOURCES &CLIMATE CHANGE " (BANARAS HINDU UNIVERSITY,VARANASI)	PRESENTATION
JACOB JOSHUA	NATIONAL CONFERENCE AND 33 rd CONVENTION OF INDIAN ASSOCIATION OF SEDIMENTOLOGISTS WITH EMPHESIS IN "ENERGY RESOURCES &CLIMATE CHANGE " (BANARAS HINDU UNIVERSITY,VARANASI)	PRESENTATION
ARSHA KRISHNAN	NATIONAL SEMINAR ON "ZERO EFFLUENT DISCHARGE TECHNOLOGIES " (SCHOOL OF ENVIRONMENTAL STUDIES),CUSAT	PARTICIPATION





NISA K.G	NATIONAL SEMINAR ON "ZERO EFFLUENT DISCHARGE TECHNOLOGIES " (SCHOOL OF ENVIRONMENTAL STUDIES),CUSAT	PARTICIPATION
ARSHA KRISHNAN	NATIONAL SEMINAR ON "MARINE ECOSYSTEM HEALTH (MEH- 2017) (DEPARTMENT OF MARINE BIOLOGY,MICROBIOLOGY & BIOCHEMISTRY, CUSAT)	PARTICIPATION
MOUSHMI K S	NATIONAL SEMINAR ON "MARINE ECOSYSTEM HEALTH (MEH-2017) (DEPARTMENT OF MARINE BIOLOGY, MICROBIOLOGY & BIOCHEMISTRY, CUSAT)	PRESENTATION
DIVYA K R	NATIONAL SEMINAR ON "MARINE ECOSYSTEM HEALTH (MEH-2017) (DEPARTMENT OF MARINE BIOLOGY, MICROBIOLOGY & BIOCHEMISTRY, CUSAT)	PARTICIPATION
ARSHA KRISHNAN	NATIONAL WORKSHOP ON EMERGING TRENDS IN CHROMATOGRAPHICS TECHNIQUES (INDIAN SOCIETY OF ANALYTICAL SCIENTISTS& DEPARTMENT OF CHEMICAL OCEANOGRAPHY)	PARTICIPATION
MANU MOHAN	NATIONAL WORKSHOP ON EMERGING TRENDS IN CHROMATOGRAPHICS TECHNIQUES (INDIAN SOCIETY OF ANALYTICAL SCIENTISTS& DEPARTMENT OF CHEMICAL OCEANOGRAPHY)	PARTICIPATION
NISA K G	NATIONAL WORKSHOP ON EMERGING TRENDS IN CHROMATOGRAPHICS TECHNIQUES (INDIAN SOCIETY OF ANALYTICAL SCIENTISTS& DEPARTMENT OF CHEMICAL OCEANOGRAPHY)	PARTICIPATION
ELDHOSE CHERIYAN	NATIONAL WORKSHOP ON EMERGING TRENDS IN CHROMATOGRAPHICS TECHNIQUES (INDIAN SOCIETY OF ANALYTICAL SCIENTISTS& DEPARTMENT OF CHEMICAL OCEANOGRAPHY)	PARTICIPATION
SHAMEEM K	NATIONAL WORKSHOP ON EMERGING TRENDS IN CHROMATOGRAPHICS TECHNIQUES (INDIAN SOCIETY OF ANALYTICAL SCIENTISTS& DEPARTMENT OF CHEMICAL OCEANOGRAPHY)	PARTICIPATION



MOUSHMI K S	NATIONAL WORKSHOP ON EMERGING TRENDS IN CHROMATOGRAPHICS TECHNIQUES (INDIAN SOCIETY OF ANALYTICAL SCIENTISTS& DEPARTMENT OF CHEMICAL OCEANOGRAPHY)	PARTICIPATION
DIVYA K R	NATIONAL WORKSHOP ON EMERGING TRENDS IN CHROMATOGRAPHICS TECHNIQUES (INDIAN SOCIETY OF ANALYTICAL SCIENTISTS& DEPARTMENT OF CHEMICAL OCEANOGRAPHY)	PARTICIPATION
MOVITHA M	NATIONAL WORKSHOP ON EMERGING TRENDS IN CHROMATOGRAPHICS TECHNIQUES (INDIAN SOCIETY OF ANALYTICAL SCIENTISTS& DEPARTMENT OF CHEMICAL OCEANOGRAPHY)	PARTICIPATION
RAMZI A	NATIONAL WORKSHOP ON EMERGING TRENDS IN CHROMATOGRAPHICS TECHNIQUES (INDIAN SOCIETY OF ANALYTICAL SCIENTISTS& DEPARTMENT OF CHEMICAL OCEANOGRAPHY)	PARTICIPATION
DAYALA V T	NATIONAL WORKSHOP ON EMERGING TRENDS IN CHROMATOGRAPHICS TECHNIQUES (INDIAN SOCIETY OF ANALYTICAL SCIENTISTS& DEPARTMENT OF CHEMICAL OCEANOGRAPHY)	PARTICIPATION
SARITHA S	NATIONAL WORKSHOP ON EMERGING TRENDS IN CHROMATOGRAPHICS TECHNIQUES (INDIAN SOCIETY OF ANALYTICAL SCIENTISTS& DEPARTMENT OF CHEMICAL OCEANOGRAPHY)	PARTICIPATION
RAGI A S	NATIONAL WORKSHOP ON EMERGING TRENDS IN CHROMATOGRAPHICS TECHNIQUES (INDIAN SOCIETY OF ANALYTICAL SCIENTISTS& DEPARTMENT OF CHEMICAL OCEANOGRAPHY)	PARTICIPATION
SALAS P M	NATIONAL WORKSHOP ON EMERGING TRENDS IN CHROMATOGRAPHICS TECHNIQUES (INDIAN SOCIETY OF ANALYTICAL SCIENTISTS& DEPARTMENT OF CHEMICAL OCEANOGRAPHY)	PARTICIPATION
RAGI A S	INDIAN SCIENCE CONGRESS(104)	PARTICIPATION
RAMZI A	INDIAN SCIENCE CONGRESS(104)	PARTICIPATION



MOUSHMI K S	NATIONAL WORKSHOP ON MUDBANKS OF KERALA (NATIONAL INSTITUTE OF OCEANOGRAPHY)	PARTICIPATION
ANU SUSAN CHERIYAN	NATIONAL WORKSHOP ON MUDBANKS OF KERALA (NATIONAL INSTITUTE OF OCEANOGRAPHY)	PARTICIPATION
SHAMEEM K	SCIENCE ACADEMICS LECTURE WORKSHOP ON COMPUTATIONAL QUANTUM CHEMISTRY(SACRED HEART COLLEGE), THEVARA	PARTICIPATION
SHAMEEM K	COMPUATATIONAL CHEMISTRY AND APPLICATIONS	PARTICIPATION
DIVYA K R	NEXTGEN GENOMICS,BIOLOGY,BIOINFORMATICS AND TECHNOLOGIES(NGBT) CONFERENCE),COCHIN,INDIA	PARTICIPATION
DIVYA K R	36TH ANNUAL CONFERENCE OF INDIAN ASSOCIATION FOR CANCER RESEARCH, AMALA CANCER RESEARCH CENTRE	PARTICIPATION
ARSHA KRISHNAN	ORGANIC FARMING' ORGANISED (BIOWIN AGRO RESEARCH)	RESOURCE PERSON
NISA K G	ORGANIC FARMING' ORGANISED (BIOWIN AGRO RESEARCH)	RESOURCE PERSON

### 15. Role of Faculty in International / National organizations / Institutions / Editorial Boards:

SI. No.	Name of Book/Journal	Name of Faculty
1	Indian Journal of Geomarine Sciences	Dr.N.Chandramohanakumar, Editorial Board

### 16. Awards/ Honours/ Fellowships etc. received:

Name of Recipient	Name of Fellowship/ Honour /Award	Awarding Agency
Sudheesh V.	NF-POGO (The Partnership for Observation of the Global Oceans) – Fellowship	Scientific Committee Oceanic Research, Germany
Dr.Deepulal.P.M	Training course on Marine Radiochemistry, June 8-10, 2016	State Key Laboratory of Marine Environmental Science, Xiamen University, Xiamen China



Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	Detection of DMSP production in phytoplankton species using ddd gene encoding primers	DBT, Govt. India (2014-2017)	4037140	Dr. C.H. Sujatha

**17. Sponsored Research Projects:****18. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department.**

Sl. No.	Title	Duration	Coordinator	Funding Agency
1	National Workshop on Emerging Trends in Chromatographics Techniques (Indian Society of Analytical Scientists & Department of Chemical Oceanography)	One day	Dr. N. Chandramohana kumar	KSCSTE

**19. Consultancy Work**

Sl. No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
1	Marine Monitoring in connection with Cochin Shipyard Project	Department of Chemical Oceanography	Asian Consulting Engineers Pvt. Ltd. New Delhi.



## DEPARTMENT OF COMPUTER APPLICATIONS

### 1. Brief History of the Department

Computer Applications is one of the thrust areas in Science and Technology. In appreciation to its growing importance in business and industrial scenario, the University established Department of Computer Applications to facilitate Research and Human Resource Development in the subject. The Department offers Master's Programme in Computer Applications (M.C.A.), M.Sc Computer Science with specialization in Soft Computing and Research programme leading to Ph.D.

The Department in its present form was founded in 01.01.1994 as one of the constituent department of School of Computer Science Studies, under the Faculty of Technology. Earlier from 11.04.1992, it was a division under the School of Mathematical Sciences. The University implemented the MCA Programme with substantial financial assistance, jointly from the UGC and DOE, Government of India.

### 2. Programmes of Study/Research

MCA

M.Sc Computer Science with specialization in Soft Computing Ph.D (Technology)

Ph.D (Science)

Ph.D (Library Science and Information Technology)

### 3. Faculty Members

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. A. Sreekumar	Associate Professor	M.Sc. M.Tech. Ph.D	Compiler Design Number Theory Cryptography
2	Dr. K.V. Pramod	Associate Professor	M.Sc. Ph.D	Simulation & Modelling Mathematical Morphology Image Processing Data Mining
3	Dr. B. Kannan	Associate Professor	M.Sc. M.Phil M.Tech Ph.D	Artificial Intelligence Graph Algorithms Language Computing Image Processing



4	Dr. Judy M V	Associate Professor	MCA M.Phil Ph.D	Big Data Analytics Data Mining Soft Computing Computation Biology
5	Dr. Sabu M K	Associate Professor	MCA Ph.D	Data Mining Rough Set Theory Artificial Intelligence
6	Smt. S. Malathi	Assistant Professor	M.C.A M.Tech.	Software Quality Assurance Software Project Management Software Engineering Language Computing
7	Smt. Rafidha Rahiman	Assistant Professor on Contract	MCA M.Tech	Information Systems Security
8	Smt Keerthy A S	Assistant Professor on Contract	MCA MPhil	Bio Informatics
9	Reshma M.R	Assistant Professor on Contract	M.Tech	Computer Science and Engineering
10	Reshma Sanu	Assistant Professor on Contract	MCA	Data Structures
11	Lekshmi H	Assistant Professor on Contract	MCA	System Programming

#### 4. Emeritus Professor/Scientist (if any)

SI.No.	Name	Designation	Qualification	Specialization
1	Dr. M. Jathavedan	Emeritus Professor	MSc Ph.D	Fluid Mechanics

#### 5. Visiting Faculty (if any)

SI.No.	Name	Designation	Qualification	Specialization
1	Neethu A.S	Guest Faculty	M.Tech	
2	Ninu G. Hari	Guest Faculty	M.Tech	
3	Manikandan A.G	Guest Faculty	M.Tech	
4	Merin Paul	Guest Faculty	M.Tech	
5	Hasna Paul	Guest Faculty	MCA	
6	Treesa Joseph	Guest Faculty	M.Tech	
7	Archana Krishnan	Guest Faculty	M.Tech	



## 6. Research Scholars

Sl. No	Name	Funding Agency	Guide	Area of Work
1	Aneurin Salim A L	Nil	Dr. K.V. Pramod	Mobile Computing
2	Arumughavelan S	Nil	Dr. K.V. Pramod	Building Automatic Innovative General Efficient Neural network and Pattern matching model applied to medical imaging in health care
3	Arun Madhu	Nil	Dr. A Sreekumar	Wireless Sensor Networks
4	Beena A.L.	Nil	Dr. S. Humayoon Kabir	Information Security
5	Bindu J.S	Nil	Dr. K.V. Pramod	Land Cover problem using Satellite Images
6	Binu Jacob	Nil	Dr. K.V. Pramod	Data Mining in location based services
7	Binu V.P	IHRD	Dr. A Sreekumar	Information Extraction from online Social Network
8	Deepika M.P	Nil	Dr. A Sreekumar	Visual Cryptography
9	Dhanya P.M	Nil	Dr. A Sreekumar	Natural Language Processing
10	Indukala Ramanath	Nil	Dr. M. Bhasi	Applying cognitive load theory to Computer Science Education in Schools
11	Jasir M.P	Nil	Dr. B. Kannan	Text to Speech Synthesis in Malayalam
12	Jessy George	Nil	Dr. A Sreekumar	Mobile Ad-Hoc Network Security
13	Jestin Joy	Nil	Dr. B. Kannan	Graph Algorithms and Applications
14	Jino P.J.	UJRF	Dr. B Kannan	A statistical approach to machine translation from English to Malayalam – Develop tools and new methodologies for machine translation



15	Krishna Kumar M.	Nil	Dr. K.V. Pramod	An Efficient Approach for Multilingual content Retrieval from Long Digital Audio Files using Vocal Query
16	Malalathi S.	Nil	Dr. B. Kannan	Software Visualization
17	Merin Cheriyan	Nil	Dr. B. Kannan	Grammatical Error Check for Malayalam
18	Parameswaran R	Nil	Dr. M. Jathavedan	Differential equations related to fluid Mechanics
19	Rajesh Kumar R	Nil	Dr. K.V. Pramod	Medical Image Processing
20	Reshmi S	Nil	Dr. B. Kannan	Neural Network based emotion detection cum 3D sound synthesizer
21	Santhosh Kumar M.B	Nil	Dr. B Kannan	Medical Imaging for Brain Tumour Detection & 3D Analysis
22	Sariga Raj	Nil	Dr. Jagathy Raj VP	Enterprise service oriented architecture
23	Shine K George	Nil	Dr Jagathy Raj VP	Personalized Media Extraction Framework based on Ontology
24	Shini Renjith	Nil	Dr. A Sreekumar	Research on Big Data and Contest aware Recommender Systems for Online Communities
25	Smiju I.S	Nil	Dr. M Bhasi	Software Project Management
26	Soumya George	UJRF	Dr. M. Sudheep Elayidom	An Efficient search Methodology for Big Data in Cloud Database
27	Soumya S	Nil	Dr. K.V. Pramod	Sentiment Analysis for Malayalam Language
28	Sreekala K.M	Nil	Dr. Varghese Paul	Development of a Novel Encryption Technique for the security enhancement of Multimedia using Conic Curves
29	Sukrith B	UJRF	Dr. A Sreekumar	Image Registration





30	Sunil Kumar R	FIP-UGC	Dr. M. Jathavedan	Graph Theory
31	Syam Sunder Iyer	Nil	Dr. M. Jathavedan	Fluid Mechanics
32	Tibin Thomas	Nil	Dr. M. Jathavedan	Topological Fluid Mechanics
33	Unnikrishnan K	Nil	Dr. K.V. Pramod	Implementation – Issue of Temporal Databases
34	Vijith T.K	UGC	Dr. K.V. Pramod	Unified approach for detection of image manipulation using metadata analysis
35	Vinu V.S	UGC	Dr. B. Kannan	Cross Lingual Information Retrieval between English and Malayalam
36	Sruthi S	UJRF	Dr. Binu Paul	Natural Language Processing
37	Ajilisa O A	UJRF	Dr. Jagathy Raj V P	Entity resolution in big data Analytics – Comparison of different Algorithms
38	Jean Jerald Vincent Etibou	Nil	Dr. A. Sreekumar	Adopting white label solution in Network Computing Infrastructure Ecosystem
39	Selin M	Nil	Dr. Preetha Mathew	Cyber Security
40	Anuraj Mohan	Nil	Dr. K V Pramod	Large Scale Machine Learning Approaches to Problems in Text and Social Network Mining

## 7. Administrative Personnel

Sl.No.	Designation	No. of Posts
1	Section Officer	1
2	Assistant Section Officer	1
3	Senior Grade Assistants	2
4	Office Superintendent (H.G)	1
5	Computer Assistant Gr.II	1
6	Junior Librarian	1
7	Office Attendant	2
8	Sweeper – cum – Cleaner	1



## 8. Technical Personnel

Sl.No.	Designation	No. of Posts
1	Programme Assistant	1
2	Technical Assistant Gr. III (Computer)	1
3	Technical Assistant Gr. II (Computer)	2
4	Technical Assistant Gr. II (Electrical)	1

## 9. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1	MCA II Semester	31	26	57
2	MCA IV Semester	37	36	73
3	MCA VI Semester	21	33	54
4	M.Sc Computer Science	1	12	13

## 10. Research Facilities

### a. Laboratories

#### Department Laboratory

The Department has a well-equipped laboratory, which is being constantly updated with the latest computers. At present the laboratory has 43 IBM Desktops based on Pentium IV with Windows XP, 30 AMD Athlon 64 bit PCs running Suse Linux 9.3, 3 Desktops IBM Thinkcentre Intel Pentium D, 12 TFL Orchid Intel Core 2 Duo Desktops, 1 IBM Thinkpad, 2 Acer Aspire 4736 Laptops, 30 Delta Computers with Intel Core 2 Duo Processor, 14 HCL Computers with Intel Core i3 Processor, 1 HCL ME L74 Laptop, 1 Acer Net book, 17 Keltron Computers with Intel Core i7 Processor, 3 iMac Computers with Intel Core i5 Processor, 11 All in one Computers with Intel Core i7 Processor, 15 Dell Optiplex 3020 MT with Intel Core i3 Processor, 20 Dell Optiplex 9020 MT with Intel Core i5 Processor, 25 HP Pro One 400 G1A, 9 Laserjet Printers and 2 Inkjet Printers. The Department provides 24 hour internet access to its students through a dedicated link to the campus network.

The Department has also at its disposal, modern state of the art equipment such as Multimedia Projector from Toshiba (1 No.), Hitachi (1No.), Optoma (1 No.), Sanyo (2 Nos.), Panasonic (2 Nos.), HCL Infocus (1 No.) to aid in the teaching process. Some of the sister Departments also seeks our help for their special needs.

Cybercrimes are increasing every day. But very few researchers are working in these areas. Still few are trained in these areas. Considering the need of the hour the Department set up a new laboratory for Cyber Forensic research and training. The



Department has currently one person working in this area and also we have one Associate Professor working in the related area. Digital Image Forensic software: Amped Authenticate, Cyber Forensics Analysis Software: Encase V7, Forensic Tool Kit (FTK-6) are some of the software used.

### b. Major Equipments

1. 1 Dell Poweredge 1950 Server, IBM X Series 255 Server Quad Processor based on Intel Xeon with Windows 2003 Server.
2. High Resolution Display Screen: 4K TV 55" screen
3. DSLR Camera
4. High-End Forensic Work Station: FRED, All in one field cyber forensic kit : VPER Kit, Write blockers kit with forensic duplicator : ULTRA Kit

### c. Library

	No. of Books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
Books	6217	282
Journals	14	-

## 11. Distinguished Visitors

Sl.No.	Name	Affiliation	Remarks
1	Dr. Niladri Sekhar Dash	Professor, Linguistics Research Unit Indian Statistical Institute, Kolkata	NCILC - 2017
2	Mr. Satish Babu	Former National President & Fellow, Computer Society of India	NCILC - 2017
3.	Ms. Shampa Sarkar	Chief Architect(DESS), TCS, Infopark, Kochi	NCILC - 2017
4.	Dr. D. Govind	Assistant Professor Amrita Viswa Vidyapeetham, Coimbatore	NCILC – 2017
5.	Mr. S Ganeshkumar	Chief General Manager Department of Information Technology, RBI, Mumbai	International Workshop Cyber Cube - 2017
6.	Dr. M Sethumadhavan	Head, Cybersecurity, Amrita University, Coimbatore	International Workshop Cyber Cube - 2017
7.	Mr. Jean Gerald Vincent Etibou	Network Engineer, Ivory Coast	International Workshop Cyber Cube - 2017



8.	Mr. N. Krishnan Moothathu	Director (Retd), Joint Cipher Bureau Ministry of Defense	International Workshop Cyber Cube - 2017
9.	Mr. Ezz El-Din Hemdan	Assistant Professor Faculty of Electronic Engineering Menofia University, Egypt	International Workshop Cyber Cube - 2017 Talk on Ethical Hacking
10.	Mr. A R S Iyer	Joint Director (Retd), Intelligence Bureau, Govt. of India	International Workshop Cyber Cube - 2017
11.	Mr. K Muhammed Y Safirulla IAS	District Collector Ernakulam	International Workshop Cyber Cube - 2017
12.	Mr. Pankaj Choudhary	Research Scholar, Digital Forensics Domain of Digital Forensics Lab, Defence Institute of Advanced Technology, Pune	International Workshop Cyber Cube - 2017
13.	Mr. Nithesh Kumar Bharadwaj	Research Scholar, Digital Forensics Domain of Digital Forensics Lab, Defence Institute of Advanced Technology, Pune	International Workshop Cyber Cube - 2017
14.	Mr. Bhupendra Singh	Research Scholar, Digital Forensics Domain of Digital Forensics Lab, Defence Institute of Advanced Technology, Pune	International Workshop Cyber Cube - 2017
15.	Dr. Jeny Rajan	Assistant Professor, Department of Computer Science & Engineering, NIT Karnataka, Managalore	Class on Short Introduction on Image Processing
16.	Mr. Ashish Agarwal	Forensics Analyst Cyint Technologies New Delhi	International Workshop Cyber Cube - 2017 5 Day Training on Fred Workstation, VPER Kit and Ultra Kit functionalities
17.	Mr. Nithin Chowhan	Principal Analyst Foundation Futuristic Technologies, New Delhi	2 Day Training on Amped Authenticate



## 12. Publications

### a. Papers

Sl. No.	Name of Paper	Impact Factor, if any
<b>Dr. B. KANNAN</b>		
1	Reshmi S, Kannan Balakrishnan, "Implementation of an inquisitive chatbot for database supported knowledge bases", Sadhanan Springer Vol 41-10, pages 1173 – 1178 (2016)	
2	Jino P J, Kannan Balakrishnan, "Offline Handwritten Recognition of Malayalam District Name – A Holistic Approach", International Journal of Engineering and Technology Vol 9-2, Pages 987-994 (2017)	
3	Malathi S, Kannan Balakrishnan, "Big Data Challenges: A Software Engineering perspective", International Journal of Control Theory and Applications Vol 10-8, Pages 249-255 (2017)	
4	MB Santosh Kumar, B.Kannan, "A Model knowledge Based System for Exchanging Agricultural Knowledge –A case study", International Journal of Control theory and Applications Vol 10-8, 2017-	
<b>Dr. A SREEKUMAR</b>		
1	Arun Madhu, A Sreekumar, "Guarding Architecture for Unattended Deployment Applications of Ad Hoc Networks: GARUD", Indian Journal of Science and Technology, Vol. 9- 33, pages 1-7, 2016	
2	V.P Binu, A Sreekumar "Secure and Efficient Secret Sharing Scheme with General Access Structures Based on Elliptic Curve and Pairing", Wireless Personal Communications – Springer, Vol 4/2017, Pages 1-13, 2017	
<b>Dr. JUDY M V</b>		
1	Suma, V. R., Renjith, S., Ashok, S., & Judy, M. V. (2016). Analytical Study of Selected Classification Algorithms for Clinical Dataset. <b>Indian Journal of Science and Technology</b> , 9(11) SJR : 0.273 ; IPP : 0.670 ; SNIP : 1.289	
2	Niranjana.R, Amal Prakash.N1,Sreeja Ashok, M.V.Judy," Exploring Key Gene Interactions Using Particle Swarm Optimization", <b>International Journal of Pharma Bio Sci</b> 2016 July ; 7(3): (B) 734 - 741 SJR: 0.274 ; IPP : 0.340 ; SNIP :0.538	



3	Vijayakumar, N. T., & Judy, M. V. (2016). Autism spectrum disorders: Integration of the genome, transcriptome and the environment. <b>Journal of the Neurological Sciences</b> Volume 364, Pages 167–176. <b>Elsevier Publication</b> . [SNIP: 0.936, SJR: 1.024, IF: 2.126]	
<b>Ms. MALATHI S</b>		
1	Malathi S, Kannan Balakrishnan, “Big Data Challenges: A Software Engineering perspective”, International Journal of Control Theory and Applications Vol 10-8, Pages 249-255 (2017)	

#### 14. Participation in Seminar/Conference/Refresher Courses etc. by Faculty/ Students

Name of Participant	Name of Seminar/ Conference/ Workshop	Role
Dr. B. Kannan	National Conference on Indian Language Computing 2017 (NCILC – 17), Organized by Department of Computer Applications, CUSAT, Feb 17-18, 2017.	Chair
Dr. K.V. Pramod	National Conference on Indian Language Computing 2017 (NCILC – 17), Organized by Department of Computer Applications, CUSAT, Feb 17-18, 2017.	Chair
	A Model of Legal and Procedural Framework for Cybercrime Investigation in India Using Digital Image Forensics Springer International Conference on Intelligent Computing and Applications (ICICA 2016), held at DYPatil College of Engineering, Akurdi, Pune during 20-22 December, 2016	Participant
	5 Day Training on Fred Workstation, VPER Kit and Ultra Kit functionalities	Participant
	2 Day Training on Amped Authenticate	Participant
Dr. A. Sreekumar	National Conference on Indian Language Computing 2017 (NCILC – 17), Organized by Department of Computer Applications, CUSAT, Feb 17-18, 2017.	Chair
Ms. S. Malathi	National Conference on Indian Language Computing 2017 (NCILC – 17), Organized by Department of Computer Applications, CUSAT, Feb 17-18, 2017.	Organising Committee Member
	Five day International Workshop “CYBER CUBE – 2017” Organized by Department of Computer Applications, CUSAT, March 23-27, 2017.	Participant



Dr. Judy M V	National Conference on Indian Language Computing 2017 (NCILC – 17), Organized by Department of Computer Applications, CUSAT, Feb 17-18, 2017.	Organising Committee Member
Dr. Sabu M K	National Conference on Indian Language Computing 2017 (NCILC – 17), Organized by Department of Computer Applications, CUSAT, Feb 17-18, 2017.	Organising Committee Member
Sri. Vijith T.K	National Conference on Indian Language Computing 2017 (NCILC – 17), Organized by Department of Computer Applications, CUSAT, Feb 17-18, 2017.	Participant
	Course on Cyber Crime Investigation and Digital Forensics, GIAN, NIT, Goa	Participant
	National Seminar on Cyber laws: Issues and Challenges Jan'17, School of Legal Studies, CUSAT	Participant
	A Model of Legal and Procedural Framework for Cybercrime Investigation in India Using Digital Image Forensics Springer International Conference on Intelligent Computing and Applications (ICICA 2016), held at DY Patil College of Engineering, Akurdi, Pune during 20-22 December, 2016	Participant
	Two day workshop on Intellectual Property Rights (IPR), Organized by MSME-Development Institute (Govt. of India, Ministry of Micro, Small & Medium Enterprises) Thrissur, 3 - 4 August 2016	Participant
	5 Day Training on Fred Workstation, VPER Kit and Ultra Kit functionalities	Participant
	2 Day Training on Amped Authenticate	Participant
Sri. Vinu V S	National Conference on Indian Language Computing 2017 (NCILC – 17), Organized by Department of Computer Applications, CUSAT, Feb 17-18, 2017.	Participant
	Five day International Workshop "CYBER CUBE – 2017" Organized by Department of Computer Applications, CUSAT, March 23-27, 2017.	Participant
Sri. Jino P.J	National Conference on Indian Language Computing 2017 (NCILC – 17), Organized by Department of Computer Applications, CUSAT, Feb 17-18, 2017.	Participant
	Five day International Workshop "CYBER CUBE – 2017" Organized by Department of Computer Applications, CUSAT, March 23-27, 2017.	Participant



Ms. Beena A L	National Workshop on Moodle conducted by Kerala University, 24 & 25 March, 2017	Participant
	National Workshop on Research Report Writing by KLA & Rajagiri College, 17 & 18 February 2017	Participant
Sri. Sukrith B	National Conference on Indian Language Computing 2017 (NCILC – 17), Organized by Department of Computer Applications, CUSAT, Feb 17-18, 2017.	Participant
	Massive Open Online Course on “Machine Learning Foundations: A Case Study Approach” via Coursera by University of Michigan	Participant
	Space Conference, December 2016, University of Hyderabad	Participant
	FDP on Foundation of Communication Engineering (5 days) at Rajagiri (RSET) November 2016	Participant
	ACM Workshop on Neural Network, Technopark, Trivandrum, August 2016	Participant
	International Workshop on Impulse Noise Reduction in Image Processing, Trichy August 2016	Participant
	Five day International Workshop “CYBER CUBE – 2017” Organized by Department of Computer Applications, CUSAT, March 23-27, 2017.	Participant
	5 Day Training on Fred Workstation, VPER Kit and Ultra Kit functionalities	Participant
	2 Day Training on Amped Authenticate	Participant
Ms.Shini Renjith	Faculty Development Programme (AICTE Approved) on “Use of ICT in Education for Online and Blended Learning” conducted by IIT Bombay	Participant
	Faculty Development Programme on “Concept Coaching” at SBCE, Pattoor conducted by ICT Academy of Kerala	Participant
	Faculty Development Programme conducted by Teaching Learning Centre, IIT Madras	Participant
	Massive Open Online Course on “Machine Learning Foundations: A Case Study Approach” via Coursera by University of Washington	Participant
	Workshop on “Data Analytics using R” at ICT Academy of Kerala, Technopark, Thiruvananthapuram	Participant





Sri.Jean Jerald Etibou	Five day International Workshop “CYBER CUBE – 2017” Organized by Department of Computer Applications, CUSAT, March 23-27, 2017.	Resource Person
Sri. Aneurin Salim A L	Five day International Workshop “CYBER CUBE – 2017” Organized by Department of Computer Applications, CUSAT, March 23-27, 2017.	Participant
	National Conference on Indian Language Computing 2017 (NCILC – 17), Organized by Department of Computer Applications, CUSAT, Feb 17-18, 2017.	Organising Committee Member
	Course on Cyber Crime Investigation and Digital Forensics, GIAN, NIT, Goa	Participant
	National Seminar on Cyber laws: Issues and Challenges Jan’17, School of Legal Studies, CUSAT	Participant
	5 Day Training on Fred Workstation, VPER Kit and Ultra Kit functionalities	Participant
	2 Day Training on Amped Authenticate	Participant

#### 14. Role of Faculty in International / National Organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
Dr. B. Kannan	CSI	Lifetime Member
	Indian Science Congress	Member
	ACM	Member
Dr. Sabu M K	Rough Set Society	Member
Dr. K V Pramod	Indian Science Congress	Member

#### 15. Seminar/Conference/Workshop/Refresher Courses conducted by the Department

Sl. No.	Title	Duration	Coordinator	Funding Agency
1	7 <sup>th</sup> National Conference on Indian Language Computing 2017 (NCILC – 17)	February 17-18, 2017	Dr. K.V Pramod	UGC & University
2	Five day International Workshop “CYBER CUBE – 2017”	March 23-27, 2017.	Dr. K.V Pramod	University
3	5 Day Training on Fred Workstation, VPER Kit and Ultra Kit functionalities	March 1 -5, 2017	Dr. K.V Pramod	NIL
4	2 Day Training on Amped Authenticate	March 2017	Dr. K.V Pramod	NIL



## DEPARTMENT OF COMPUTER SCIENCE

### 1. Brief History

The Department of Computer Science came into existence in 1984 with an M.Tech. programme in Computer and Information Sciences, which was the first in the state of Kerala. In 1986, the Department was identified by the Defense Research and Development Organization for conducting a M.Sc. programme in Computer Software, as a feeder course to the DRDO Laboratories. The department served as a seeding agent for the establishment of the Computer Centre, which was inaugurated by the then Prime Minister in 1990. The department was entrusted with the responsibility of conducting the MCA programme in June 1994, which helped to streamline the course and setting it into the right track. The B.Tech. course started in 1996, was given co-ordinating support by the department in the branch of Computer Science & Engineering. M.Tech. programme in Software Engineering sponsored by UGC was also started in the academic year 2000-2001. M.Tech programme in Computer Science with Specialization in Embedded Systems (Part Time) was started in the year 2011.

Ph.D. programme in the areas of Artificial Intelligence, Networking, Information Systems Engineering, VLSI, etc. are being pursued.

The department has so far received grants to the tune of Rs. 10 crore from various national agencies. The INFOCUS project with support from the Netherlands Government and collaboration of the Delft University of Technology was piloted by the department.

The campus Intranet, the CUSAT website, the campus intercom system were all initiated and commissioned by the department. The Centre for Information Resource Management was proposed and nurtured by the department.

The department provides technical expertise and support to various Government/ Quasi- government bodies.

### 2. Programmes of Study/Research

1. M.Tech. Computer and Information Science
2. M.Tech. Software Engineering
3. M.Tech Computer Science with Specialization in Embedded Systems (Part Time)



## 4. Ph. D

## 3. Faculty Members

Sl. No.	Name	Designation	Qualification	Specialisation
1	Dr. Sumam Mary Idicula	Professor	M.Tech., Ph.D	Natural language Processing, Human Computer Interaction
2	Mr.K.B.Muralidharan	Assistant Professor	M.Tech.	Artificial Intelligence
3	Dr. G. Santhosh Kumar	Assistant Professor	M.Tech. Ph.D	Software Engineering, Wireless Mobile Networks
4	Dr.Jereesh.A.S	Assistant Professor	M.Tech. Ph.D	CSE, Bio Informatics
5	Sri. Jyothis.V	Assistant Professor	M.Tech	Computer Science and Data Processing
6	Mrs. Athira.B	Lecturer (on contract)	M.Tech	Software Engineering
7	Mrs. Pooja Jayaprakash	Lecturer (on contract)	M.Tech	Cyber Security

## 4. Research Scholars (Full Time &amp; Part-time)

Sl. No.	Name	Guide	Area of Work
1	Daleesha M.Viswanathan	Dr.Sumam Mary idicula	Human computer Interaction
2	Mohan K.	Dr. K.Poulose Jacob	Software Engineering
3	Mini U.	Dr. K. Poulose Jacob	Information Science
4	Prime Kumar	Dr.Sumam Mary idicula	Neural Networks
5	Sindhu L.	Dr.Sumam Mary idicula	Natural Language Processing
6	Lini Varghese	Dr. K. Poulose Jacob	Mobile Computing
7	Vimina E.R	Dr. K. Poulose Jacob	Computer Vision
8	Anupama Surendran (FT)	Dr. Philip Samuel	Object Oriented Program Testing
9	Pradeep M	Dr. David Peter	Adaptive MAC in Adhoc Wireless Networks



10	Vinod Kumar.P.P	Dr.K.Paulose Jacob	Parallel MD Simulation algorithms
11	Thresiamma.K.George	Dr.M.D.Baby	Data base Security
12	Saju.P.John	Dr.Philip Samual	Current problems in advanced authentication techniques in wired /wireless networks
13	Asha Das	Dr.David Peter	Medical Image Registration Application to SPECT and MRI Images
14	Sunitha. E.V	Dr. Philip Samuel	Object Oriented Modeling and Design
15	Renu George	Dr. Philip Samuel	Compiler Design
16	Manju.K	Dr. David Peter	Natural Language Processing
17	Jyothi John	Dr. David Peter	Distributed Computing
18	Manoj Ray D (F.T)	Dr. Philip Samuel	Cost Estimation for Global Software Development
19	Murali Mohanan	Dr. Philip Samuel	Effective and Improved Requirement Engineering
20	Jayasree.K (F.T)	Dr.Sumam Mary Idicula	Video Classification and Retrieval using Multimodal Analysis
21	Jisha P Abraham	Dr.Sheena Mathew	Computer Architecture and Parallel Processing
22	Vipin Kumar.K.S	Dr.Sheena Mathew	Software Engineering
23	Pramod Pavithran	Dr.Sheena Mathew	Network Security and Cryptography
24	Sminu Isudheen	Dr.Sheena Mathew	Data Mining
25	Anil.C.B	Dr.Sheena Mathew	Localization, Object Tracking and Time Synchronization in Wireless Sensor Network
26	Jayaprabha.P	Dr. K. Poullose Jacob	Computer Generated Holograms and its applications
27	Sr. Thresiamma Devasia	Dr.Tessamma	Automatic early stage Glaucoma Detection using Iimage Processing Techniques
28	Preetha K G	Dr.A.Unnikrishnan	Mobile Adhoc Networks
29	Deepa Elizebeth George	Dr.A.Unnikrishnan	Multi Sensor Data Fusion



30	Brighty Jose	Dr. M.D Baby	Re Engineering Public Library System in Kerala
31	Jacob Mathew	Dr. Rekha K James	Low Power IC Design
32	Deepa T	Dr.A.Unnikrishnan	Cluster –based Outlier Mining
33	Janardhanan.P.S	Dr. Philip Samuel	Multi Core Adaptability of Operating Systems
34	Shimmi Asokan	Dr.G Santhosh Kumar	Formal Specification and Verification of Software System
35	Sobha.T	Dr.A.Unnikrishnan	Development of Effective Models For Image Understanding
36	Saritha.S	Dr.G Santhosh Kumar Dr. Rekha K James	Studies in Spatiotemporal Data Mining
37	Sonia Abraham	Dr. Rekha K James	Investigations on Data Mining and its applications in novel platforms
38	Mary Priya Sebastian	Dr.G Santhosh Kumar	Linguistics knowledge based Machine Translator for Malayalam
39	Kochaleema K H	Dr.G Santhosh Kumar	Modeling and Verification of Embedded Systems
40	Binu.A	Dr.G Santhosh Kumar Dr. Rekha K James	Energy-Aware incremental compilation techniques for Mobile Processor
41	K.B Muralidharan	Dr.G Santhosh Kumar	Low-Latency Processing of Event Streams
42	Vinu Paul M V	Dr.G Santhosh Kumar	Mapping of Cyber Space Geometry through High Speed Network Traffic Analysis
43	Suresh Kumar.N	Dr.G Santhosh Kumar	Communication Protocol frame work for cyber physical systems
44	Muhammed Anees V (F.T)	Dr.G Santhosh Kumar	Real time analysis of surveillance video and detection of abnormalities in high density crowds
45	Namitha K (F.T)	Dr.G Santhosh Kumar	Weather Forecasting Using Machine Learning Methods



46	Ajees.A.P (F.T)	Dr.Sumam Mary Idicula	Intelligent Language Processing
47	Sreela S.R (F.T)	Dr.Sumam Mary Idicula	Automatic image description generation using Computer version and computational linguistics
48	Athira B	Dr.Sumam Mary Idicula	Data Mining
49	Graham.G (F.T)	Dr.Sumam Mary Idicula	Spatial Data Mining
50	Anu Maria Sebastian	Dr. David Peter	Intelligent Agent for Data Protection in the Cloud based on Data Classification
51	Malu S Nair	Dr.Sumam Mary idicula	Summarization of Malayalam Text to Indian Sign Language Structure.
52	Sara Renjit	Dr.Sumam Mary idicula	Application of Information Retrieval Methods and Similarity Identification Methods in Document Search
53	Sindhya K Nambiar	Dr. David Peter	Simulation Optimization

## 5. Administrative Personnel

Sl. No.	Designation	No. of posts
1	Section Officer	1
2	Assistant	2
3	Office Superintendent (Typist)	1
4	Office Attendant	1 (vacant)
5	Sweeper/Cleaner	1(vacant)

## 6. Technical Personnel

Sl. No.	Designation	No. of posts
1	Tech. Officer Gr. I	1
2	Tech. Asst. Gr. II	2
3	Tech. Asst. Gr. III	3
4	Junior Librarian	1



## 7. Students Enrollment

Sl. No.	Programme of Study	Men	Women	Total
1	<b>M.Tech. Degree in Computer and Information Science</b>			
	2016-2018 batch	1	14	15
2	M.Tech. Degree in Software Engineering			
	2016-2018 batch	1	12	13
3	<b>M.Tech Degree in Computer Science with Specialization in Embedded Systems (Part Time)</b>			
	2016-18	0	0	0
4	<b>Ph. D</b>			
	2016	0	4	4

## 8. Research Facility

### A. Laboratory

The research laboratories have been developed/augmented using the 2007 MHRD grant.

#### Human-Computer Interaction Laboratory (HCI Lab) Objectives

- To Provide hands on experience on various modes of interaction with computers
- To facilitate research in the field of human computer interaction
- To undertake projects and consultancy work related to the development of multimode interfaces to diverse, challenged or non-specialist users.
- To investigate problems of accessibility of computers for users of different ages, skill levels, cognitive styles, sensory & motion impairments or native languages

#### Embedded Systems Laboratory (ESL) Hardware Facilities

- PC /104 based development platform:  
Popular standardized small form-factor platform for small computing applications.
- NI's PXI Controller:  
Compact PCI system for modular instrumentation and data acquisition applications
- PowerQuicc II Reference Design:



Compact PCI Card for evaluating and prototyping designs

- Mica Motes:

An out-of-the-box wireless sensor network module for rapid prototyping, application development and deployments

- IBM System x3400:  
Dual-Core Dual Intel Xeon based server system

- Fujitsu workstations:  
Quad Core Xeon E3-1240 Quad Core Xeon E5-1600

Software Facilities

- **RTLinux** : Operating System for Real-Time / Embedded applications
- **VxWorks** : Real-Time operating system with Tornado IDE
- **LabView** : A visual design tool for measurement analysis & signal processing
- **TinyOS** : Development platform for tiny devices

#### **Mobile Computing Lab (MCL) Hardware Facilities**

- IBM X Series Servers
- IBM Thinkpad Laptops with wireless connectivity
- WiFi Access Points
- GSM Modem
- GSM/GPRS & CDMA simulation infrastructure
- Programmable Mobile Phones
- Lenovo Thinkstation P900 w/s

Software Facilities

- **Montavista Linux**
- **Asterix IP PBX**
- **NS2 Simulation Software**
- **Matlab R2006a**
- **Opensource JAVA/SIP environment**
- **Service Delivery Platform**
- **SDK for Windows/Linux Smart Phones**





- **Network Simulator software : QualNet Software Engineering Laboratory (SEL) Hardware Facilities**

Desktops on Pentium IV Dual Core and Pentium IV Software Facilities

- **Microsoft Visual Studio. NET with MSDN**

An integrated development environment (IDE) for developing web applications, web services, desktop applications, and mobile applications.

- NetBeans (freeware)

Linux based integrated tool for software development and associated documentation (UML diagrams).

- Matlab version 7.0

Library of signal and image processing routines.

- Open CV (Computer Vision)

Intel's open computer vision library for solving various computer vision problems.

Computing Lab

This well equipped general-purpose Computing lab meets the curricular requirements of the M.Tech programmes.

## B. LIBRARY

No. of books/journals as on 31 <sup>st</sup> March of the previous year		Additions during the current Year	
Books	6153	Books	83
Journals	47	Journals	6

- **C. Others** 24 hour 300Mbps internet connectivity and uninterrupted power supply for computing.

## 9. Distinguished Visitors

Sl. No.	Name	Affiliation	Remarks
1	Dr. Deepak Padmanabhan	Queen's University, Belfort, UK	Key note Speaker on "Multi-View Analytics" on 23 <sup>rd</sup> August 2016 (for ICDSE 2016)



2	Ms. Sreedevi Menon	Cognub, Technolpark, Thiruvananthapuram	Key note speaker on "Health care through the eyes of a Data Scientist" On 24 <sup>th</sup> August 2016 (for ICDSE 2016)
3	Mr. Sajith Kecheril Sadanandan	Research Scholar, UPSALA University, Sweeden	Talk on " Deep Learning Networks" on 05/01/2017
4	Dr. M.P Sebastian	Professor, IIM Kozhikode	Talk on " Data Analytics" on 10/02/2017
5	Dr.Leela Veluswamy	Head,NIT,Trichy	Talk on "Mobile Adhoc Networks" On 13/02/2017

## 10. Ph.D. Awarded

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	A Computational Framework for Indian Sign Language Recognition	Daleesha M.Viswanathan	Dr.Sumam Mary idicula
2	Program Slicing Techniques For Software Testing	Anupama Surendran (FT)	Dr. Philip Samuel
3	Trust Based Key Management Framework for MANET	Saju.P.John	Dr.Philip Samual

## 11. Publications

### a) Papers

Sl. No.	Name	Name of Paper	Impact Factor, if any
1	Dr. Jereesh.A.S	Immuno-hybrid algorithm: a novel hybrid approach for GRN reconstruction <i>3 Biotech, Springer</i>	2016 <b>0.992</b> impact factor by Thomson Reuters
2	Dr. Santhosh Kumar G	Modelling and Verification of CoAP over Routing Layer Using SPIN Model Checker	Procedia Computer Science, Elsevier
3	Dr. Santhosh Kumar G	Modeling and verification of timed automaton based hybrid systems using spin model checker	IEEE Conference



4	Dr. Santhosh Kumar G	Detection of similar community in large network based on graph edit distance	IEEE Conference
5	Mr Jyothis V	Adaptive Image Steganography Based on Syndrome-Trellis Codes	International Conference on Computing, Communication and Networking Technologies, IIT Delhi

## b) Books

Sl.No.	Name	Name of Book
1		Proceeding of IEEE 2016 ICDSE, Published by IEEE Editors: Dr. K. Poullose Jacob, Dr. Santhosh Kumar G

## 12. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

### (a) Faculty

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. Sumam Mary Idicula	International Conference on Data Science and Engineering, ICDSE 2016, DCS, CUSAT	Organizing Chair
Dr. G. Santhosh Kumar	International Conference on Data Science and Engineering, ICDSE 2016, DCS, CUSAT	Coordinator
Mr. K.B Muralidharan	International Conference on Data Science and Engineering, ICDSE 2016, DCS, CUSAT	Paper reviewer
Dr. Jereesh A.S	International Conference on Data Science and Engineering, ICDSE 2016, DCS, CUSAT	Paper reviewer
Dr. Jereesh A.S	National conference on Health care system in India and human rights concerns	Attendee
Dr. Jereesh A.S	National seminar on Advances in Scientific and Industrial Instrumentation (ASCI-2017)	Attendee
Dr. Jereesh A.S	National seminar on Tribal protection and welfare: Issues and challenges	Attendee
Mr. Jyothis V	International Conference on Data Science and Engineering, ICDSE 2016, DCS, CUSAT	Paper reviewer



Mr. Jyothis V	National conference on Health care system in India and human rights concerns	Attendee
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**(b) Students**

Jayasree K	FDP ON Big Data Analytics- Tools & Techniques (BDT) 27 th February to 4 th March 2017 Department of Computer Science and Engineering, NIT Calicut.	Participant
Sindhu.L	DPIL @ FIRE 2016 : Shared Task on Detecting Paraphrase in Indian Languages (DPIL) held in conjunction with FIRE2016	Participated in the Shared Task
Sindhu.L	FIRE 2016: Eighth meeting of the Forum for Information Retrieval Evaluation 8th - 10th December, 2016 Indian Statistical Institute, Kolkata	Paper presenter
Sindhu.L	9th International Conference on Machine Learning and Computing, Singapore — February 24 - 26, 2017	Paper presenter
T. Sobha	Workshop on 'Pedagogical initiatives and preparatory practices for NBA Accreditation' on 22 <sup>nd</sup> July 2016.	Participant
T. Sobha	Workshop on 'Algorithm Design' during 12 <sup>th</sup> , 13 <sup>th</sup> and 14 <sup>th</sup> January 2017.	Participant
Vimina E R	iON PRIDE Faculty Development Program -7th of September, 2016, conducted by iON - TATA Consultancy Services at Infopark Campus Kochi.	Participant
Sunitha E.V	Workshop on "Advanced Web Technology"	participant
Sunitha E.V	FDP on IoT	Participant
Sunitha E.V	Technical Talk on "advances in science for the sustainable development"	Participant
Sunitha E.V	National conference on 'Innovative Library Services in Digital Age'	Organizer
Murali Mohanan	2nd International Conference on Inventive Research in Emerging Technology 2017 Bangkok. January 30-31.2017	Paper Presentation.
Murali Mohanan	6 <sup>th</sup> International Conference on Innovations in Bio-inspired Computing and Applications. December 16-18. 2015	Paper Presentation.



Brighty Jose	Workshop on Social Responsibility and Professional Ethics	Participant
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### 13. Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
Dr. Jereesh A.S	International conference on information system and Data Mining, University of Charleston, USA	<i>Reviewer and Technical committee member</i>
Dr. Jereesh A.S	International conference on Information, Communication & Computing Technology (ICICCT-2017), Springer and Computer society of India, JIMS, New Delhi, India	<i>Reviewer and Technical committee member</i>
Dr. Jereesh A.S	Invited MTech external examiner, ASIET, Kerala Technical University	External Examiner
Mr Jyothis V	International conference on Data Science and Engineering – 2016	<i>Reviewer and Session Chair</i>

### 14. Sponsored Research Projects

Sl.No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	DST-FIST	DST-FIST	52 LAKHS	Dr. Sumam Mary Idicula & Dr. G. Santhosh Kumar

### 15. Research Programmes and Activities:

Sl.No.	Problem / Topic	Investigator (s)
1	Wireless Sensor Networks	Dr. G. Santhosh Kumar
2	Big Data Analytics	Mr. K. B Muralidharan
3	Bio Informatics	Dr. Jereesh A.S
4	Natural Language Processing	Dr. Sumam Mary Idicula

### 16. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1	International Conference on Data Sciences and Engineering 2016 (ICDSE 2016)	3 days	Dr. Santhosh Kumar G	DRDO & CUSAT



## DEPARTMENT OF ELECTRONICS

### 1. Brief History of the Department :

The Department of Electronics was established in 1975, as a post graduate Department with Master's and Ph.D programmes in the frontier field of Electronics. Post-graduate programmes include M.Sc Electronics Science and M.Tech Electronics and Communication Engineering.

The Doctoral Programmes are mainly in fields such as Underwater Acoustics, Ocean Electronics, Microwave Propagation & Antennas, Microwave Material Studies, Image Processing, Pattern Recognition, Microprocessor Applications and Signal processing National agencies like the UGC, DST, ISRO, AICTE, DoE, DRDO, DOD, CSIR, MoES, NRB, DIT etc are supporting this Department through various Research projects and Research Fellowships.

The Department of Electronics has well equipped Microwave Electronics, Ocean Electronics, Intelligent Machines & systems and Microprocessor Research Laboratories for carrying out research work at M.Tech and Ph.D levels.

The Department was chosen for special assistance by the University Grants Commission under different schemes. The UGC has sanctioned "COSIST" assistance in 1988 to the Department for the development of postgraduate education and research in the areas of Microprocessor Applications and Microwave Antennas. In 1994, the Department was selected by the UGC for DRS programme in the field of Ocean Electronics and for the special assistance programme of UGC at DSA level in the year 2000. UGC has recognized the Department as a participant in the Centre of Excellence in Laser and Optoelectronic sciences. The Department is currently undertaking research projects from various agencies and has successfully completed several major research projects. The Department has already established international collaboration with Delft University, Netherlands, Polarizone incorporation, Malaysia, University of Paris, France and University of Kent, U.K. for different research projects. The research facilities of the department are used by different national research laboratories and research organizations like NAL Bangalore, SAC Ahmadabad, Indian Navy and researchers from many nearby academic institutions.

The Department conducts two symposia as biennial events – the National Symposium on Antennas & Propagation (APSYM) – which commenced from 1988 and the symposium



on Ocean Electronics (SYMPOL) – from 1991 onwards. Effective from 2007, SYMPOL is organized as international conferences with the technical co-sponsorship of IEEE Oceanic Engineering Society and Acoustical Society of America. APSYM was conducted as an international event in 2016 with the technical support of IEEE Antennas and Propagation Society.

The Department has over 170 research publications and 25 students have taken Ph.D degree during the past five years. It also has very good library facilities having more than 6070 specialized books on Electronics and is also subscribing international and national journals.

The technical biasing of the University, spectacular growth of Electronics industries in Kerala and the location of the University in the industrial zone of the State are all favourable aspects for substantial development of this Department.

## 2. Programmes of Study/Research: M.Sc., M.Tech., Ph.D.

### 3. Faculty Members

Sl. No.	Name	Designation	Qualification	Specilisation
1.	Dr. Supriya M.H.	Professor & Head	B.Tech M.Tech Ph.D	Signal Processing, Network Analysis, Digital Electronics, Microprocessors, Embedded Systems, Data Structures.
2.	Dr. C.K. Aanandan	Professor	M.Sc Ph.D.	Microwave Communication, Radar Systems and Antennas
3.	Dr. James Kurian	Professor	M.Sc M.Tech Ph.D	Instrumentation, Embedded Systems
4.	Dr. Bijoy Antony Jose	Assistant Professor	B.Tech M.Sc Ph.D	Embedded Systems, VLSI, Computer Software
5.	Arun A Balakrishnan	Assistant Professor	B.Tech M.Tech	Signal Processing
6.	Mithun Haridas T P	Assistant Professor	B.Tech M.Tech	Embedded Systems

**4. Emeritus Professors/Scientist (If any)**

1.	Dr.P.Mohanam	Professor	M.Sc.,Ph.D.	Antennas, Microwave Networks, Microwave Communication
2.	Dr.K.Vasudevan	Professor	M.Sc.,Ph.D.	Antennas, Electromagnetics, Microwave Devices, Radar Systems, Microwave Communications
3.	Dr.Tessamma Thomas	Professor	M.Sc.,Ph.D.	Digital Image Processing

**5. Visiting Faculty/Contract Faculty (If any)**

Sl.No.	Name	Designation	Qualification	Specialization
1.	Aparna P S	Guest Lecturer	M.Tech	Digital Electronics
2.	Priyanka Raghuthaman S	Guest Lecturer	M. Tech	Digital Electronics
3.	Varna C Prakash	Guest Lecturer	M.Tech	Communication
4.	Unnimaya N	Guest Lecturer	M.Tech	Digital Electronics
5.	Swathy K C	Guest Lecturer	M.Tech	Digital Electronics

**6 Research Staff:**

Sl. No.	Name	Designation	Qualification	Specialisation
1	Mohammed Ameen	Project Staff	M.Tech	Communication Engineering
2.	Deepa Mathew	Project Staff	M.Tech	Communication Engineering
3.	Binthiya Suny Gabriel	Project Staff	M.E	Genomics Signal Processing

**7. Research Scholars**

Sl. No.	Name	Funding Agency	Guide	Area of Work
<b>Full – Time</b>				
1	Suraj Kamal	UJRF	Dr. Supriya M H	Acoustic Classification
2	Satheeshchandran C	UGC-JRF	Dr.Supriya M H	Acoustic Classification
3	Lindo.A.O.	UGC	Dr.C.K.Aanandan	Microwave Antennas
4	Sreekala P S	UGC-JRF	Dr.C.K.Aanandan	Nanomaterials





5	Dibin Mary George	KSCSTE	Dr.C.K.Aanandan	Microwave Antennas
6	Sruthy Dinesh	UGC-JRF	Dr.C.K.Aanandan	Microwave Electronics
7	Anju P Mathews	FIP	Dr.C.K.Aanandan	Microwave Filters
8	Prasanth M N	PDF	Dr.C.K.Aanandan	Wireless Communication
9	Revathy R	UGC-JRF	Dr.P R S Pillai	Underwater Acoustics
10	Sabna N	KSCSTE	Dr.P R S Pillai	Underwater Acoustics
11	Roshna T K	CSIR	Dr.P.Mohanan	Microwave Antennas
12	Deepak U	UGC	Dr. P. Mohanan	Microwave Antennas
13	Vinisha C V	E-GRANTZ	Dr. P. Mohanan	Microwave Antennas
14	Remsha M	BRNS	Dr. P. Mohanan	Microwave Antennas
15	Manoj M	UGC-JRF	Dr.P.Mohanan	Microwave Antennas
16	Shameena V A	PDF	Dr.P.Mohanan	Microwave Antennas
17	Aji George	UGC-JRF	Dr.James Kurian	Vibration Analysis
18	Navya Mohan	UGC-JRF	Dr.James Kurian	Machine Vision Systems
19	Ann Varghese	UGC-JRF	Dr.James Kurian	Sensor Agents
20	Theresa Bernard	KSCSTE	Dr.James Kurian	Multi Robot coordination
21	Midhun M S	NFOB	Dr.James Kurian	Finger/Hand HMI Control
22	Vinesh P V	UGC	Dr.K.Vasudevan	Multiband Folded Antennas
23	Athul Tomas	UGC-JRF	Dr.James Kurian	Robot Control
24	Prasanth P P	UGC-JRF	Dr.James Kurian	Swarm Robotics
25	Libimol V A	MANF	Dr.C K Aanandan	Microwave Electronics
26	Binthiya Suny Gabriel	UGC-JRF	Dr.Tessamma Thomas	Genomic Signal Processing
27	Deepthi	UGC-JRF	Dr.Tessamma Thomas	Digital Image Processing
28	Suja S	UGC-RGNF	Dr.Tessamma Thomas	Genomic Signal Processing
29	Tina P G	FTP	Dr.Tessamma Thomas	Genomic Signal Processing
30	Neeraj K Pushkaran	UGC-JRF	Dr.Tessamma Thomas	Conducting Polymer Antenas
31	Sangeetha R	UGC-JRF	Dr.Tessamma Thomas	Proteomics Signal Processing
32	Mini P P	UGC-NET JRF	Dr.Tessamma Thomas	Speech Processing



33	Anitha R	UGC-JRF	Dr.K.Vasudevan	Microwave Electronics
34	Sumitha Mathew	FDP Sponsored	Dr. K. Vasudevan	Microwave Antennas
35	Vivek R	KSCSTE	Dr.Vasudevan K	Microwave Electronics
<b>Part Time</b>				
1	Rithu James	-	Dr.Supriya.M.H.	Ocean Electronics
2	Sherin.B.M.	-	Dr.Supriya.M.H.	Embedded Systems
3	S.M Alex Raj	-	Dr.Supriya M H	VLSI Systems
4	Vijeesh P	-	Dr.Supriya M H	VLSI systems
5	Kurian Thomas	-	Dr.Supriya M H	Embedded Systems
6	Pradeep T S	-	Dr.Supriya M H	Embedded Systems
7	Paulbert Thomas	-	Dr.C.K.Aanandan	Microwaves
8	Cyriac.M.Odackal	-	Dr.C.K.Aanandan	Microwave Electronics
9	Sreenath.S.	-	Dr.C.K.Aanandan	Microwave Imaging
10	Sreelekshmi K	-	Dr.P R S Pillai	Underwater Acoustics
11	Anila P V	-	Dr.P.Mohanan	Microwave Antennas
12	Titu K.Samson	-	Dr.P.Mohanan	Microwave Antennas
13	Sajitha V R	-	Dr.P.Mohanan	Compact metamaterial loaded microwave filter
15	Tony.D.	-	Dr. K. Vasudevan	Microwave Antennas
15	Abdul Rasheed	-	Dr.K.Vasudevan	Compact Broadband Metamaterial Antennas
16	Nelson K J		Dr.K.Vasudevan	Microwave Electronics
17	Anu Sabarish.R.	-	Dr.Tessamma Thomas	Genomic Signal Processing
18	Prakash.K.C.	-	Dr. K. Vasudevan	Microwave Electronics

## 8. Administrative Personnel

Sl.No.	Designation	No. of Posts
1	Section Officer	1
2	Assistant Section Officer	1
3	Assistant	1
4	Computer Assistant	3
5	Office Attendant	2
6.	Sweeper-cum-cleaner	1



## 9. Technical Personnel

Sl.No.	Designation	No. of Posts
1.	Maintenance Engineer	1
2.	Tech. Asst. Grade III	3
3	Junior Tech. Asst. Grade III	1
4.	Technician	1
5.	Printer	1
6.	Asst. Librarian	1
7.	Lab. Assistant	3
8.	Storekeeper Gr. I (Electronic Science)	1

## 10. Student Enrollment (2016 admission)

Sl. No.	Programme of Study	Men	Women	Total
1.	M.Tech. (Electronics & Communication Engg.)	6	20	26
2.	M.Sc. (Electronic Science)	7	18	25
3	Ph.D.(Full-Time)	2	3	5
4	Ph.D.(Part-Time)	NIL	NIL	NIL

## 11. Research Facilities

### (A) List of Major Equipment available in the Department (cost exceeding more than 1 lakh)

Sl. No.	Equipment	Cost in Lakhs
1	Epson EB-1965 LCD Projector	0.82
2	HP 8510 C-Network Analyzer	20.00
3	HP 8514 B S Parameter Test set	20.50
4	HP 8341 B Broad band Microwave sweep oscillator	7.00
5	HP 83651B Dedicated source 45 MHz - 50 GHz	18.5
6	HP 8511B Frequency Converter	1.36
7	HP Spectrum Analyzer	7.98
8	Multifunction generator HP 8904A	1.95
9	Flaw Detector UFD 300	4.98
10	Level recorder, Turn Table, Recording Accessories	3.00
11	Power Amplifier B& K (2 Nos)	3.75(each)



12	Measuring Amplifier (2 Nos)	1.25(each)
13	Precession Conditioning Amplifier	1.05
14	Charge Amplifier	1.12
15	Transducer B & K 8100, 8103, 8104, 8105 (4 Nos)	2.92
16	HP Dual Power meter (2 Nos)	3.00
17	S- Band Radar (Donated by LRDE, Bangalore)	100.00
18	Robot Arm & Vision System	7.00
19	Lock-in Amplifier	2.00
20	UPS 5 KVA(6 Nos)	9.00
21	HP 8349 B Frequency Converter	1.5
22	HP Microwave Sweep Oscillator	6.5
23	Short Range Sonar	5.07
24	Fully Instrumented Underwater Transducer Evaluation Facility	20.00
25	Fully Instrumented Far Field Antenna Test Facility	20.00
26	Standard Transducer	2.92
27	Echo Sounder ES60	17.29
28	Simulation Software for Microwave Circuits/Antennas	2.00
29	Underwater Video Camera & Accessories	5.03
30	Matlab for DSP Laboratory	3.68
31	48 Channel 100MHz Logic Analyzer	1.05
32	Workstations (2 Nos.)	1.53 (each)
33	Portable Network Analyzer	5.00
34	Microwave Vector Network Analyzer	38.07
35	Dual Frequency Sonar	6.62
36	SMD Rework Station	13.25
37	Logic Analyzer	4.31
38	Digital Storage Oscilloscope	1.07
39	Spectrum Analyzer	3.26
40	Colour CCD Camera COHU	3.82
41	Sony Lap Top	1.16
42	UPS IGA Sattern 5 KVA (8 Nos.)	12.24
43	Agilent PNA	45.00
44	Simulation Software for Microwave Circuits/Antennas	13.00



45	VLSI Tools	4.00
46	R & S PNA – Network Analyzer	37.00
47	TDS 2022 Two channel 200 MHz 2GS/s Oscilloscope (DSO)	1.00
48	SMD Re-work station Martin DBL-05 + Air Compressor	17.00
49	Coventor MEMS Software	9.93
50	Video Conferencing System	2.80
51	Anritsu Make Spectrum Analyzer MS 2724 B	12.44
52	20 Element Hydrophone Array	2.86
53	PCB Prototype Machine	7.86
54	External Power Sensor	1.98
55	OR 36-8 Channel FFT Analyser	14.39
56	Probe Station	20.94
57	Keil MDK & RL Software (5)	4.95
58	Altium Designer tool for PCB and embedded system design	3.00
59	Agilent Network Analyser 67 GHz	50.00

## B. RESEARCH AND TRAINING LABORATORIES OF THE DEPARTMENT

**With assistance from difficult funding agencies, Research and Training Laboratories have been set up in the Department in frontier areas of Electronics.**

### a. OCEAN ELECTRONICS LABORATORY (CUCENTOL)

A Research and Training Laboratory in Ocean Electronics (CUCENTOL) has been set up in the Department with the financial assistance from the Ministry of Human Resource Development, Govt. of India and the UGC. An amount of Rs.32 lakhs was sanctioned by the Ministry in two installments for this Centre. University Grants Commission has approved the establishment of the Centre during the VIII plan period with essential staff and infrastructure. UGC has sanctioned a sum of Rs.60.00 lakhs under the DRS programme in 1993. Developments of new Underwater Transducers and Arrays for Sonar Applications are the major activities of the center.

Studies on marine animal behaviour are gaining increased attention nowadays. The marine biologists have been labouring hard to develop systems to understand the behaviour and physiology of marine animals in their normal environment. The requirement of monitoring the detailed geographical position of fish in the open sea is highly complex. Migratory patterns of certain commercially important species are widely used for the purpose of stock assessments. The real time monitoring of the migratory routes is not feasible in the case of



marine animals, which spent majority of the time at higher depths, as high frequency signals are heavily attenuated in underwater. Certain animals like whales, sharks, etc. spend a considerable time in the sea surface, while the species like tuna do not come to the sea surface at all. The satellite based active tracking can be resorted to only for certain species and active tracking is much expensive compared to passive tracking. Hence the migratory pattern of highly migratory species like the tuna in the open sea, can only be performed by attaching archival tags to the species under study. These tags can be used to measure the oceanographic parameters, such as pressure, temperature, light level data, etc.

A prototype archival electronic tag for monitoring the ocean parameters like temperature, pressure and light intensity has been developed. A digital temperature sensor is used to sample the temperature from the tag's surroundings, while a micro machined piezoresistive silicon digital pressure sensor, which is capable of measuring absolute pressure levels upto 14 bars, provides the depth information. The depth measurements can be made more accurate, if the resolution of the pressure sensor is significantly high. An absolute pressure measurement with a resolution of 1.2 mbar (approx. 1.2 cm in depth measurements) has been achieved with this tag. One of the important parameters to be measured is the geolocation of the species, which is computed from the ambient light intensities recorded by the digital light sensor in the tag. These parameters can be sampled and recorded in the memory at preset time intervals, as set at the time of deployment of the tag. This miniaturised tag provides the temperature data with 13 bit resolution, while the pressure and light intensity values have 15 bit resolutions. When used in fisheries studies, the size of the device has to be miniaturised, so that by way of attaching such devices, the normal behaviour of the species remain unaffected.

Simulation of Rotating Hydrophone arrays and Localisation of the Underwater Targets Using Buoy Systems and Estimation of DOA Using the Buoy System are also undertaken in this laboratory. Works in the area of Underwater Target Classifier Capable of Reducing Self-Convolution Distortion, Towards Improving the Space Reconstruction of Underwater Signals, Collection and Analysis of Ocean Noise Data Using NI cDAQ 9215 and NI LabVIEW as well as OROS OR-36 Based Platform for Recording and Analysing the Ocean Noise Data is also undertaken in the lab.

#### **b. MICROWAVE ELECTRONICS AND ANTENNA LABORATORY**

A well established research and training Laboratory in Microwave Electronics and Antennas has been set up in this Department with financial assistance from MHRD, UGC, DST (Govt. of India) and DoE (Govt. of India). The Laboratory is equipped with most modern and sophisticated equipment like HP 8510 B Network



Analyzer, Agilent Network Analyser 67 GHz, Cascade Probe Station, Microwave Power Meter and different antenna and RCS standards. The laboratory is having a Microwave Anechoic Chamber for simulating free space environment for antenna and RCS measurements. The Chamber has instrumentation set-up attached to it with provision for fully automatic measurement based on HP 8510 B Network Analyzer and Scientific Atlanta Positioner. The Department has developed an indigenous software which is used for quick and precise antenna measurements and analysis. The major areas of research now being pursued are microstrip antennas and transmission lines, integrated circuits and antennas, reduction of radar cross section, microwave non-destructive testing, leaky wave antennas, microwave horn antenna, material studies in microwave region etc. These facilities are being used/operated by many establishments like SAMEER (Bombay & Madras), SAC Ahamadabad, NPOL, Cochin, Delhi University, CSIR Regional Research Laboratory (Trivandrum), Jadavpur University, Gulbarga University and others.

**Major works undertaken are:**

- Electrically Small Antennas
- Substrate Integrated Waveguide
- Miniature Antenna for Medical Applications:
- RFID Tags
- Ultra Wide Band Antennas
- Low Radiation Hazard Antennas for Mobile Applications
- MIMO Antennas
- Microwave properties of nano composite
- Radar Cross section studies

**c. EMBEDDED SYSTEM LABORATORY (ESL)**

The Department has set up an Embedded Systems Laboratory, comprising of Martin Auto vision Expert 9.5 SMD Re-workstation, Tektronics 34 Channel Logic Analyzer, Tektronics Digital Storage Oscilloscope, etc. The nature of activities currently being pursued in the Department making use of these facilities include the design and development of Embedded Systems for the realization of steering/control system for hydrophone arrays, embedded signal processor modules, embedded CDMA transceiver modules, miniaturized archival tags for tagging tuna, development of miniaturized embedded global positioning devices, etc.

**(i) Training and Research facilities in VLSI Design**

In view of the importance and significance in promoting Training and Research



activities in VLSI Design, the Department is planning to establish a VLSI Laboratory for exposing the PG students and Research Scholars to this most emerging area of Electronics, and cater the requirements of National Laboratories and industries.

#### **d. AUDIO AND IMAGE RESEARCH LAB (AIRL)**

**In this laboratory major works are done in the following areas:**

##### **1. Biomedical Image Processing**

- Analysis and Content Based Image Retrieval of Scoliosis images
- Mammogram analysis using fractals for the detection of breast cancer
- Genomic Signal Processing
- DNA Image processing
- Microarray Image Processing
- Finger Print Recognition and Identification

#### **e. ADVANCED SIGNAL PROCESSING & INSTRUMENTATION RESEARCH LAB (ASPIRE)**

**In this laboratory major works are done in the following areas:**

- Implementation of an underwater target classifier with improved success rates using HMM concepts.
- Kinematic Predictive Tracking of Underwater Targets using Extended Kalman Filter
- Selective Listening of Underwater Acoustic Targets using MVDR Beam forming
- Acoustic Classification of Marine Species using Self-Organizing Maps
- Design of SVM Based Underwater Target Classifier
- Asymmetric cryptography based GSM audio authentication system
- General Processing using Graphical Processing Unit for Hidden Markov Models
- PDA Filters for multiple target tracking
- Acoustic Synthesis of Underwater targets
- VLSI systems for computer vision

#### **C Other Facilities : Library**





No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
Books - 6151 Indian Journals - 4	4

## 12. Distinguished visitors

Sl. No.	Name	Affiliation	Remarks
1	Dr.J.Jaganth Bhat	Director-in-charge, STIC	National Science Day celebration
2	Satheesh C Shenoy	Director, INCOIS	Silver Jubilee CUCENTOL Celebration
3	Dr.V N Sanjeevan	Former Director Centre for Marine, Kendriya Bhavan	Attend Silver Jubilee CUCENTOL Celebration
4	Dr.M A Atmanand	Former Director, NIOT, Chennai	SYMPOL 2015
5	Prof.S. Ananthakrishnan	Pune University, Pune	Visit ST Radar
6	Zachariah C Alex	School of Electronics,VIT University, Velloor	Ph.D Viva
7	Dr.R S Anand	Professor, Dept. of Electrical Engg, IIT, Roorke	Visiting CUSAT under Eurodite scheme
8	Reuben S John	California,USA	Visiting the Department
9	Dr.Parvez Mustajab	Dept. of Electronics, AMU, Aligarh	UGC DSA Meeting
10	Prakash Kumar	UST Global, Technopark, Tvm.	Meet with Professors
11	Jacob John	NOKIA, West Ford-MA-USA	Meet with HOD
12	Dr. N. R Munirathnam	Director General C-MET, Pune	To See Micro Wave & MM Wave Lab
13	Dr. Murali Krishna	Scientist NPOL	National Technology Day Celebration - 2016
14	Prof. A. D. Sarma	Ph.D(Eng.) Landon, UK	Participated as an Examiner of Ph.D viva-voce Examination
15	Prof. M. V. Karthikeyan	Department of ECE, IIT, Roorkee	Participated as an Examiner of Ph.D viva-voce Examination



16	Venugopalan P	Deputy Head, Acoustic Research Lab, National University of Singapore	Courtesy Visit
17	Dr. S. Adhiauri	Prof. Dept. of EC,PFS Institute of Technology, Banglore-560085	Official

### 13. Ph.Ds Awarded

Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1.	Design and Analysis of Printer UWB Antenna with Dual Band-notched Characteristics.	Sarah Jacob	Dr.P.Mohanam
2.	Investigation on Radiation characteristics and Pattern Reconfigurability of Asymmetric Coplanar strip Antenna.	Ashkarali P	Dr.C.K.Aanandan
Thesis Submitted			
Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1.	Sparse Signal Processing for Undersea Acoustic Links	Sabna.N	Dr.P R S Pillai
2.	Investigations on Compact Uni-planner Antennas for Wireless Communication	Sreenath S	Dr.C.K.Aanandan

### 14. Publications

#### (a) Publications in International / National Journals

1. Libimol V A, Sreekala P.Sasikumar, Dibin M. George, Arimpoorpallan O. Lindo, Neeraj K. Pushkaran, and Chandroth K. Aanandan, Radar Cross Section Reduction Property of High Impedance Surface on a Lossy Dielectric Progress In Electromagnetics Research M, Vol. 46, 19–28, 2016.
2. Neeraj K Pushkaran, Libimol V A, Sreekala PS, Sreenath S, C.K Aanandan, Tessamma Thomas”polyaniline Based Monopole antenna for Broadband Applications”International Journal of Latest Research in Engineering and Technology(IJLRET),*volume-2- Issue10, October 2016,pp.41-44.*
3. Libimol V.A,Sreekala P Sasikumar,Dibin Mary George and Aanandan C.K, “Radar cross section reduction property of high impedance surface on a lossy dielectric,” *Progress In Electromagnetics Research M 46:19-28 · January 2016*
4. Novel Approach to Analyzing MFE of Noncoding RNA Sequences Tina P. George<sup>1</sup> and Tessamma Thomas<sup>2</sup>, August 4, 2016.



5. Neeraj K Pushkaran, Libimol V A, Sreekala P S, Sreenath S, C K Aanandan, Tessamma Thomas,” Polyaniine Based Monopole Antenna for Broadband Applications”, International Journal of Latest Research in Engineering & Technology (IJLRET),Vol. 2, 41-44, October 2016.
6. Jos Prakash, Babita Jose, Jimson Mathew, and Bijoy A. Jose, “A differential quantizer based error feedback modulator for analog to digital converters,” IEEE Transactions on Circuits & Systems II, 99, 1-5, Feb. 2017.
7. Akhil P.,Abhijith C. R. and Bijoy A. Jose, “Interfacing a Computer Aided Design Tool with a Multi-Function Numerical Machine,” Journal of low power electronics, 2017 (accepted)
8. V. P Sarin, M. P Jayakrishnan, P.V Vinesh, C. K Aanandan, P.Mohan and K. Vasudevan, “An Experimental Realization of Cylindrical Cloaking using Dogbone Metamaterials”, Canadian Journal of Physics, 10.1139/cjp-2016-0876, 2017.
9. V.P Sarin, M. P Jayakrishnan, C. K Aanandan, P.Mohan and K. Vasudevan, “Grating-based Dipole Antenna Configuration for High Gain Directional Radiation characteristics”, Advanced Electromagnetics, Vol. 6, No. 1, pp. 36-41,2017.
10. Anitha Ramachandran, Sumitha Mathew, Vivek Rajan and Vasudevan Kesavath,”A Compact Tri-Band Quad Element MIMO Antenna Using SRR Ring for High Isolation” IEEE Antennas and Wireless Propagation, 2016 (Accepted for publication) DOI: 10.1109/LAWP.2016.2640305 (Impact Factor: 1.579)
11. R.Anitha, P.V.Vinesh, K. C. Prakash, P.Mohan, and K. Vasudevan, “A Compact Quad Element Slotted Ground Wideband Antenna for MIMO Applications” IEEE Transactions On Antennas And Propagation, Vol. 64, No. 10, October 2016. (Impact Factor: 2.459)
12. Sumitha Mathew, Mohammad Ameen, M.P. Jayakrishnan, P.Mohan and K. Vasudevan, “Compact dual polarized V slit, stub and slot embedded circular patch antenna for UMTS/ WiMAX/ WLAN applications”, Electronics Letters, Vol. 52, No. 17, August 2016. (Impact Factor: 1.07)
13. Anitha R, Sumitha Mathew, vinesh P.V, P Mohan and Vasudevan K, “A Diversity Based Four-port MIMO Antenna Loaded with Interdigital Structure for High Isolation”, IET Microwaves, Antennas & Propagation, doi: 10.1049/iet-map.2015.0828. (Impact Factor: 0.91)
14. Titu K Samson, Manoj M G, Ajil Kottayil, Rakesh V, Rejoy Rebello, Vasudevan K, Santosh K R, Mohan P and Mohankumar K, “Technical Aspects of 205



- MHz Mini Wind Profiler Radar for Tropospheric Probing”, IEEE Transactions on Geo-Science and Remote Sensing letters, Vol. 13, No. 7, July 2016. (Impact Factor: 2.228)
15. Sarin V. Pushpakaran, Jayakrishnan M.P, Aanandan Chandroth, P. Mohanan, and Kesavath Vasudevan, “Extraordinary Transmission Technique for Microwave Antenna Applications”, Journal of PhysicsD: Applied Physics, 49 (2016) 185503 (6pp), April 2016. (Impact Factor: 2.772)
  16. Prakash K.C, Vinesh P.V, Vivek R, Mohammad Ameen and Vasudevan K, “Circularly Polarised Hexagonal Patch Antenna with Polygonal Slot for RFID Applications”, Journal of Communications Software and Systems, Vol. 12, No. 2, June 2016.
  17. Sarin V. Pushpakaran, Anju Pradeep, Jayakrishnan M.P, Pezholil Mohanan and Vasudevan Kesavath, “Tailoring the spectral response of a dogbone doublet metamaterial”, Microwave and optical technology letters, vol. 58, No.4, April 2016. (Impact Factor:0.585)
  18. V. R. Sajitha, C. M. Nijas, T. K. Roshna, Kesavath Vasudevan, and P. Mohanan, “Compact Cross Loop Resonator Based Chipless RFID Tag with Polarization Insensitivity”, Microwave and optical technology letters, vol. 58, No.6, June 2016. (Impact Factor: 0.585)
  19. Prakash K. C, Vinesh P.V, Jayakrishnan M. P, Dinesh R, Mohammad Ameen and Vasudevan K, “Hexagonal circularly polarised patch antenna for RFID applications”, International Journal on Cybernetics & Informatics (IJCI) Vol. 5, No. 2, April 2016
  20. Ajil Kottayil, K. Mohanakumar, Titu Samson, Rejoy Rebello, M. G. Manoj, Rakesh V,  
K. R. Santhosh, P. Mohanan and K. Vasudevan, “Validation of 205 MHz Wind Profiler Radar Located at Cochin, India Using Radiosonde Wind Measurements”, Radio Science, vol. 51, No.3, 2016, doi:10.1002/2015RS005836. (Impact Factor: 1.45)
  21. M.G. Manoj, Titu K. Samson, V. Rakesh, Ajil Kottayil, Rejoy Rebello, K. Mohankumar,  
K.R. Santosh, P. Mohanan and K. Vasudevan, “A Method of Estimating Air Vertical Velocity from Ascending Radiosondes and its Comparison with Radar Measurements”, Journal of Geophysical Research Atmospheres (under revision, 2016) (Impact Factor: 5.6)
  22. Karavilavadakkethil C. Prakash, Sumitha Mathew, Ramachandran Anitha,



- Puthiyapurayil V. Vinesh, Methapettyparambu P. Jayakrishnan, Pezholil Mohanan and Kesavath Vasudevan, "Circularly Polarized Dodecagonal Patch Antenna with Polygonal Slot for RFID Applications", Progress In Electromagnetics Research C, Vol. 61, 9-15, 2016. (Impact Factor: 1.229)
23. Anitha Ramachandran, Sarin V. Pushkaran, Mohanan Pezholil and Vasudevan Kesavath, "A Four Port MIMO Antenna using Concentric Square Ring Patches Loaded with CSRR for High Isolation", IEEE Antennas and Wireless Propagation Letters, Vol. 15, April 2016. (Impact Factor: 1.579)
  24. S Joseph, S Jacob, B Paul, S Mridula, P Mohanan, "Time-Domain Characterization of Dual Band Spiral Antenna with WMTS/UWB Application", International Journal of Antennas and Propagation March, 2017.
  25. T K Roshna, U Deepak, P Mohanan, "A compact Coplanar 4-port MIMO antenna for high-speed UWB applications", Antennas and Propagation in Wireless Communications (APWC), 2016 IEEE-APS, September 2016
  26. P R Mini, S Mridula, B Paul, P Mohanan, "A novel algorithm for adaptive NLMS beamformer", International Journal of Wireless and Mobile Computing 10 (2), 122- 129, May 2016.
  27. Alex Raj S. M., Abhilash S and Supriya M. H., A Comparative Study of Various Methods for Underwater Image Enhancement and Restoration, IOSR Journal of VLSI and Signal Processing (IOSR-JVSP) Volume 6, Issue 2, Ver. I (Mar.-Apr. 2016), PP 30-33
  28. Alex Raj S.M. and Supriya M. H. Hardware Co-simulation of Underwater Moving Object Detection using Xilinx System Generator, International Journal of Oceans and Oceanography ISSN 0973-2667 Volume 10, Number 1 (2016), pp. 73-80
  29. Alex Raj S.M., Rita Maria Abraham, Supriya M.H., Vision-Based Underwater Cable/ Pipeline Tracking Algorithms in AUVs: A Comparative Study, International Journal of Engineering and Advanced Technology, Volume-5 Issue-4, April 2016, PP 48-52
  30. Rithu James & Supriya M H, Computationally Efficient Methods for Sonar Image Denoising using Fractional Mask, Image Process. Int. J. (IJIP) vol.10, Iss.5, pp. 239- 258, September 2016
  31. Alex Raj S. M., Rita Maria Abraham, Supriya M.H., Spatial filtering based Boundary Extraction in Underwater Images for Pipeline Detection: FPGA Implementation, International Journal of Computer Science and Information Security, vol 14, No, 9, pp.790-794, IJCSIS ISSN 1947-5500, Pittsburgh, PA,



USA, September 2016

- 32 Alex Raj S. M. and Supriya M.H., Reconfigurable Platform Based Design In FPGA For Underwater Image Color Correction, Vol 8, issue 7, October 2016, The IIOAB journal, pp 76-81.
- 33 Sherin B.M. and Supriya M.H, WOA based Selection and Parameter Optimization of SVM Kernel Function for Underwater Target Classification, International Journal of Advanced Research in Computer Science, Volume 8, No. 3, March – April 2017, pp.223-226
- 34 M Gopikrishna, DD Krishna, C Gopakumar, CK Aanandan, A Novel J Slot Antenna for UWB WiMedia, Procedia Computer Science 93, 89-93, 2016
- 35 VP Sarin, MP Jayakrishnan, CK Aanandan, P Mohanan, K Vasudevan, Extraordinary transmission technique for microwave antenna applications, Journal of Physics D: Applied Physics 49 (18), 185503,1, 2016
- 36 VP Sarin, MP Jayakrishnan, CK Aanandan, M Pezhoolil, V Kesavath, A Metamaterial Backed Dipole Antenna for High Gain Directional Communications, Advanced Electromagnetics 5 (1), 9-14, 2, 2016
- 37 DM George, VA Libimol, S Sreenath, PS Sreekala, CK Aanandan, High Gain Circular Sector Microstrip Patch Antenna for Millimeter Wave WLAN Applications, European Journal of Advances in Engineering and Technology 3 (9), 67-70, 2016
- 38 J Abraham, T Mathew, CK Aanandan, A novel proximity fed gap coupled microstrip patch array for wireless applications, Progress In Electromagnetics Research C 61, 171-178, 4, 2016
- 39 VP Sarin, MP Jayakrishnan, CK Aanandan, P Mohanan, K Vasudevan, Grating-based Dipole Antenna Configuration for High Gain Directional Radiation characteristics, Advanced Electromagnetics 6 (1), 36-41, 2017
- 40 Sreekala P S, Libimol V A, Dibin mary George, Lindo A O, Neeraj K Pushkaran, Honey John, Aanandan, C. K. Electromagnetic Interference Shielding Efficiency Enhancement of the PANI-CSA films at Broad Band Frequencies, Accepted for publication at Progress In Electromagnetics Research M

**b) Publications in International / National Conference/symposia**

- 1 Prakash K.C, Vinesh P.V., Jayakrishnan M.P., Dinesh R., Mohammad Ameen and Vasudevan K., " Hexagonal circularly polarised patch antenna for RFID applications", International Conference on Computing and Communication (ICCC'16), Mar Athanasius College of Engineering, Kothamangalam, Kerala, 28-29 January 2016



- 2 Sajitha. V. R, Nijas C. M, Roshna T. K and P. Mohanan, "Multiresonator Circuit Using a /4 SIR for Chipless RFID Tags", International Conference on Computing and Communication (ICCC'16), Mar Athanasius College of Engineering, Kothamangalam, Kerala, 28-29 January 2016
- 3 Nicky Kattukkaran, Arun George, Mithun Haridas T.P., "Intelligent Accident Detection and Alert System for Emergency Medical Assistance", International Conference on Computer Communication and Informatics (ICCCI-2017), Coimbatore, India. 05-07 January, 2017
- 4 Neeraj K Pushkaran, Libimol V A, Sreekala PS, Sreenath S, C.K Aanandan, Tessamma Thomas "polyaniline Based Monopole antenna for Broadband Applications" International Journal of Latest Research in Engineering and technology (IJLRET), volume-2- Issue10, October 2016, pp.41-44.
- 5 Libimol V.A and Aanandan C.K, "Polarization Independent Multiband Absorber with Enhanced Bandwidth in Ku band," Conference: International Symposium on Antennas and Propagation-APSYM 2016, At COCHIN, KERALA
- 6 Anju P Mathews, Lindo A. O, and C. K Aanandan, "X-band bandstop filter using Half Mode Substrate Integrated Waveguide with Split Ring Resonators," Conference: International Symposium on Antennas and Propagation-APSYM 2016, At COCHIN, KERALA
- 7 Libimol V.A and Aanandan C.K, "Checker board HIS with Defected Ground Structure for Positive Reflection Phase Gradient and Wideband RCS Reduction," Conference: International Conference on Next Generation Intelligent Systems 2016 (ICNGIS-2016)
- 8 Ajai J. Chemmanam, Salmanul Faris K, Sreelekshmi. S., M.Vasu Sairam, and Bijoy A. Jose, Portable E-Voting decision system, 6<sup>th</sup> IEEE Intl. Conf. on Computer Comm. and Informatics (ICCCI), Coimbatore, Jan., 2017.
- 9 Elizabeth George E., Elsa Mary Cyriac, Sreedevi K., and Bijoy A. Jose, Voice Biometric System Based Personnel Identification, Kerala Technological Congress (KETCON-2017 Embedded systems and VLSI Technologies), Kerala, Jan. 2017.
- 10 Akhil P., Abhijith C. R. and Bijoy A. Jose, Interfacing a Computer Aided Design Tool with a Multi-Function Numerical Machine, 6<sup>th</sup> IEEE Intl. Symposium on Embedded computing and system Design (ISED), IIT Patna, Dec. 2016.
- 11 Akhil P., Abhijith C. R. and Bijoy A. Jose, An indigenous Computer Aided Design tool for multifunction printers, 2<sup>nd</sup> India International Science Festival, National Physical Laboratory, CSIR, New Delhi, Dec. 2016.



- 12 Mohammad Ameen, Sumitha Mathew, Prakash. K. C, Manoj. M, Vinesh. P. V and K. Vasudevan, "Gain Enhancement of a Compact Wideband Antenna Using Hexagonal AMC Ground Plane," proc. of 12th International Conference on Microwaves, Antenna, Propagation and Remote Sensing, Jodhpur, Rajasthan, pp. 79 – 82, Feb 2017.
- 13 Sumitha Mathew, Prakash K.C, Vinesh P.V, Mohammad Ameen and K.Vasudevan, "Slotted ground sectoral patch antenna with low cross polarization and enhanced gain," proc. of 122th International Conference on Microwaves, Antenna, Propagation and Remote Sensing, Jodhpur, Rajasthan, pp. 83 – 85, Feb 2017.
- 14 Manoj. M, Remsha. M, Mohammad Ameen, Prakash K.C, K.Vasudevan and P. Mohanan "A Novel Dual Band Ultra Compact Artificial Magnetic Conductor-backed Antenna for Wireless Applications," proc. of 12th International Conference on Microwaves, Antenna, Propagation and Remote Sensing, Jodhpur, Rajasthan, pp. 178 – 180, Feb 2017.
- 15 Vinesh P.V, Prakash K.C, Mohammad Ameen, Sumitha Mathew, Anitha. R, Vivek. R and K. Vasudevan "Compact Wide band Planar Inverted-F Antenna for LTE Applications," proc. of 12th International Conference on Microwaves, Antenna, Propagation and Remote Sensing, Jodhpur, Rajasthan, pp. 44 – 46, Feb 2017.
- 16 Mohammad Ameen, Sumitha Mathew, Prakash K. C, Anitha. R, Manoj. M, P. Mohanan and K. Vasudevan, "A Compact 2×2 MIMO Antenna for WLAN and 4G LTE Applications," proc. of Fourth International Conference on Advanced Computing and Communication Systems, Coimbatore, India, pp. 923 – 926, Jan 2017.
- 17 Mohammad Ameen, Sumitha Mathew, Prakash. K. C, Manoj. M, P. Mohanan and K. Vasudevan, "A Two-Layer Circularly Polarized High Antenna for 5.2 GHz WLAN Applications", Proc. of 2016 International Symposium on Antennas and Propagation, CUSAT, Cochin, India, pp. 45 – 48, Dec 2016.
- 18 Prakash. K.C, Mohammad Ameen, Manoj. M, Sumitha Mathew, Anitha. R, Vinesh P. V, Vivek. R, and K. Vasudevan, "A Compact UWB Circularly Polarized Hexagonal Slot Antenna for Wireless Applications", Proc. of 2016 International Symposium on Antennas and Propagation, CUSAT, Cochin, India, pp. 197 – 200, Dec 2016.
- 19 Sumitha Mathew, Anitha. R, Vinesh P.V, Mohammad Ameen and K. Vasudevan,





- “Dual Band Corner Truncated Sectoral Patch Antenna with Dual Slits for GPS and WLAN”, Proc. of 2016 International Symposium on Antennas and Propagation, CUSAT, Cochin, India, pp. 197 – 200, Dec 2016
- 20 Prakash K. C, Vinesh. P. V, Sumitha Mathew, Mohammad Ameen and K. Vasudevan, “Novel Circularly Polarised Antenna for Power Harvesting Applications”, International Conference on Signal Processing and Advanced Communication, College of Engineering, Chertala, August 10-11, 2016.
  - 21 Mohammad Ameen, Prakash. K. C, Sumitha Mathew, Manoj. M, M.P. Jayakrishnan and K. Vasudevan, “A Compact Wideband Square Slot Antenna with Enhanced Bandwidth for 5.2/5.8 GHz WLAN Applications”, International Conference on Signal Processing and Advanced Communication, College of Engineering, Chertala, August 10-11, 2016.
  - 22 Sumitha Mathew, Prakash K. C, Mohammad Ameen and K. Vasudevan, “Annular Ring Patch Antenna with Omnidirectional Radiation Pattern for WiMAX Applications” International Conference on Signal Processing and Advanced Communication, College of Engineering, Chertala, August 10-11, 2016.
  - 23 Prakash K. C, Vinesh P.V, Vivek. R, Mohammad Ameen and Vasudevan K, “Circularly Polarised Hexadecagonal Patch Antenna for Power Harvesting Applications”, 8th National Conference on VLSI, Signal Processing and Communication, Viswajyothi College of Engineering and Technology, Vazhakulam, Kerala, 21-22 July 2016.
  - 24 Mohammad Ameen, Prakash. K. C, Sumitha Mathew, Manoj. M and K. Vasudevan, “A Compact Shaped Microstrip Antenna for WLAN, TD-LTE and WiMAX Applications”, International Conference on Computing, Communication and Signal Processing, College of Engineering, Karunagappally, July 8-9, 2016.
  - 25 K.C Prakash, Sumitha Mathew, P.V Vinesh, Mohammad Ameen and K. Vasudevan, “Circularly polarized tridecagonal patch antenna for power harvesting applications”, International Conference on Computing, Communication and Signal Processing, College of Engineering, Karunagappally, July 8-9 2016.
  - 26 Sumitha Mathew, K. C. Prakash, Vivek. R. Kurup and K. Vasudevan, “Reduced Cross Polarization using sectoral Slots in the Ground Plane of a Sectoral Patch Antenna”, International Conference on Computing, Communication and Signal Processing, College of Engineering, Karunagappally, July 8-9 2016.
  - 27 Alex Raj S.M., Deepa S. and Supriya M.H. “Underwater Image Enhancement using CLAHE in a Reconfigurable Platform”, IEEE Oceans’16, Monterey,



California, September 19-23, 2016.

- 28 Sherin B.M. and Supriya M.H, “SOS Based Selection and Parameter Optimization for Underwater Target Classification”, IEEE Oceans’16, Monterey, California, September 19-23, 2016.
- 29 Rithu James and Supriya M.H., “Despeckling of Sonar Images Based on a Naïve Homogeneity Index”, IEEE Oceans’16, Monterey, California, September 19-23, 2016.
- 30 Rithu James & Supriya M H, “Blind Estimation of Single Look Side Scan Sonar Image from the Observation Model”, Elsevier Procedia Computer Science, Volume 93, 2016, Pages 336–343, September 2016.

**(b). BOOKS**

Sl. No.	Name of Book
1	PROCEEDINGS OF APSYM 2016
2	A chapter entitled “Applications of Dielectric Resonators” in the book “ Microwave Materials and Applications “ Wiley Series in Materials for Electronic and Optoelectronic Applications by P.Mohanan and S Mridula
3	PROCEEDINGS OF <b>APSYM 2016, ISBN 978-93-80095-85-8</b>

**15. Participation in Seminar/Conference/Refresher Courses etc. by Faculty/ Students Conference**

Name of Participant	Name of Seminar/Conference/Workshop	Role
Mithun Haridas TP	Talk on “Soil characterization using Microwave”, by Dr.Mrudula at CUSAT Knowledge Forum on 13 <sup>th</sup> July 2016	Participant
Mithun Haridas TP	Workshop on “Modeling and Simulation of Mechanical / Mechatronic Systems Using MATLAB and Simulink”, on 03rd August 2016	Participant
Mithun Haridas TP	Talk on “Emission Control of Ships’, by Dr K.A.Simon at CUSAT Knowledge Forum on 10 <sup>th</sup> August 2016.	Participant
Mithun Haridas TP	Short Term Training Programme(STTP) on “Scratch to End Product” organized by Division of Electronics, School of Engineering, CUSAT, during 26 <sup>th</sup> to 30 <sup>th</sup> September 2016	Participant
Mithun Haridas TP	Talk on “Internet of Things” by Dr. G Santosh Kumar, at CUSAT Knowledge Forum on 5-October, 2016	Participant



Mithun Haridas TP	Talk on "Embedded software for safety critical systems" by Dr. Bijoy A. Jose, at CUSAT Knowledge Forum on 9-November, 2016	Participant
Mithun Haridas TP	Workshop on Smart India Hackathon'17, conducted by AICTE at College of Engineering Campus Thiruvananthpuram, 19 <sup>th</sup> November, 2016	Participant
Mithun Haridas TP	Workshop on "Google Scholar: Discovery tool for researchers", by Dr.Santhosh Kumar G on 24 <sup>th</sup> November 2016	Participant
Mithun Haridas TP	Industrial visit at SFO Technologies on 7 <sup>th</sup> December 2017	Participant
Mithun Haridas TP	Talk on "Biowaste recycling: A novel approach" by Dr. Anand M, at CUSAT Knowledge Forum on 14-December, 2016	Participant
Mithun Haridas TP	Talk on "Deep learning in image analysis" by Sajith K Sadanandan, Uppsala University, Sweden at Dept, of Computer Science, CUSAT on 5 <sup>th</sup> Jan 2017	Participant
Mithun Haridas TP	International Conference on Computer Communication and Informatics (ICCCI-2017), Coimbatore, India. 05-07 January, 2017	Participant
Mithun Haridas TP	Technical Talk on behalf of Kerala Science Congress KSC organized by Dept. of Youth Welfare on 11 <sup>th</sup> January 2017	Participant
Mithun Haridas TP	Talk on "Intercellular Lasers" by Dr. M. Kailasnath, at CUSAT Knowledge Forum, on 11 <sup>th</sup> January 2017	Participant
Mithun Haridas TP	Webinar on Smart India Hackathon – Idea Submission and Solution, 17 January, 2017	Participant
Mithun Haridas T.P.	Workshop on IOT system design using LABVIEW, 23 <sup>rd</sup> – 27 <sup>th</sup> January 2017 at Department of Instrumentation, CUSAT	Participant
Mithun Haridas TP	Talk on "Length Scale Challenges" by Dr. Madhusoodanan K.N. at CUSAT Knowledge Forum, on 8 <sup>th</sup> February 2017	Participant
James Kurian	International Conference on Computing, Communication and Signal Processing (ICCCSP-2016) at 9:30AM on July 8, 2016, at The Quilon Beach Hotel, Kollam	Member Advisory Committee



Midhun M S, Theresa Bernard, Aji George, Navya Mohan, Ann Varghese, Athul Thomas	Workshop on Modelling and Simulation of Mechanical/Mechatronic Systems Using MATLAB and Simulink on 3rd August at Kochi Marriott Hotel, Kochi	Participant
Navya Mohan, Midhun M S	'QIP Short Term Course on Probability and Statistics for Machine Learning during 28th November to 2nd December 2016 at IISC Bangalore	Participant
Aji George, Theresa Bernard	workshop and tutorials on Introduction to Robot Navigation using Robot Operating System (ROS)', 'Design and Deploy Control Algorithms for Robotics Application using Matlab' and 'Cable Driven Parallel Robots' December 17 Amrita University, Kollam	Participant
Aji George, Theresa Bernard.	International Conference on Robotics & automation For Humanitarian Applications, December 18-20, Amrita University, Kollam	Participant
Athul Thomas	Talk on "IoT- A Pervasive Technology for Innovation", by Prof. Anura Jayasumana, Professor of Electrical and Computer Engineering and Computer Science, organized by IEEE Communication Society, & IEEE Kochi Subsection, 26 September 2016, Department of Electronics, CUSAT	Participant
Prasanth P P	"Embedded software for safety critical systems" by Dr. Bijoy A. Jose, November 9, 2016, CUSAT Knowledge Forum, CUSAT	Participant
Prasanth P P, Athul Thomas	"Internet of Things" by Dr. G Santosh Kumar, Assistant Professor, Department of Computer Science, October 5, 2016, CUSAT Knowledge Forum, CUSAT	Participant
James Kurian	International Conference on Computing, Communication and Signal Processing (ICCCSP-2016) at 9:30AM on July 8, 2016, at The Quilon Beach Hotel, Kollam	Member Advisory Committee
Arun A. Balakrishnan	Talk on "Soil characterization using Microwave", by Dr. Mrudula at CUSAT Knowledge Forum on 13 <sup>th</sup> July 2016	Participant
Arun A. Balakrishnan	Workshop on "Modeling and Simulation of Mechanical / Mechatronic Systems Using MATLAB and Simulink", on 03rd August 2016	Participant



Arun A. Balakrishnan	Talk on "Emission Control of Ships", by Dr K.A.Simon at CUSAT Knowledge Forum on 10 <sup>th</sup> August 2016.	Participant
Arun A. Balakrishnan	One day orientation program by Higher Education Department, Govt. of Kerala named Fostering Linkages in Academic Innovation and Research (FLAIR) at Maria Rani training centre, Sreekaryam, Trivandrum – 1 <sup>st</sup> September 2016	Participant
Arun A. Balakrishnan	Short Term Training Programme(STTP) on "Scratch to End Product" organized by Division of Electronics, School of Engineering, CUSAT, during 26 <sup>th</sup> to 30 <sup>th</sup> September 2016	Participant
Arun A. Balakrishnan	Talk on "Internet of Things" by Dr. G Santosh Kumar, at CUSAT Knowledge Forum on 5 <sup>th</sup> October, 2016.	Participant
Arun A. Balakrishnan	Three day induction training program by Higher Education Department, Govt. of Kerala named Fostering Linkages in Academic Innovation and Research (FLAIR) at the Loyola Extension Service, Thiruvananthapuram from 6 <sup>th</sup> to 8 <sup>th</sup> October, 2016	Participant
Arun A. Balakrishnan	Talk on "Embedded software for safety critical systems" by Dr. Bijoy A. Jose, at CUSAT Knowledge Forum on 9-November, 2016	Participant
Arun A. Balakrishnan	National/International Internship interview by Higher Education Department, Govt. of Kerala named Fostering Linkages in Academic Innovation and Research (FLAIR) at the Loyola Extension Service, Thiruvananthapuram from 22 <sup>nd</sup> Novemebr 2016.	Internship proposal submitted and defended.
Arun A. Balakrishnan	Industrial visit at SFO Technologies on 7 <sup>th</sup> December 2017	Participant
Arun A. Balakrishnan	Talk on "Biowaste recycling: A novel approach" by Dr. Anand M, at CUSAT Knowledge Forum on 14-December, 2016.	Participant
Arun A. Balakrishnan	Talk on "Deep learning in image analysis" by Sajith K Sadanandan, Uppsala University, Sweden at Dept, of Computer Science, CUSAT on 5th Jan 2017	Participant
Arun A. Balakrishnan	Talk on "Intercellular Lasers" by Dr. M. Kailasnath, at CUSAT Knowledge Forum, on 11 <sup>th</sup> January 2017	Participant



Arun A. Balakrishnan	Talk on “Length Scale Challenges” by Dr. Madhusoodanan K.N. at CUSAT Knowledge Forum, on 8 <sup>th</sup> February 2017	Participant
Arun A. Balakrishnan	User Scientist Workshop on ST Wind Profiler Radar @Advanced Centre for Atmospheric Radar Research, CUSAT on 9 <sup>th</sup> and 10 <sup>th</sup> February 2017.	Coordinator - Radio Astronomy Group
Dr. Bijoy A. Jose	Talk on “Soil characterization using Microwave”, by Dr.Mrudula at CUSAT Knowledge Forum on 13 <sup>th</sup> July 2016	Participant
Dr. Bijoy A. Jose	Talk on “Emission Control of Ships’, by Dr K.A.Simon at CUSAT Knowledge Forum on 10 <sup>th</sup> August 2016.	Participant
Dr. Bijoy A. Jose	One day orientation program by Higher Education Department, Govt. of Kerala named Fostering Linkages in Academic Innovation and Research (FLAIR) at Maria Rani training centre, Sreekaryam, Trivandrum – 1 <sup>st</sup> September 2016	Participant
Dr. Bijoy A. Jose	Short Term Training Programme(STTP) on “Scratch to End Product” organized by Division of Electronics, School of Engineering, CUSAT, during 26 <sup>th</sup> to 30 <sup>th</sup> September 2016	Participant
Dr. Bijoy A. Jose	Talk on “Internet of Things” by Dr. G Santosh Kumar, at CUSAT Knowledge Forum on 5 <sup>th</sup> October, 2016.	Participant
Dr. Bijoy A. Jose	Three day induction training program by Higher Education Department, Govt. of Kerala named Fostering Linkages in Academic Innovation and Research (FLAIR) at Ashir Bhavan, October, 2016	Participant
Dr. Bijoy A. Jose	Talk on "Embedded software for safety critical systems” by Dr. Bijoy A. Jose, at CUSAT Knowledge Forum on 9-November, 2016	Invited Speaker
Dr. Bijoy A. Jose	National/International Internship interview by Higher Education Department, Govt. of Kerala named Fostering Linkages in Academic Innovation and Research (FLAIR) at the KSCSTE, Thiruvananthapuram from 22 <sup>nd</sup> November 2016.	Internship proposal submitted and defended.
Dr. Bijoy A. Jose	Young Scientist Conclave Speaker: 2 <sup>nd</sup> India International Science Festival, National Physical laboratory, CSIR, Dec. 2016.	Conference paper presentation



Dr. Bijoy A. Jose	MHRD sponsored Global Initiative of Academic Networks course on Security for Internet of Things, at IIT Patna, Dec 2016.	FDP attendee
Dr. Bijoy A. Jose	6 <sup>th</sup> IEEE Intl. Symposium on Embedded computing and system Design (ISED), IIT Patna, Dec. 2016.	Conference paper presentation
Dr. Bijoy A. Jose	6 <sup>th</sup> IEEE Intl. Symposium on Embedded computing and system Design (ISED), IIT Patna, Dec. 2016.	Session Chair
Dr. Bijoy A. Jose	Talk on "Deep learning in image analysis" by Sajith K Sadanandan, Uppsala University, Sweden at Dept, of Computer Science, CUSAT on 5th Jan 2017	Participant
Dr. Bijoy A. Jose	Talk on "Length Scale Challenges" by Dr. Madhusoodanan K.N. at CUSAT Knowledge Forum, on 8 <sup>th</sup> February 2017	Participant
Deepthi	One day workshop on "Hyperspectral Data Processing Techniques "on 09/03/2017	Participant
Suja Subramanian	Attended short term Training Programme on Android Programming and Mobile Application Development conducted by the Division of IT, School of Engineering, Cusat, from 23/05/16 to 27/05/16.	Participant
Suja Subramanian	Attended Training Program on DNA Computing on 23rd Dec 2016 at College of Engineering, Poonjar, Kottayam.	Participant
Sangeetha	Attended Training Program on DNA Computing on 23rd Dec 2016 at College of Engineering, Poonjar, Kottayam.	Participant
Mohammad Ameen	12 <sup>th</sup> International Conference on Microwaves, Antenna, Propagation and Remote Sensing, Jodhpur, Rajasthan, pp. 79 – 82, Feb 2017.	Conference paper presentation
Vinesh P. V	12 <sup>th</sup> International Conference on Microwaves, Antenna, Propagation and Remote Sensing, Jodhpur, Rajasthan, pp. 79 – 82, Feb 2017.	Conference paper presentation
Manoj. M	12 <sup>th</sup> International Conference on Microwaves, Antenna, Propagation and Remote Sensing, Jodhpur, Rajasthan, pp. 79 – 82, Feb 2017	Conference paper presentation
Remsha. M	12 <sup>th</sup> International Conference on Microwaves, Antenna, Propagation and Remote Sensing, Jodhpur, Rajasthan, pp. 79 – 82, Feb 2017	Conference paper presentation



Mohammad Ameen	Fourth International Conference on Advanced Computing and Communication Systems, Coimbatore, India, pp. 923 – 926, Jan 2017.	Conference paper presentation
Mohammad Ameen	International Symposium on Antennas and Propagation, CUSAT, Cochin, India, pp. 45 – 48, Dec 2016.	Conference paper presentation
Prakash. K.C	International Symposium on Antennas and Propagation, CUSAT, Cochin, India, pp. 45 – 48, Dec 2016.	Conference paper presentation
Sumitha Mathew	International Symposium on Antennas and Propagation, CUSAT, Cochin, India, pp. 45 – 48, Dec 2016.	Conference paper presentation
Prakash K. C	International Conference on Signal Processing and Advanced Communication, College of Engineering, Chertala, August 10-11, 2016.	Conference paper presentation
Mohammad Ameen	International Conference on Signal Processing and Advanced Communication, College of Engineering, Chertala, August 10-11, 2016.	Conference paper presentation
Sumitha Mathew	International Conference on Signal Processing and Advanced Communication, College of Engineering, Chertala, August 10-11, 2016.	Conference paper presentation
Prakash K. C	8 <sup>th</sup> National Conference on VLSI, Signal Processing and Communication, Viswajyothi College of Engineering and Technology, Vazhakulam, Kerala, 21-22 July 2016.	Conference paper presentation
Sumitha Mathew	International Conference on Computing, Communication and Signal Processing, College of Engineering, Karunagappally, July 8-9, 2016.	Conference paper presentation
Mohammad Ameen,	International Conference on Computing, Communication and Signal Processing, College of Engineering, Karunagappally, July 8-9, 2016.	Conference paper presentation
Prakash K. C	International Conference on Computing and Communication (ICCC'16), Mar Athanasius College of Engineering, Kothamangalam, Kerala, 28-29 January 2016.	Conference paper presentation
Dr.P.Mohan	User Scientists Workshop on Wind Profiler Radar 9-10 February 2017 at ACARR, CUSAT	Organizer
Dr.K. Vasudevan	User Scientists Workshop on Wind Profiler Radar 9-10 February 2017 at ACARR, CUSAT	Organizer





Dr.K. Vasudevan	Participated in the India Antenna Week conducted at Thyagarajar College of Engineering in Madurai during 6 <sup>th</sup> and 7 <sup>th</sup> of June 2016	Participant
Dr.K. Vasudevan	An Invited special lecture on “ design aspects of portable antennas” was given at NIT, Tiruchirappaly on 27 <sup>th</sup> July 2016	Speaker for a special lecture
Dr.K. Vasudevan	As a resource person in a Faculty development programme in college of Engineering Cherthala on 21 <sup>st</sup> December 2016	Resource person for TEQUIP FDP Programme
Dr.K. Vasudevan	As a resource person in a FDP programme in Poonjar Engineering college on 16 <sup>th</sup> February 2016	Resource person for TEQUIP FDP Programme
Dr.K. Vasudevan	International symposium on Antennas and Propagation at Cochin University of Science and Technology during 15-17, December 2016	Participant and Organizing Committee Member
Dr.C.K. Aanandan	1. International Conference on Electromagnetics in Advanced Applications, ICEAA-IEEE APWC SEPTEMBER 19-23, 2016, Cairns, Australia.	Represented IEEE APS Kerala Chapter in the APS Chapter Chairs' meeting

## 16. Role of Faculty in International/National organizations /Institutions / Editorial Boards

Name of Faculty	Name of Organization	Role
Dr.P.Mohanalan	ST RADAR Facility	Co-Investigator
Dr.K. Vasudevan	ST RADAR Facility	Co-Investigator
Dr.C.K.Aanandan	ST RADAR Facility	Co-ordinator
Dr.P.Mohanalan	NITI Ayog New Delhi	Presented the technical aspects of TRM and Antennas.

## 17. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount (Rs. in lakhs)	Investigator(s)
1	Algorithms for Underwater Image Enhancement, Object Detection and Cable Tracking	Naval Research Board, Delhi	33.05	PI: Dr. Supriya M. H. Co PI: Arun A. Balakrishnan



2	Optimizations for virtualized mobile computing	Science and Engineering Research Board	17.2	PI: Dr. Bijoy A. Jose
3	UGC-SAP	UGC	185	Dr.C.K.Aanandan

### 18. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl. No.	Title	Duration	Chairman/ Coordinator	Funding Agency
1.	APSYM 2016	3 days (15-17 December 2016)	Dr.Supriya M H	NRB, CSIR,SERB UGC, KSCSTE, INSA
2.	CUCENTOL Silver Jubilee Inauguration	1 day (8 <sup>th</sup> February 2016)	Dr.P.R.S.Pillai Dr.James Kurian	KSCSTE
3.	Seminar on Make in India: S&T Driven Innovations with Specific Emphasis to Ocean Technology for Sustainable Development, organized as a part of the National Science Day 2016 Celebrations	1 day (26 <sup>th</sup> February 2016)	Dr.P.R.S.Pillai Dr.James Kurian	KSCSTE + CUSAT
4.	Workshop on "Make Yourself"	2 days (20 <sup>th</sup> to 21 <sup>st</sup> December 2016)	Dr.Supriya M H	CUSAT
5.	Workshop on NRB Project- "IIMM based TargetClassifier with Improved Success Rates"	2 days (5 <sup>th</sup> to 6 <sup>th</sup> December)	Dr.Supriya M H	NRB
6.	APSYM 2016	3 days (15-17 December 2016)	Dr. C.K Aanandan	UGC, KSCSTE, INSA
7.	IEEE workshop on Modern trends in Antenna Technologies	2 days (24-25 May 2017)	Dr. C.K Aanandan	IEEE APS



8.	IEE workshop on “Microwave to Terahertz Technologies” & “Electromagnetic Scattering Problems and their Applications”	1 day (7 <sup>th</sup> September 2016)	Dr.K.Vasudevan	IEEE APS
9.	Seminar on National Technology Day	1 day (11 <sup>th</sup> May 2016)	Arun B Balakrishnan	KSCSTE + CUSAT

### 19. Consultancy Work

Sl. No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
1	Mobile Computing project with cloud platform	Dr. Bijoy Antony Jose	Agileblaze Technologies



## DEPARTMENT OF ENGLISH AND FOREIGN LANGUAGES

### 1. Brief History of the Department:

The Department was established in 1976 under the name of Foreign Languages. In the year 2003 it was renamed as the Department of Culture and Heritage. In order to give more importance to English and Foreign languages pedagogy, the Department was rechristened in 2012 as the Department of English and Foreign Languages. Besides its earlier concerns with teaching linguistic and literary aspects of languages like English, French, German, Japanese and Russian, the Department now gives thrust to communicative aspects of languages and culture. During 2006- 07, the study of Italian language and culture was introduced with funding from the Italian Government.

One of the extension activities of the Department consists of conducting short – term Courses in language and culture for institutions and the public on demand. Yet another is consultancy in terms of interpretation and translation. With the emergence of English as a global lingua franca, the teaching of English will be given added importance. To facilitate communication skills in English and other languages a multimedia laboratory has been set up. Short- term Courses of 3 months duration in communicative English and vacation programs in Foreign Languages are conducted.

The Department conducted UGC Sponsored National Seminar on “ENGLISH AS A CORPORATE COMMUNICATION MEDIUM” on 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> March 2017

### 2. Programmes of Study/Research

1. Certificate Courses in French, German, Italian, Japanese and Russian.
2. Diploma Courses in French, German, Italian, Japanese and Russian.
3. Integrated Diploma Courses in French, German, Italian, Japanese and Russian.
4. P.G Diploma Courses in Communicative English.
5. Ph. D. Programme.
6. Short- term Courses on the above foreign Languages and Communicative English and IELTS Training and vacation class for English and Personality Development for students.



### 3. Faculty Members

Sl.No.	Name	Designation	Qualification	Specialization
1	Smt.Brinda Bala Sreenivasan	Asst. Professor in English & Head	M.A. English, (Qualified SLET-Accredited by UGC)	English Language and Literature.

### 4. Visiting Faculty (If any)

Sl. No.	Name	Designation	Qualification	Specialization
1	Prof. K.C. George	Guest Faculty	M.A.	French Language and Literature.
2	Dr. Annie Kurian	Guest Faculty	M.A., Ph.D	German Language and Literature.
3	Dr. Mathew Joseph	Guest Faculty	M.A., Ph.D	English Language and Literature
4	Paul Valsan	Guest Faculty	Diploma in Mech. Engg Japanese Language Level 3 & 4	Japanese Language and Literature
5	Isabella Pinna	Guest Faculty	M.A.	Italian Language and Literature
6	Ushakumari P A	Guest Faculty	M.A.	English Language and Literature
7	Sabitha K. Babu	Guest Faculty	M.A.,M. Phil	French Language and Literature
8	Usha Devarajan	Guest Faculty	B.A., Diploma in Management	Personality Development & Management
9	Preeti Pillai	Guest Faculty	B.A., LLB	English Language and Literature
9	Sonia Britto	Guest Faculty	M.A.	English Language and Literature
10	Deepti Santhosh Nair	Guest Faculty	M.A., B Ed.	English Language and Literature
11	Krishnapriya M	Guest Faculty	M.A., Ph.D	German Language and Literature.

**5. Administrative Personnel**

Sl. No.	Designation	No. of Posts
1	Assistant Section Officer	1
2	Office Superintendent	1
3	Library Assistant	1
4	Office Attendant	1

**6. Student Enrollment**

Sl. No.	Programme of Study	Men	Women	Total
1	Certificate Course in French	23	15	38
2	Certificate Course in German	26	6	32
3	Certificate Course in Italian	23	7	30
4	Integrated Diploma in Japanese	12	3	15
5	P.G. Diploma in Communicative English	7	8	15
6	Ph.D. Programme	0	0	0

**8. Research Facilities****a. Laboratories**

**A multimedia Language Laboratory has been set up with 25 positions.**

**b. Major equipments**

**Digital Light Projector (DLP) in the class- room that facilitates digital and e-learning.**

**c. Library**

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
7442	30

**d. Others: Journals : National Geographic Magazine, Readers Digest.****9. Distinguished visitors:**

Sl. No.	Name	Affiliation	Remarks
1	Alice Gauny	Director, Alliance Frangaise, Trivandrum	French Teacher
2.	Masato Nuhako		Japanese Teacher
3.	Yumico Mizunu		Japanese Teacher



4.	Motomitzu Kaetsu		Japanese Teacher
5.	C Livingstone	Dept. of Languages, Madras Christian College, Chennai	German Teacher

## 10. Publications

### a. Papers

Sl.No.	Name of Paper	Impact Factor, if any
1.	The Girl with a Pearl Earring: Portrait of a relationship, Verbally and Visually	-

### b. Books

Sl.No.	Name of Book
1.	Verbal to Visual; The Aesthetic Semiotics of Classics as Movies.
2.	Enhancing English Communication through Sit Com & Movies

## 11. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Smt. Brinda Bala Sreenivasan	1. UGC Sponsored National Seminar: Verbal to Visual: The Aesthetic Semiotics of Classics as Movies.	Seminar Director
	2. International Conference on Empowering the English Language Learner, Materials, Methods and testing: Department of English, Anna University, Chennai.	Participant

## 11. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl. No.	Title	Duration	Director/ Coordinator	Funding Agency
1	UGC Sponsored National Seminar – English as a Corporate Communication medium	3 days (2 <sup>nd</sup> , 3 <sup>rd</sup> & 4 <sup>th</sup> March 2017)	Smt. Brinda Bala Sreenivasan	UGC



## 12. Consultancy Work

Sl. No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
1	Translation and Interpretation of official documents and manuals	1. Sri. K.C. George 2. Dr. Annie Kurien 3. Paul Valsan  4. Sri. A Achyutha Menon 5. Smt. Sabitha K Babu 6. Smt. Isabella Pinna	Institution and individuals





## DEPARTMENT OF HINDI

### 1. Brief History of the Department

The Department of Hindi, established in 1963, is one of the oldest departments of the University. It was a part of the Kerala University and joined the folds of University of Cochin when it was established in the year 1971. From the period of inception, it has blossomed into one of the prestigious institutions among Indian University Departments engaged in teaching and research of Hindi Language and Literature.

This Department is a UGC assisted SAP department DSA Phase-1 is going on. It is actively engaged in research in different areas like Ancient and Modern Poetry, Fiction, Drama and Theatre studies, Criticism, Grammar, Linguistics, Comparative Studies of Languages and Literature, Folk Literature, Translation, Computer Aided Language Teaching, Feminist Literature, Dalit Literature, Ecological Discourse etc.

The Department is one of the leading centers of research in Hindi and the faculties have guided about 221 Ph.Ds. The creative capabilities of the teaching faculty received the recognition through the award of Fellowships/Prizes. About one Hundred and ten research papers, twenty one books and learned articles have been published by the faculty and research Scholars during the past five years.

The Department Library has about 42091 books and is currently subscribing 69 journals. The PG students and Research Scholars from various parts of Kerala use the Library as a reference centre. It has been assessed as one of the best libraries in the country. The Department has a well-equipped computer lab and conducts short term Computer Courses.

The Department organizes national seminars every year and also conducts UGC sponsored programmes.

### 2. Programmes of Study/Research

1. M.A. Hindi Language and Literature
2. M.Phil
3. Ph.D
4. P.G. Diploma in Translational, Journalism and Hindi Computing
5. Certificate course in Computer Aided Language Training in Hindi

**3. Faculty Members**

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. K. Vanaja	Professor & Head	M.A, Ph.D, D. Litt.	Criticism Comparative Literature, Modern Literature, Feminist Studies, Ecological Studies and Translation studies
2	Dr. R. Sasidharan	Professor	M.A., M.Phil., Ph.D Translation.	Hindi Drama and Theatre Comparative Literature, Translation Studies
3	Dr.K Ajitha	Professor	M.A, M.Phil, Ph.D	Modern Drama and Theatre Comparative Study
4	Dr. Aneesh. K.N	Asst. Professor	M.A, M.Phil, Ph.D	Modern Hindi Literature, Drama and Literature, Comparative Literature
5	Dr. Girish Kumar. K.K	Asst. Professor	M.A, M.Phil, Ph.D	Modern and Contemporary Hindi Literature, Comparative Literature, Contemporary Hindi Poetry
6	Sri. Rajkumar Meena	Asst. Professor	M.A, M.Phil,	Modern Hindi Literature Tribal Studies, Literary Journalism

**5. Emeritus Professor/Scientist (if any)**

Sl.No.	Name	Designation	Qualification	Specialization
1	Dr. N.Mohan	Emeritus Fellow	M.A, M.Phil, Ph.D	Ancient and Modern Hindi Literature
*2	Dr.N.G. Devaki	Emeritus Fellow	M.A, Ph.D	Ancient and Modern Hindi Literature

**7. Contract Faculty (If any)**

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. Mobin Johoroddin	Assistant Professor	M.A, M.Phil, Ph.D	Ancient and Medieval Poetry & Comparative Literature



2	Dr. Viji V	Assistant Professor	M.A, M.Phil, Ph.D	Modern & Contemporary Novels
3	Dr. Preetha T.D	Assistant Professor	M.A, M.Phil, Ph.D	Modern & Contemporary Novels

## 9. Research Staff

Sl.No.	Name	Designation	Qualification	Specialization
1	Syamkumar.S	Project Fellow	M.Phil	
2	Jesna Rehim	Project Fellow	M.A	

## 11. Research Scholars

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Saranya.T.S (Submitted)	P.T	Dr. M.Shanmughan	Samakaleen Mahila Kahanikarom Ki Kahaniyom Mein Badalti Naitik Chethana
2	K.Lekha	P.T	Dr. K.Ajitha	Stree Vimarsh Ke Sandharbh Mein Stree Natya Lekhan
3	Manish.K.Gopinath (Submitted)	E-GRANTZ	Dr. K.Ajitha	Hindi Ki Dalit Atmakathaom Ka Vishleshnatmak Adhyayan
4	Lakshmipriya.C (Submitted)	P.T	Dr.R Sasidharan	Samakaleen Hindi Natak:Ek Vishleshnatmak Adhyayan
5	Vidya P.V (Submitted)	E-GRANTZ	Dr.R Sasidharan	Hindi Balnatak:Ek Adhyayan
6	Susmitha Ghai	P.T	Dr.N.Mohanan	Samakaleen Hindi Upanyas Mein Gandhi Chintan
7	Sreejina P.P	USRF	DrN.Mohanan	Samakalin Hindi Upanyas Mein Laghu Sanskrutiyom Ka Vishleshanatmak Adhyayan
8	Soumya M.B (Submitted)	E-GRANTZ	Dr.K.Ajitha	Samakaleen Hindi Mahila Kahanikaron Ki Kahaniyon Mein Manavadhikar



9	Arya Viswanath	P.T	Dr.R. Sasidharan	Samakaleen Hindi Malayalam Mahila Kahanikarom Ki Kahaniyom Ka Tulnatmak Adhyayan
10	Krishnapriya T.P	USRF	Dr.N.G. Devaki	Amarkant Ki Kahaniyom Ka Vishleshnatmak Anusheelan
11	Sangeetha Nair	USRF	Dr.N.G. Devaki	Adhunik Hindi Kavayitriyon Ki Kavitaon Ka Vishleshnatmak Adhyayan
12	Aparna Venu	USRF	Dr.K.Ajitha	Bharatiya Mahila Rang Manch: Ek Adhyayan Hindi Aur Malayalam Ke Vishesh Sandarbh Mein
13	Sajana Beegum K.H	USRF	Dr.K.Ajitha	Samakaleen Hindi-Malayalam Mahila Kahaneekarom Ki Kahaniyom Mein Prathirodi Chethana (1990 SE 2010 Tak Ki Kahaniyom Ke Vesesh Sandharbh Mein)
14	Mary Ria D'Couth	USRF	Dr.R.Sasidharan	Samakaleen Hindi Kahaniyon Mein Mahanagareey Jeevan Ka Yatharth
15	Sariga I.V	E-GRANTZ	Dr. N. Mohanan	Prem Chand Ke Katha Sahitya Ka Sampathi Shasthriya Vivechan
16	Geethu V Krishnan	USRF	Dr.R.Sasidharan	Adhunik Hindi Jevaneeparak Upanyaas: Ek Adhyayan
17	Reshmi Raveendran	USRF	Dr.K.Ajitha	Hindi Ke Natyaroopantaron Ki Samvedana Aur Sanrachna – Ek Vishleshnatmak Adhyayan
18	Beena Pylee	F.T	Dr.K.Vanaja	Upanivesh Aur Navaupaniveshkaleen Stree Kendrit Hindi Upanyasom Ka Tulanatmak Adhyayan



19	Neethu George	MANF-JRF	Dr.R.Sasidharan	Mamata Kaliya Ki Kahaniyom Ka Vishleshanatmak Adhyayan
20	Mahesh.S	P.T	Dr. M. Shanmughan	Samakaleen Hindi Kavita Mein Badalte Manaveey Sambandh
21	Sinju PV	RGNF	Dr. M. Shanmughan	Anchalikata Ke Pariprekshya Mein Markandey Ka Katha Sahitya: Ek Anusheelan
22	Pavan Bharti	P.T	Dr. K. Vanaja	Hindi Ke Navajagarankaleen Nibandh Sahitya Mein Rashtriya Asmita: Ek Anusheelan
23	Hema Narayanan (Submitted)	USRF	Dr. K. Vanaja	Hindi Ke Samakaleen Mahila Lekhan Ka Soundarya Shastra: Katha Sahitya Ke Vishesh Sandarbh Mein
24	Vishnu Thankappan (Submitted)	USRF	Dr. K. Ajitha	Samakaleen Hindi Kahani Mein Loktantra Vimarsh
25	Reshma. VC	USRF	Dr. N. G. Devaki	Samakaleen Hindi Kavita Mein Jeevan Moolya
26	Thanooja Thaha	USRF	Dr. K. Vanaja	amakaleenata Ke Pariprekshya Mein Udayaprakash Ka Rachana Sansar
27	Helen Mary A.J	USRF	Dr. N. G. Devaki	Mahabharat Par Adharith Narendra Kohli Ke Upanyasom Ka Anusheelan
28	Mary Jeena.KG	USRF	Dr. N. Mohanan	Hindi Aur Malayalam Navajagarankaleen Upanyasom Ka Tulanatmak Adhyayan
29	Salmi Sebastian	UJRF	Dr.R.Sasidharan	Samakaleen Hindi Mahila Upanyaskaron Ke Upanyasom Mein Stree Vimarsh
30	Latha.V	E-GRANTZ	Dr. K. Vanaja	Ekkiavim Sadi Ki Hindi Kahaniyom Mein Navrashtiyata



31	Shyja.K	UJRF	Dr. R. Sasidharan	Ikkisvim Sadi Ke Prathan Dasak Ke Katha Sahitya Mein Sampradayikata
32	Anju.K.R	UJRF	Dr. K. Ajitha	Swathanthryothar Hindi Upanyasonn Mein Veshya Jeevan
33	Radhika.C.R	E-GRANTZ	Dr. N. Mohanan	Adivasi Vimarsh Ke Sandarbh Mein Samakaleen Hindi Upanyas
34	Anupama.C.V	UJRF	Dr. N. Mohanan	Samakaleen Hindi Kavita Ke Pratiman
35	Sangeetha Sadanandan	UJRF	Dr. K. Ajitha	Prasadyugeen Hindi Natakon Mein Rashtreeyata
36	Aiswarya. C.K	E-GRANTZ	Dr. N. Mohanan	Gyanranjan Ki Kahaniyon: Ek Anuseelan
37	Silpa Sivan	UGC-JRF	Dr. K. Vanaja	Hindi Ka Stree Yatra Sahitya
38	Mymoona.P	MAN-JRF	Dr. R. Sasidharan	Samakaleen Hindi Kahani Mein Ghar: Ek Vishleshnatmak Adhyayan
39	Jesna Rahim	UJRF	Dr. K. Vanaja	Navjagaran Kaleen Hindi Kahaniyon Mein Rashtra Sankalpana
40	Prasara. S	UJRF	Dr. K. Vanaja	Agyeya Aur T.S Eliot Kee Samakaleen Drishti: Ek Tulnatmak Adhyayan
41	Neethu. P.J	UJRF	Dr. K. Ajitha	Samakaleen Hindi Kahani Mein Upbhoktavad
42	Shyju. K	UJRF	Dr. N. Mohanan	Nav Vampanthi Kaviyon Ki Kavitaon Mein Pratirodh Ki Sanskriti
43	Anumol Krishnan	UJRF	Dr. K. Ajitha	Samakaleen Hindi Kahaniyon Mein Bal Vimarsh
44	Rinu Elizebath Philip	UJRF	Dr. Aneesh K.N	Samakaleen Hindi Kahaniyom Mein Gaav



45	Anjali B Kumar	UJRF	Dr.Girish Kumar K.K	Samakaleen Hindi Katha Sahitya Mein Jadui Yatharth
46	Anjusree PK	UJRF	Dr. Aneesh K.N	Samakaleen Hindi Katha Sahitya Mein Kashmir
47	Saranya Sasi	E-GRANTZ	Dr. R. Sasidharan	Samakaleen Hindi Dalit Natakam Mein Yatharth Ki Vividh Aayam
48	Prathyusha S Nair	(UGC) POST DOCTORAL FELLOW	Dr. K. Vanaja	Asmita Vimarsh Ke Sandarbh Mein Samakaleen Hindi Atmakatha

### 13. Administrative Personnel

Sl.No.	Designation	No. of Posts
1	Section Officer	1
3	Junior Librarian	1
4	Assistant	2
5	Computer Assistant	2
6	Lab/Library Assistant	1
7	Peon	1
8	Sweeper-cum-Cleaner	1

### 14. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1	M.A	0	28	28
2	M.Phil	1	9	10
3	Ph. D	1	8	9
4	PG Diploma in Translation, Journalism and Hindi Computing	2	22	24

### 15. Research Facilities

#### a. Laboratories : Computer Lab

#### b. Library

No of books and Journals as on 31 <sup>st</sup> March 2017	Additions during the current year
Books: 42091 Journals: 69	1359

**d. Others****16. Distinguished visitors**

Sl. No.	Name	Affiliation	Remarks
1	Dr. Ravikumar Anu	Professor, Punjab University	Ph.D viva and had given a talk
2	Dr. Ravi Bhooshan	Retired Professor & Critic Ranchi, Bihar	Given a lecture
3	Prof. S.V.M.S Narayan Raju	Professor & Head Central University, Tamil Nadu	Delivered a talk
4	Meera Kant	Play write in Hindi	Delivered a talk in Hindi Drama
5	Dr. P. Pavithran	Professor of Malayalam S.S.U.S Kalady	Chief Guest of Malayalam Day Celebration
6	Vivek Nirala	Eminent Poet in Hindi	Resource Person in UGC National Seminar
7	Rajesh Joshy	Eminent Poet in Hindi	Resource Person in UGC National Seminar
8	Ramesh Muktibodh	Critic in Hindi	Resource Person in UGC National Seminar
9	Ajay Tiwari	Eminent Critic in Hindi	Resource Person in UGC National Seminar
10	Jaya Prakash	Eminent Critic in Hindi	Resource Person in UGC National Seminar
11	Reman Sinha	Professor Jawaharlal Nehru University, New Delhi	Resource Person in UGC National Seminar
12	Prabhakar Singh	Professor Banarus Hindu University New Delhi	Resource Person in UGC National Seminar
13	M. Venkideshwar	Retired Professor Usmania University, Hyderabad	Resource Person in UGC National Seminar
14	Ekant Sreevastav	Eminent Poet in Hindi	Resource Person in UGC National Seminar
15	S.K. Vasanthan	Critic of Malayalam Literature	Resource Person in UGC National Seminar
16	Dr. C.R. Prasad	Professor & Critic of Malayalam Literature	Resource Person in UGC National Seminar





17	Renjana Aragadae	Professor, Gujrat University Hyderabad	Resource Person in UGC National Seminar
18	Radha Syam Meera	Deputy Director, Central Hindi Directorate, New Delhi	Resource Person in UGC National Seminar
19	S. Sreenivasan	Assistant Director, Central Hindi Directorate, New Delhi	Resource Person in UGC National Seminar
20	Rohini Agrawal	Professor, Rohtak University, Haryana	Ph.D viva & Delivered a talk
21	Dr. Ganesh Pawar	Professor, Central University Dharwad	Ph.D viva & Delivered a talk
22	Dr. Suneetha Manjan Bale	Professor, Central University Dharwad	Ph.D viva & Delivered a talk

### 17. Ph.Ds Awarded

Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Daya Prakash Sinha ke Natakam Mein Prayodharmita Ke Vividh Aayam	Shalbi Mohanan	Dr. R. Sasidharan
2	Sattothar Hindi Natokom Mein Lok Natya Ka Prabhav	Nimisha IV	Dr.N. Mohanan
3	Kashinath Singh Ka Rachana Sansar	Anjali Krishnan	Dr.N. Mohanan
4	Samakaleen Hindi Kahaniyom Ka Pravruttagath Anusheelan	Sumi C.S	Dr. N.G. Devaki
5	Hindi Ke Musalman Upanyasakarom Ke Upanyasom Mein Bharateeyata Ki Avadharana	Aneesh Shankar.P.S	Dr.N.Mohanan
6	Rajesh Joshi Aur Pawan Karan Ki Kavitaon Mein Abhivyakt Samajik Yatharth Ka Anusheelan	Salma Das P	Dr. N.G. Devaki
7	Paristhitik Streevad Ke Sandarbh Mein Samakaleen Hindi Upanyas: Ek Adhyayan	G. Sugida	Dr. K. Vanaja
8	Samakaleen Hindi Kavita Ka Pravrutthagat Adhyayan (Nabbe Ke Baad Ki Kavithavom Ke Vishesh Sandarbh Mein)	Dhanya KP	Dr. K. Vanaja
9	Hindi Ki Samakaleen Dalit Evam Adivasi Kavithavom Ka Tulanatmak Adhyayan	Syamkumar. S	Dr. K. Vanaja
10	Nabbe Ke Dashak Ki Kavayithriyon Ki Kavithaon Mein Stree Vimarsh	Vineetha N.A	Dr. K. Ajitha

**18. Publications****a. Papers**

Sl.No.	Name of Paper
1	<b>Dr. K. Vanaja</b>
	<ol style="list-style-type: none"> <li>1. Malayalam Bhasha – Sananvay Dakshin – May 2017</li> <li>2. Malayalam Upanyason Mein Paryavaron – Samanvay Dakshin – March 2017</li> <li>3. Rajesh Joshy Ki Rechanaom Mein ‘Ped’ Ka Sanskritik Prathirodh – Paristitiki Ke Vishesh Sandharbh Mein – Anuseelam-2016 July</li> <li>4. Navajagaran Kaleen Malayalam Upanyasom Mein ‘Rashtra’ Sankalpana, Anusheelan -2017 January</li> <li>5. Bhasha Shram Aur Vimochan – Behuvreehi – Dakshin Bharat Hindi Prachar Sabha-Madras -2016</li> </ol>
2	<b>Dr. R. Sasidharan</b>
	<ol style="list-style-type: none"> <li>1. Dr. Susheela Takbhaure Ke Kavya Mein Lokapaksh – in the book Bharatiy Sahitya Adyatan Pravrittiyam – Ed. Dr. R. Sethunath, Jawahar Pustakalay, Mathura</li> <li>2. Samakaleen Hindi Adivasi Kavita – Abhishek Prakashan, Delhi – 53</li> <li>3. Uttarbharat Ki Lok Kalayen Aur Lok-Natyaka Samakaleen Sandharbh – Article in the multi-disciplinary research journal etude by IQAC PMG College, Chalakkudy Jan-2017</li> <li>4. Samakaleen Hindi Natak Mein Paristhitik Chintan edited in the book Hindi Natak Saamajik Sarokar – Taxila Prakashan, New Delhi</li> </ol>
3	<b>Dr. K. Ajitha</b>
	<ol style="list-style-type: none"> <li>1. Samakaleen Adivasi Natakan Mein Paristitik Chetna</li> <li>2. Ayyankali</li> <li>3. Samakaleen Mahila Natya Lekhan</li> </ol>
4	<b>Dr. Aneesh. K.N.</b>
	<ol style="list-style-type: none"> <li>1. Hindi Ke Stree Natak accepted in Nagari Pathrika May 2017</li> <li>2. Hindi Natak Ki Prathirodhi Bhasha – Anuseelan - 2017</li> </ol>
5	<b>Dr. Girish Kumar. K.K.</b>
	<ol style="list-style-type: none"> <li>1. Pratirodh Ki Nayi Kavya Bhavana, Anuseelan-July 2016</li> <li>2. Vamsiksha Banam Vama Sikshak, Anuseelan –January 2017</li> </ol>
6	<b>Sri. Rajkumar Meena</b>
	<ol style="list-style-type: none"> <li>1. Sanjeev Ki Kahaniyom Mein Adivasi Samaj, dastak February - 2017</li> <li>2. Hindi Adivasi Lekhan Main Pratirodh - Anuseelan- July 2016</li> </ol>

**Total research papers of Research scholars – 22****c. Books**

Sl.No.	Name of Book
1	<b>Dr.K.Vanaja</b>
	<ol style="list-style-type: none"> <li>1. Stree lekhan, Anugya Books – New Delhi (Edited Book)</li> <li>2. Hashiya Ulangathi Aurat : Kahani – Malayalam –Remanika Foundation, New Delhi (Edited Journal)</li> </ol>



### 19. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop/ Refresher Courses	Role
<b>Dr.K.Vanaja</b>	1. Samakaleen Kahani Mein 'Pedi' S.S.U.S., Kalady -2017	<b>Resource Person</b>
	2. Hindi Mein Hassiyekrit Sahitya – Kerala University	<b>Keynote address</b>
	3. Samakaleen Hindi Upanyason Mein Sanskritik Pahaly – Maharajas College, Ernakulam	<b>Keynote address</b>
	4. Hindi Aur Dakshin Ki Bhashayen, conducted by Kendriya Hindi Sanstan – Agra at Kadappa	<b>Resource Person</b>
	5. National Seminar on 'Hindi Bhasha' conducted by Bharateeya Bhasha Pretishtapan Parishad, Lucknow	
	6. National Seminar – Bharateey Sahitya' conducted by Punjabi University, Patyala,	
	7. Hindi Natakam Mein Kalidas – All India Radio	<b>Resource Person</b>
	8. Hindi Sahitya Yatra conducted by Changampuzha Sanskritik Kendra – delivered a talk on 'Avam' by Chitra Mudgal	
<b>Dr. R. Sasidharan</b>	1. National Seminar 'Contemporary Hindi Literature' Maharajas College, Ernakulam	<b>Resource Person</b>
	2. UGC National Seminar – Muktiboth at Hindi Department, CUSAT	<b>Coordinator</b>
	3. UGC – DSA National Seminar 'Navajagaran Aur Hindi Malayalam Poetry at Hindi Department, CUSAT	<b>Resource Person</b>
	4. UGC National Seminar – SSUS Kalady	
	5. UGC National Seminar at Calicut University	
	6. UGC National Seminar at Mumbai University on Amrut Lal Nagar	<b>Organizing</b>
	7. International Seminar at Hindi Department, Kannur University on 'Life of non resident Indians Depicted in Hindi Films	<b>committee</b>
	8. International Seminar organized by the Dept. of Applied Economics, CUSAT	<b>member</b>



<b>Dr.K.Ajitha</b>	<ol style="list-style-type: none"> <li>International Seminar on 'Jal Aur Jangal Se Judi Samvedna Aur Samakaleen Sahitya – St. Therasas College, Ernakulam</li> <li>National workshop on ILT oriented Hindi teaching and translation studies – Victoria College, Palakkad</li> <li>National Seminar on Muktibodh Ka Rachna Sansar – CUSAT</li> <li>National Seminar on Samakaleen Hindi Malayalam Kavitaon Mein Navajagaran</li> </ol>	<p><b>Resource Person</b></p> <p><b>Participant</b></p>
<b>Dr. Aneesh. K.N</b>	<ol style="list-style-type: none"> <li>UGC National Seminar on Muktibodh Ka Rachna Sansar – CUSAT</li> <li>UGC National Seminar on Navajagarankaleen Hindi Aur Malayalam Kavita</li> </ol>	<b>Participation</b>
<b>Dr. Girish Kumar. K.K</b>	<ol style="list-style-type: none"> <li>National Seminar – Govt. College, Kalpete</li> <li>National Seminar – University of Kerala</li> <li>National Seminar – NPOL</li> <li>National Seminar on Muktibodh Ka Rachna Sansar – CUSAT</li> <li>UGC National Seminar on avajagarankaleen Hindi Aur Malayalam Kavita</li> </ol>	<p><b>Resource Person</b></p> <p><b>Coordinator</b></p>
<b>Sri. Rajkumar Meena</b>	<ol style="list-style-type: none"> <li>National Seminar on Muktibodh Ka Rachna Sansar – CUSAT</li> <li>UGC National Seminar on Navajagarankaleen Hindi Aur Malayalam Kavita</li> </ol>	<p><b>Paper presentation</b></p> <p><b>Participation</b></p>
<b>Beena Pylee</b>	Navajagarankaleen Upanyasom Mein Stree – March 2016 – Hindi Department, CUSAT	<b>Paper presentation</b>
<b>Reshma VC</b>	Ikkisweem Sadi Ki Hindi Kavitavom Mein Jeevan Moolya: Vaiyaktik Samajik Sandarbh Mein – March 2016 – Sree Sankara University, Paamana Centre, Kollam	<b>Paper presentation</b>
<b>Sinju PV</b>	Markandeya Ki Kahaniyom Ka Sanskritik Paksh – December 2016 – Maharajas College, Ernakulam	<b>Paper presentation</b>
<b>Sangeetha Nair</b>	Hindi Ki Navajagarankaleen Stree Kavita - Hindi Department, CUSAT – February 2017	<b>Paper presentation</b>
<b>Mary Geena KG</b>	Navajagarankaleen Hindi Upanyas :Ek Vishleshan - Hindi Department, CUSAT – March 2016	<b>Paper presentation</b>



<b>Prathyusha S Nair</b>	<ol style="list-style-type: none"> <li>1. Mukthibodh Ka Bhoktha 'Swa' Brahma Rakshas Ke Sandarbh Mein - Hindi Department, CUSAT –December 2016</li> <li>2. Hindi Stree Atmakathaom Mein Abhivyakth Samakaleen Chunouthiyam –KE College, Mannanam – December 2016</li> </ol>	<b>Paper presentation</b>
<b>Anju KR</b>	<ol style="list-style-type: none"> <li>1. Veshya Jeevan Sanskriti Par Dhappa: Salam Akhri Aur Aay Bazar Bandh Hei Upanyasom Ke Vishesh Sandharbh Mein –Maharajas College, Ernakulam – February 2017</li> <li>2. Veshya Bani Stree Ki Avaniiti: Reth Aur Tinka Tinke Pass Upanyas Ke Vishesh Sandarbh Mein –University College, Trivandrum - February 2017</li> <li>3. ikkisweem Sadi Ke Hindi Upanyasom Mein Veshya Bani Stree Ka Pratirodh: Ek Vishleshan - Sree Sankara University, Paamana Centre, Kollam – March 2017</li> </ol>	<b>Paper presentation</b>
<b>Sangeetha Sadanandan</b>	<ol style="list-style-type: none"> <li>1. Ikkisweem Sadi Ki Hindi Cinema Aur Rashtriyata –Govt. College Meenchanda, Kozhikkode - December 2016</li> <li>2. Janvasa Natak Mein Abhivyakth Rajaneetik Chetana - Sree Sankara University, Paamana Centre, Kollam - March 2017</li> </ol>	<b>Paper presentation</b>
<b>Shyja K</b>	<ol style="list-style-type: none"> <li>1. Ikkeesweem Sadi Ke Hindi Kahaniyom Mein Sampradayikata: Sakme Aur DooH Ke Vishesh Sandarbh Mein - Sree Sankara University, Paamana Centre, Kollam - March 2017</li> <li>2. Mythreyi Pushpa Ke Upanyas Gundh Begunah Mein Stree Vimarsh – Calicut University – January 2017</li> </ol>	<b>Paper presentation</b>
<b>Anupama CV</b>	<ol style="list-style-type: none"> <li>1. Mukthibodh Ki Kavitaavom Mein Fantasy – Hindi Department - December 2016</li> <li>2. Chayavaadi Kavitaavom Mein Naari - Hindi Department – February 2017</li> </ol>	<b>Paper presentation</b>
<b>Prasara S</b>	<ol style="list-style-type: none"> <li>3. Sameekshak Mukthobodh - Hindi Department - December 2016</li> </ol>	<b>Paper presentation</b>



<b>Latha V</b>	<ol style="list-style-type: none"> <li>1. Bhoomandaleekaran Ke Bhamvar Mein Lok Sanskriti: Ikkeesweem Sadi Ki Hindi Kahaniyom Ke Vishesh Sandarbh Mein –KE College, Mannanam - December 2016</li> <li>2. Samakaleen Hindi Kahaniyom Mein Navarashtriyata –Maharajas College, Ernakulam - December 2016</li> <li>3. Ikkiweem Sadi Ki Hindi Kahaniyom Mein Nava Rashtriyata –Sree Sankara College, Mannanam - March 2017</li> </ol>	<b>Paper presentation</b>
<b>Salmi Sebastian</b>	<ol style="list-style-type: none"> <li>1. Salam Akhi : Veshya Jeevan Ki Gaadha – Ke College, Mannanam – December 2016</li> <li>2. Ek Kasbe Ke Notes Upanyas Mein Stree –Calicut University –January 2017</li> </ol>	<b>Paper presentation</b>
<b>Neethu George</b>	<ol style="list-style-type: none"> <li>1. Samakaleen Hindi Kahani Mein Dalit Jeevan Ka Yatharth – KE College, Mannanam – December 2016</li> <li>2. Stree Asmitha Ke Sandarbh Mein Mamata Kaliya Ki Kahaniyam –Calicut University – January 2017</li> </ol>	<b>Paper presentation</b>

## 20. Role of Faculty in International/National/Organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
<b>Dr.K.Vanaja</b>	<ol style="list-style-type: none"> <li>1. Remanika Foundation, Delhi 'Haziye Utankiti Stree –2016 Anuseelan -2016 July</li> <li>2. Aanuseelan –January 2017 Kerala University</li> <li>3. Mysuru University</li> <li>4. Kerala Central University,</li> <li>5. Kasaragod</li> <li>6. Navabharat Times</li> <li>7. Sahitya Yatra in Hindi conducted by Changampuzha Samskarika Kendra, Edappally</li> </ol>	<p>Editor</p> <p>Chief Editor Chief Editor</p> <p>PG Board of Studies Member</p> <p>PG Board of Studies Member</p> <p>Column writer</p> <p>Coordinator</p>
<b>Dr. K. Ajitha</b>	<ol style="list-style-type: none"> <li>1. UGC</li> <li>2. Calicut University</li> </ol>	<p>Member, SAP Selection Committee</p> <p>Member, CAS Selection Committee</p>
<b>Dr. Aneesh. K.N</b>	<ol style="list-style-type: none"> <li>1. Journal – Anuseelan – July 2016</li> <li>2. Journal – Anuseelan – January 2017</li> </ol>	<p>Editor</p> <p>Member, Editorial Board</p>



<b>Dr. GirishKumar. K.K</b>	1. Journal – Anuseelan –July ‘16 2. Journal – Anuseelan –Jan’17	Member, Editorial Board Editor
<b>Sri.Rajkumar Meena</b>	1. Journal – Anuseelan – July 2016 2. Journal – Anuseelan – January 2017	Member, Editorial Board Member, Editorial Board

## 22. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour / Award	Awarding Agency
Dr. K. Vanaja	1. Bharateeya Sahitya Pratistapan Samman	Bharateey Sahitya Pretishtapan, Lucknow – March 2017
Dr. R. Sasidharan	1. Bharat Vikas Award on 10 <sup>th</sup> December 2016 2. Rashtriya Shikshak Bhushan Puraskar for the contribution in the field of education	ISRINDA, Bhavaneshwar  Bharatiya Pratishthan, Maharashtra

## 24. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	UGC-(SAP)DSA Phase-I on Rashtreey Asmita Ke Roopayem Mein Hindi Aur Malayalam Navajagaran Kaleen Sahitya Evam Bhasha Ka Tulnatmak Adhyayan	UGC	48.5 + 2 Project Fellows	Co-ordinator Dr. N. Mohanan Deputy Coordinator Dr.K.Vanaja

## 26. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl. No.	Title	Duration	Coordinator	Funding Agency
1	Hindi day Celebration	One Day	Chatra Parishad	Various Institutions
2	Kerala Piravi Celebration	One Day	Dr.K.Vanaja	Dept. of Hindi
3	Mukthibodh Ka Rechana Sansar	Three Days	Dr. R.Sasidharan	UGC
4	Navajagaran Kaleen Hindi Aur Malayalam Kavitha	Three days	Dr.Girish Kumar K.K	UGC



## DEPARTMENT OF INSTRUMENTATION

### 1. Brief History of the Department :

The Department of Instrumentation at the Cochin University of Science and Technology was established in the year 1995. Though it is a relatively young teaching and research department, it has a long history of evolution as it was derived from the University Science Instrumentation Centre (USIC). The department of Instrumentation offers a vibrant environment for education and research in Instrumentation Technology. The vision of the department is to provide the leadership and guidance to enable India's excellence in the field of Instrumentation. The department is committed to expansion of the frontiers of knowledge in Instrumentation and to provide the students with an inspiring and a rewarding learning experience.

### 2. Programmes of Study/Research:

- a. B.Tech. Instrumentation Technology
- b. M. Sc. Instrumentation
- c. Ph.D.

### 3. Faculty Members

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Dr. K. Rajeev Kumar	Professor	Ph.D.	Semiconductor Thin Films
2	Dr. Stephen Rodrigues	Professor	Ph.D.	Microwave Electronics
3	Dr. K N Madhusoodanan	Associate Professor and Head	Ph.D.	Analytical Instrumentation
4	Dr. Johny Isaac	Assistant Professor	Ph.D.	Process Control Instrumentation
5	Ratheesh P M	Assistant Professor	MTech. Ph.D.(pursuing)	Microprocessor based Instrumentation
6	Archana Mohan	Assistant Professor (Contract)	M.Tech.	Applied Electronics





#### 4. Emeritus Professor/Scientist (if any)

Sl.No.	Name	Designation	Qualification	Specialisation
1.	Dr. Jacob Philip	Emeritus Professor	Ph D	Photoacoustics

#### 5. Visiting Faculty (If any): Nil

#### 6. Research/Project Staff: Nil

#### 7. Research Scholars

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Aji B	PT	Dr. K N Madhusoodanan	Fiber Optic Sensors
2	S Sundararajan	PT	Dr. K N Madhusoodanan	Linearization of Sensors and its implementation
3	Melbin Baby	PT	Dr. Rajeev Kumar K	Material Science
4	Vishnu Kumar V	UJRF-CUSAT	Dr. K N Madhusoodanan	Sensors and Signal Processing
5	Savitha N	FDP UGC	Dr. K Rajeev Kumar	Chemical vapour deposition of Graphene
6	Lidiya T V	Cochin University	Dr. K Rajeev Kumar	Material Science
7	Abhay Jith	DST	Dr. K Rajeev Kumar	Solar Holography
8	Dinesh Kumar R	PT	Dr. K N Madhusoodanan	Microwave Photonics
9	Anil Johny	PT	Dr. K N Madhusoodanan	Image Processing in Biomedical applications
10	Siril V S	UJRF, CUSAT	Dr. K N Madhusoodanan	Semiconductor Metal Oxide Gas Sensors
11	Peter Cyriac	PT	Dr. Stephen Rodrigues	Microwave antenna
12	Vishnupriya T R	UJRF,CUSAT (from 23/06/2014 to 30/04/2017)	Dr. Stephen Rodrigues	Microwave Engineering (Design Development and performance analysis of UWB MIMO antennas)



13	Sanish V S	PT	Dr. Stephen Rodrigues	Microwave Engineering- (Microstrip Antenna Design)
14	Manoj B	PT	Dr. Stephen Rodrigues	Wireless Communication
15	Umesh V Sharma	PT	Dr. Stephen Rodrigues	Planar periodic structures and their application in antenna design
16	Hrudya B Kurup	CSIR	Dr. Stephen Rodrigues	Microwaves and Antennas
17	Sheeja P George	PT	Dr. Johney Isaac	Simulation and modelling of e-field distribution and associated parameters in inter-digital capacitive transducers and surface acoustic wave devices
18	Sita Radhakrishnan	PT	Dr. Johney Isaac	Adaptive fuzzy neural modelling and control scheme for Blood Oxygen level
19	Soumya H	PT	Dr. Jacob Philip	Physical properties of low dimensional solids
20	Mathew M Mecheril	PT	Dr. Jacob Philip	Nanomaterials
21	Jiss Paul	PT	Dr. Jacob Philip	Optimization and Implementation of Inter-Digital Capacitive Sensor Design
22	Hasna K	UGC	Dr. K Rajeev Kumar	Surface enhanced Raman scattering
23	Ratheesh P M	Part Time	Dr. K N Madhusoodanan	Multi Sensor Data Fusion
24	Thomas Antony	Part Time	Dr. K Rajeev Kumar	Fiber Optic Sensors
25	Rithul Mohan	NPOL	Dr. K Rajeev Kumar	Underwater acoustic sensors



29	Nissamudeen Kunnath	Part Time	Dr. Jacob Philip	Development of Polymer ceramic composites for transducer actuator applications
27	Priya Venugopal	UJRF	Dr. Johney Isaac	Power grid optimization.

## 8. Administrative Personnel

SI.No.	Designation	No. of Posts
1.	Section Officer	1
2.	Assistant Section Officer	1
3.	Assistant	1
4.	Computer Assistant	1
5.	Office Attendant	1
6.	Sweeper-cum-cleaner	1

## 9. Technical Personnel

SI.No.	Designation	No. of Posts
1	Technical Assistant Grade III	1
2	Technician IV	1
3	Technician III	1
4	Technician I	3

## 10. Student Enrollment

SI.No.	Programme of Study	Men	Women	Total
1	B.Tech	27	2	29
2	M.Sc.	7	7	14
3	Ph.D.	3	--	3

## 11. Research Facilities

### a. Laboratories:

1. Atomic Layer Deposition Lab
2. CVD Lab
3. Photo acoustic Lab
4. Process Control Lab
5. Intelligent Instrumentation Lab.



**b. Major equipments:**

1. ALD and CVD systems
2. I-V measurement setup
3. C-V measurement setup
4. PPE set up
5. IPPE set up
6. PA set up
7. Dielectric constant and pyroelectric co-efficient setup
8. TWRC set up
9. Travelling photo thermal wave set up
10. Distributed Control System (DCS)

**c. Library**

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
3154	75

**e. Others**

**12. Distinguished visitors: 2016-17**

Sl.No.	Name	Affiliation	Remarks
1	Shri. S. Kedarnath Shenoy	Director, Naval Physical and Oceanographic Laboratory (NPOL), Kochi	Inaugurated ASCII-2017 and delivered keynote address.
2	Dr.K.S. Sibi	Asst.Professor, Dept. of Physics, Kariyavattom Campus, Kerala University	Talk on "Imaging and Imagining using MRI, PET, and EEG".
3	Shri. Arun Baby	Sr. Engineering Officer, Petronet LNG, Kochi	Talk on "Overview of LNG Terminal"(ASCII 2017)
4	Dr. R. Rajesh	Scientist - F, Centre for Oceanics and Optronics, Naval Physical and Oceanographic Laboratory (NPOL), Kochi	Talk on : "Instrumentation for Fiber Optics based Sensor network"(ASCII-2017)
5	Dr. Deepu Roy	Engineer, Avionics, Vikram Sarabhai Space Centre (VSSC), Trivandrum.	Talk on "Design Considerations of Avionic Systems " (ASCII-2017)



6	Prof (Dr) Babu Anto.P	Department of Information Technology and Controller of Examinations, Kannur University, Kannur.	Talk on "MANET and its applications" (ASCII -2017)
7	Mr. Jiyo Mathew	Field Application Engineer, Tech Labs Bangalore	LabVIEW Training – Resource Person
8	Sri. Shinoj Cheruvathoor,	Lead Instrument & Controls Engineer. Wood Group PSN. United Kingdom.	Seminar on the topic "Instrumentation Engineering in Oil & amp; Gas industries"

### 13. Ph.Ds Awarded

Sl.No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1.	Microwave Plasma Assisted ALD Development for the Deposition of Gate Oxides & ALD of High-k Dielectrics	Subin Thomas	Dr. K. Rajeev Kumar

### 14. Publications- 2016-17

#### a. Papers

Sl.No.	Name of Paper	Impact Factor, if any
1	<b>"Wireless Sensor Networks for Internet of Things based Laboratory Automation System"</b> , International Journal of Research in Engineering and Technology (IJRET), volume: 05 Special Issue: 22, ICSPSCA-2016, pp. 16-18 October 2016, Vishnukumar V, Satheeshkumar M V, K N Madhusoodanan	
2	"Microwave plasma-assisted ALD of Al <sub>2</sub> O <sub>3</sub> thin films: a study on the substrate temperature dependence of various parameters of interest" <i>Appl. Phys. A</i> (2017) 123:185.	1.444
3	'Microwave Optical Module for Optical Communication Applications' Dinesh R and K. N. Madhusoodanan (Communicated)	
10	"Study on ammonia gas sensing property of hydrothermally synthesized pure ZnO nanorods" Siril VS, K N Madhusoodanan, Sinjumol K Rajan, Godfrey Louis AIP Publishing-doi.org/10.1063/1.4984180	



11	International Journal of advanced Research in Electrical, Electronics and Instrumentation Engineering, IJAREEIE Vol. 5, special issue 4 March 2016, ISSN number 2320-3765- Design and analysis of circular microstrip antenna at 5.8 Hgz with FR-4 substrate.	ISSN number 2320-3765
12	International Journal of advanced Research in Electrical, Electronics and Instrumentation Engineering IJAREEIE Vol.5, special issue 4 March 2016, ISSN number 2320-3765- Design of slotted rectangular microstrip patch antenna operated in ISM band using RT-Duroid substrate	ISSN number 2320-3765
13	Wideband T-shaped Antenna for High Speed Wireless Local Area Networks (ASCI, 2016)	
14	Thermal diffusion in thin plates and coatings: influence of thickness and substate material.	
15	An assessment over imperative features of L-Arginine 4-nitrophenolate 4-nitrophenol dehydrate single crystal for Non Linear Optical applications	
16	“ Fabrication of cost effective, highly reproducible large area arrays of nanotriangular pillars for surface enhanced Raman scattering substrate”, <b>Kudilatt Hasna</b> , Aldrin Antony, Joaquim Puigdollers, Kumaran Rajeev Kumar, Madambi Kunjukuttan Jayaraj, <b>Nano Research</b> 2016, 9(10): 3075-3083	8.89
17	“Development of high sensitive reproducible colloidal SERS active substrate using silver nanocubers for potential biosensing applications”, <b>Kudilatt Hasna</b> , Kiran Lakshmi, Madambi Kunjukuttan Ezhuthachan Jayaraj, Kumaran Rajeev Kumar and Murukeshan Vadakke matham, <b>Journal of Nanophotonics</b> 2016, 10(2), 026020-9 (IF=1.496)	1.496
18	Magneto-electric coupling in multiferroicnanocomposites of the type $x(\text{Na}0.5)0.94\text{Li}0.06\text{NbO}3-(1-x)\text{CoFe}2)4$ : Role of ferrite phase. R. Rakhikrishna, J. Isaac and J. Philip Ceramics International 43(2017) 664-671	2.986
19	‘Microwave Optical Module for Optical Communication applications’ Journal of Optical Communications (communicated)	0.251
20	Design of all optical Integrator and Differentiator based on Fabry-Perot Filters based on FBG, V T Gopakummar and K N Madhusoodanan J. Photonic Network Communication Vol.33 (3) (2017) 377	<b>0.8</b>



21	Performance analysis of All -Optical clock recovery using Fabry -Perot Filter Bragg Grating, M Srivastava, V T Gopakumar, Deepa Venkitesh, Balaji Sreenivasan, 13 <sup>th</sup> Intl. conf. on Fiber optics and Photonics 2016 IIT Kanpur OSA tech. Digest. 2016	
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**b. Books - nil**

**15. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.**

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Vishnukumar V	Vishnukumar V, Satheesh Kumar M V, K N Madhusoodanan <b>“Wireless Sensor Networks for Internet of Things based Laboratory Automation System”</b> , International Conference on Signal Power Communication Security and Computing Applications (ICSPSCA-2016), October 2016, College of Engineering, Vadakara	Paper presentation
	ASCII 2017, National Seminar, Department of Instrumentation, CUSAT	Paper presentation
	Workshop on IoT system Design using LabVIEW 2017, Department of Instrumentation, CUSAT	Participation
Savitha N	International Symposium on semiconductor Materials and Devices (ISSMD-4), 8-10 <sup>th</sup> March 2017 at School of Material Science and Nanotechnology, Jadavpur University, Kolkata	Poster Presentation
	“Effect of growth pressure on single or few-layer graphene synthesis on copper foil with lower hydrocarbon flow rates” at the 15 <sup>th</sup> International Conference on Advanced Materials, Kyoto University, Japan	Accepted for oral presentation
	One day workshop on Nanolithography and Nanofabrication, Organized by Raith GmbH Germany at CeNSE, IISc, Bangalore on May 16, 2017	Participant



	Five day workshop on IoY System Design using LabView organized by Department of Instrumentation, CUSAT during 23-27 January 2017	Participant
	UGC Sponsored “National Workshop on Nanophotonics” organized by Centre of Advanced Materials & Department of Physics, CUSAT in association with SPIE CUSAT Student Chapter held on 18 <sup>th</sup> to 19 <sup>th</sup> March 2016	Participant
	UGC assisted National Seminar on “Advances in Scientific and Industrial Instrumentation (ASCII 2016) organized by Department of Instrumentation, Cochin University of Science and Technology, from February 11 <sup>th</sup> to 12 <sup>th</sup> 2016	Participant
Lidiya T V	International Academic Conference on Electrical and Electronics Engineering, (IRAJ research forum), January 2017, Bangalore	Presented paper
Abhay Jith	Asia student Photonic Conference (ASPC)- 2016	Poster
	Advances in Scientific and Industrial Instrumentation -2017	Oral
	International Conference on Optics and Photonics Engineering (icOPEN)	Oral
Anil Johny	Workshop on Biomedical Instruments and Research Development Society conducted at Rajagiri School of Engineering and Technology	Participant
Siril V S	“Optics-17”, conference at NIT Calicut	Presenter
	“ASCII-17”, national seminar at DOI, CUSAT	Participant
	“LABVIEW”, workshop at DOI, CUSAT	Participant
Vishnupriya T R	IEEE International Symposium on Antennas and Propagation (APSYM)2016	Participant
Sanish V S	IEEE- Sponsored workshop on Modern Trends in RF & Microwave Technologies on 24 <sup>th</sup> & 25 <sup>th</sup> May 2017 at DOE-CUSAT, Cochin	Participant
	National Conference on Recent Innovations in Information & Communication technologies (NCRICT-2017) on 30 <sup>th</sup> & 31 <sup>st</sup> March 2017 at Ahalia School of Engineering & Technology, Palakkad	Presented a paper on Fractal Antenna Design





Manoj B	IEEE International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT)-2016	Presented Paper
	6 <sup>th</sup> IEEE International Conference on Communication and Signal Processing ICCSP'17	Presented Paper
Hrudya B Kurup	APSYM 2016-Biennial Symposium on Antennas & Propagation	Participant
	ASCII 2017- National Seminar	Participant
	ASCII 2016- National Seminar	Participant
	Modern Trends in microwave and RF Technologies-Workshop organised by IEEE APS Kerala Chapter	Participant
Sita Radhakrishnan	PLC AND SCADA WORKSHOP, organised by Technex '17 IIT Varanasi conducted in AEI dept, SAINTGITS College of Engineering, from 25 <sup>th</sup> and 26 <sup>th</sup> October 2016	Coordinator
Mathew M Mecheril	Conference on Neutron Scattering organised by Babha Atomic Research Centre	Presented poster on Fluorescence quenching of Rh 6G dye by doping with nanoparticles of ZnO
Hasna K	National Laser Symposium, NLS 25	Best Thesis Award Competition
Ratheesh P M	“National Conference on Microelectronics And Communication Technologies” organized by Department of ECE, College of Engineering Vadakara (29 <sup>th</sup> and 30 <sup>th</sup> September 2016)	Paper Presented
	“National Conference on Recent Innovations in Data Science” organized by Department of CSE, College of Engineering Vadakara and Department of IT, Kannur University(5 <sup>th</sup> and 6 <sup>th</sup> October 2016)	Paper Presented
	“International Conference on Signal, Power, Communication, Security & Computing Applications” Conducted by Dept. of EIE, College of Engineering, Vadakara on 18 <sup>th</sup> , 19 <sup>th</sup> , and 20 <sup>th</sup> October 2016	Chaired a Paper Presentation Session on 19 <sup>th</sup> October 2016
	Short Term Training Programme on “ LABVIEW for Vibration Analysis and Image Processing” organized by Department of Mechanical Engineering, Govt. College of Engineering, Kannur.	Participant



	Expert Talk on “ Memory and Programmable Logic” at Govt. Polytechnic College, Meppadi, Wayanad on 28 <sup>th</sup> September 2016	Resource Person
	Expert Talk on “ Digital Signal Processing” at College of Engineering, Vadakara on 18 <sup>th</sup> March 2016	Resource Person
	Project Exhibition and Evaluation at Adi Shankara Institute of Engineering And Technology, Kalady on 25 <sup>th</sup> April 2016	Judging Panel
	National Seminar on “Advances in Scientific And Industrial Instrumentation” organized by Department of Instrumentation, CUSAT. (22 <sup>nd</sup> and 23 <sup>rd</sup> February 2017)	Co-ordinated and Participated
	Workshop on “IoT System Design Using LabVIEW” organized by Department of Instrumentation, CUSAT. (23 <sup>rd</sup> to 27 <sup>th</sup> January 2017)	Co-ordinated and Participated

#### 16. Role of Faculty in International/National organizations/Institutions/ Editorial Boards- nil

#### 17. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour /Award	Awarding Agency
Vishnukumar V	UJRF	CUSAT
Lidiya T V	UJRF	CUSAT
Siril V S	UJRF	CUSAT
Hrudya B Kurup	Senior Research Fellowship	SRF

#### 18. Sponsored Research Projects - nil

#### 20. Research Programmes and Activities:

SI.No.	Problem / Topic	Investigator (s)
1	Preparation and characterization of Al <sub>2</sub> O <sub>3</sub> thin films using Microwave Plasma Assisted ALD	Dr. K. Rajeev Kumar
2	Preparation and characterization of ZnO thin films using Thermal ALD	Dr. K. Rajeev Kumar
3	Preparation and characterization of Graphene using CVD method	Dr. K. Rajeev Kumar
4	Preparation and characterization of WS <sub>2</sub> thin films by chemical methods.	Dr. K. Rajeev Kumar
5	Surface Enhanced Raman Scattering	Dr. K. Rajeev Kumar & Dr. M.K.Jayaraj (Dept. of Physics)



6	Development of Holographic Concentrator for Solar cells	Dr. K. Rajeev Kumar & Dr. M.K. Jayaraj (Dept. of Physics)
7	Fiber Optic and Semiconductor Sensors	Dr. K N Madhusoodanan
8	Fiber Bragg Grating	Dr. K N Madhusoodanan
9	Sensors and Signal Processing	Dr. K N Madhusoodanan
10	Image Processing in Biomedical Applications	Dr. K N Madhusoodanan
11	Designs of Wearable Antennas	Dr. Stephen Rodrigues
12	Bandwidth Enhancement of Microstrip Antennas	Dr. Stephen Rodrigues
13	Wearable Antennas for Body Centric Communication	Dr. Stephen Rodrigues
14	Multiferroic composites	Dr. Johney Isaac
15	Thermal transport in nano structures	Dr. Johney Isaac
16	Automated Drug Delivery Systems	Dr. Johney Isaac
17	Physical Properties of low dimensional solids	Dr. Jacob Philip
18	Multi Sensor Data Fusion	Dr. K N Madhusoodanan

### 21. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1	National Seminar on "Advances in Scientific And Industrial Instrumentation" ASCII-201	22 <sup>nd</sup> and 23 <sup>rd</sup> February 2017(Two Days)	Ratheesh P M	UGC Assistanc
2	Workshop on "IoT System Design Using LabVIEW"	23 <sup>rd</sup> to 27 <sup>th</sup> January 2017(Five Days)	Ratheesh P M	CUSAT
3	Training on " LabVIEW Core 1& 2" for Students of CUSAT	28 <sup>th</sup> January to 1 <sup>st</sup> February 2017.(Five Days)	Ratheesh P M	Nil

### 22. Consultancy Work – nil

## DEPARTMENT OF MARINE BIOLOGY, MICROBIOLOGY & BIOCHEMISTRY

### 1. Brief History of the Department :

The Department of Marine Biology Microbiology & Biochemistry is the academic continuation of the original Department of Marine Biology and Fisheries established in 1938 under the University of Travancore. The M.Sc course in Marine Biology was started in 1958. Currently the annual intake of students is 22. So far about 683 students have completed the course. The department has well equipped laboratories with sophisticated instruments. At present 85 Research Scholars are working in these labs and 155 Ph.Ds have been already awarded. Major thrust areas of research include Marine Biodiversity, Microbiology, Biochemistry, Fishery Biology, Aquaculture, Fish Pathology, Marine Pollution monitoring, Marine benthos and Marine Pharmacology. Further the department has an M.Phil Degree course in Life Sciences with an intake of 6 students.

### 2. Programmes of Study/Research

1. M.Sc Marine Biology
2. M.Phil. Life Sciences
3. PhD in different disciplines specified above

### 3. Faculty Members

Sl. No.	Name	Designation	Qualification	Specialisation
1.	Dr. Rosamma Philip	Professor and Head	M.Sc. Ph.D	Marine Microbiology
2.	Dr. A.V. Saramma	Professor	M.Sc.Ph.D	Microbiology
3.	Dr. Aneykutty Joseph	Professor	M.F.Sc. Ph.D	Fisheries Science with specialization in Aquaculture
4.	Dr. A.A.Mohamed Hatha	Professor	M.Sc. Ph.D	Fish Pathology, Fish Nutrition & Fish Genetics
5.	Dr. S. Bijoy Nandan	Professor	M.Sc. Ph.D	Marine Ecology & Marine Pollution



6.	Dr. Padma Kumar K B	Assistant Professor	M.Sc. Ph.D	Algology
7.	Dr Priyaja P	Assistant Professor	M.Sc. Ph.D	Marine Invertebrata
8.	Dr. Swapna P Antony	Assistant Professor	M.Sc. Ph.D	Aquaculture
9.	Dr. Manjusha K P	Assistant Professor (Contract)	M.Sc. Ph.D	Fishery Biochemistry

#### 4. Emeritus Professor/Scientist (if any)

Sl.No.	Name	Designation	Qualification	Specialisation
1	Prof. Dr. N.R. Menon	Emeritus Professor	M.Sc. Ph.D	Marine Pollution
2	Prof. Dr. P.K.Abdul Azis	Emeritus Professor	M.Sc., PhD, D. Sc	Marine Ecology
3	Prof. Dr. C.K Radhakrishnan	Emeritus Professor	M.Sc. Ph.D	Invertebrate Biology

#### 5. Research Staff

Sl. No.	Name	Designation	Qualification	Specialisation
1	Dr. Jaseetha Abdul Salam	UGC –DSK- PDF	M.Sc, Ph.D	Environmental Biotechnology
2	Dr. Jayesh P	UGC -DSK PDF	M.Sc, Ph.D	Marine Biotechnology
3	Dr. Divya Jose	UGC- DSK- PDF	M.Sc, Ph.D	Marine Biotechnology
4	Smitha C.K.	UGC-PDF	M.Sc, Ph.D	Marine Biology
5	Sephy Rose Sebastian	DST- WoS B	M.Sc	Marine Biotechnology
6	Dr.Anju Antony Moonjely	UGC-DSK-PDF	M.Sc, Ph.D	Marine Biotechnology
7	Dr Preetha K.	DBT-RA	M.Sc, Ph.D	Marine Biology
8	Dr. Lathika Cicily Thomas	UGC - PDF for Women	M.Sc,Ph.D	Marine Biology
9	Dr Nifty John	PDF	M.Sc, Ph.D	Microbiology
10	Dr. Divya P.S.	PDF	M.Sc, Ph.D	Microbiology
11	Dr.Rekhamol K.R.	PDF	M.Sc, Ph.D	Microbiology
12	Dr Farah	PDF	M.Sc, Ph.D	Microbiology
13	Dr.Vineetha.S	UGC - PDF for Women	M.Sc,Ph.D	Marine Biology

**6. Research Scholars**

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Abhilash K.R	MoES Project	Dr. A.V.Saramma	Bioactive compounds from benthic microorganisms
2	Afsal V.V.	Part time	Dr.Rosamma Philip	Bioactive Peptides from Crustaceans
3	Aishwarya Nair	UGC-BSR SRF	Dr.Rosamma Philip	Bioactive Peptides from Fishes
4	Aiswarya Gopal	-	Dr.A.V.Saramma	Marine Benthos
5	Ajin A.M.	University JRF	Dr.N.R.Menon	Coastal marine ecosystems and biodiversity concepts
6	Ajith Joseph C.		Dr. A. A. Mohamed Hatha	A trophic level (TL)-Based Ecosystem Modelling Approach of Jellyfishes using Ecopath and Ecosim
7	Akhilesh Vijay	KSCSTE	Dr.S. Bijoy Nandan	Ecology of wetlands
8	Ally C. Antony	UGC-FIP	Dr. A. A. Mohamed Hatha	Incidence and survival kinetics of indicator and pathogenic bacteria in sediment, waters and bivalve.
9	Aneesa P.A.	University -JRF	Dr. C.K. Radhakrishnan	Studies on cold active enzymes from psychrotrophic micro-organisms from Artic
10	Anil kumar P.R	Part time	Prof. R. Damodaran	Benthic Ecology
11	Anju M.V.	INSPIRE Fellow	Dr. Rosamma Philip	Antimicrobial peptides from Marine Organisms: Heterologous Expression and the Therapeutic Potential
12	Anooja V.V.		Dr. C.K. Radhakrishnan	Antimicrobial Peptides from Marine Invertebrates
13	Anu P.R.	MoES-ICMAM	Dr. C.K. Radhakrishnan	Toxicity effects of selected trace metals on marine organisms.



14	Anu Pavithran	University-JRF	Dr.S.Bijoy Nandan	Intertidal Ecology
15	Archana K.	UGC-JRF	Dr.Rosamma Philip	Antimicrobial peptides from marine fishes
16	Asha C.V.	University JRF	Dr.S.Bijoy Nandan	Trophic status of macrobenthos in Vembanad estuary
17	Aswathy Krishnan		Dr.Aneykutty Joseph	Investigations on Diatoms for Commercial Applications
18	Athira P.P.		Dr.R.Damodaran	Anti-Microbial Peptides from Marine Organisms
19	Bhavya Kachiprath	MoES -CMLRE	Dr.R.Damodaran	Novel Enzymes from Marine Environment – A metagenomic approach
20	Bini Francis	University JRF	Dr.K.J.Joseph	Survival of food borne pathogens in food contact surfaces in speafood industry and efficacy of disinfectants and spices extracts in controlling – their growth.
21	Chaithanya E.R	Part time	Dr.Rosamma Philip	Antimicrobial peptides from fishes
22	Deborah Gnana Selvam.A	RFSMS	Dr.A.A.Mohamed Hatha	Bacterial pathogens from paddy cum prawn fields
23	Dhanya Kesavan		Dr.Rosamma Philip	Bioactive Potential of Marine Peptides
24	Divya T.Babu	University JRF	Dr.T.P.Sajeevan	Marine Actinomycetes and their applications in aquaculture
25	Don Xavier N.D.		Dr.K.J.Joseph	Toxicity effects of selected trace metals and it's trophic transfer in selected marine organisms.
26	Emilda Rosemine	-	Dr.A.V.Saramma	Bioactive compounds from marine micro-organisms
27	Jabir T.	UGC-BSR	Dr.K.J.Joseph	Diversity, distribution and role of nitrogen fixing and denitrifying organism in South Eastern Arabian sea



28	Jasmin K.A.	University JRF	Dr.A.V.Saramma	Isolation, characterization and mass cultivation of economically important microalgae
29	Jayachandran P.R.	MoES-ICMAM	Dr.K.J.Joseph	Benthic Biotope of Kodungallur and Azhikode estuary
30	Jayanath G.	MoES	Dr.T.P.Sajeevan	Novel genes for commercially important enzymes from marine microbes
31	Jayanthi T.T	Part time.	Dr. C.K. Radhakrishnan	Marine Bioactive compounds
32	Jayasree.S	Part time	Prof. Dr.Aneykutty Joseph	Structure of Benthos, zooplankton and fishery resources of mangroves
33	Jemi Job	UJRF	Dr. C.K. Radhakrishnan	Study on parasitic copepods and their association with bacterial pathogens in fish and shrimps from traditional shrimp/fish farms along Cochin backwaters
34	Jima M.	UJRF	Dr. C.K. Radhakrishnan	Structural and functional aspects of benthic communities in the Arctic fjords
35	Jimly C.Jacob	Part time	Dr. Rosamma Philip	Microbenthos in the south east coast of India
36	Jini Jacob	Part time	Prof. Dr.R.Damodaran	Meiobenthos in the west coast of India
37	Jisha V.K	RGNF-UGC	Dr.A.V.Saramma	Cyanobacteria
38	Krishnapriya P.P.		Dr.K.J.Joseph	Benthic Fauna of Arctic Fjords (Kongst jord and krossf jord) assessment on Community structure and impacts due to Carbon dynamics and climate change
39	Lakshmi Devi P.	KSCSTE	Dr. Aneykutty Joseph	Taxonomy of Brachyuran crabs





40	Lekshmi S.	UGC-BSR	Dr.Babu Philip	Studies on cyanobacteria
41	M. Abhijith	MoES Project	Dr.K.J.Joseph	Algae – Bacterial Interactions with reference to bloom forming algae
42	Manomi S.	DST-INSPIRE	Dr.Rosamma Philip	Endophytic Fungi from sea weeds
43	Mathew K.A.	UGC-JRF	Dr.N.R.Menon	Mangrove ecology
44	Nashad M.	NANSEN	Dr.N.R.Menon	Monitoring and modeling of algal blooms
45	Naveen Sathyan	Part time	Dr.Rosamma Philip	Antimicrobial peptides from marine organisms
46	Neelima Vasu K.	E-Grantz	Dr. C.K. Radhakrishnan	Systematics and Phylogeny of Harpacticoid (Crustacea) copepod from the Arabian sea, along Southwest coast of India
47	Neema Job	University -SRF	Dr.Rosamma Philip	Endophytic microbes from marine plants,phylogenetic characterisation and bioactive potential
48	Neethu C.S	University -SRF	Dr.A.V.Saramma	Psychrophiles, Psychrotrophs and their enzymes
49	Nisha Raj	Part time	Dr. Aneykutty Joseph	Macrobrachium Rosenbergii
50	Philomina Joseph	UGC-MANF	Dr.K.J.Joseph	Benthos and accumulation of heavy metals
51	Preethy C.M.	U- egrantz	Dr. C.K. Radhakrishnan	Mangrove Taxonomy & Ecological Characterisation
52	Radhika R.	DBT Project	Dr. C.K. Radhakrishnan	Toxonomy and Genetic Characterisation of Cyclopoid and Harpacticoid Copepods from Lakshadweep Islands, India.
53	Rajani S.Ganga	University -JRF	Dr.Aneykutty Joseph	Development and standardization of enrichment protocol of live feed for shell fish larval rearing



54	Rakhi Gopalan K.P.	Part time	Dr.S.Bijoy Nandan	Benthic Ecology
55	Ramyra K.D	U-SRF	Dr.Rosamma Philip	Microflora in the shelf sediment of south west coast of India
56	Rani Varghese	DST-INSPIRE	Prof. A. Mohandas	Carbon sequestration and budgeting of marine mangrove ecosystem
57	Ranju R.	KSCSTE	Dr.N.R.Menon	Taxonomy and systematics of benthic foraminiferans from south –west coast of India
58	Reshma Silvester	UGC-BSR	Dr.A.A.Mohamed Hatha	Genotyping of pathogenic vibrio from food and environmental sources
59	Retina I Cleetus	University-JRF	Dr.S.Bijoy Nandan	Benthic Ecology
60	Sajana N.	UGC-MAMF	Dr. C.K. Radhakrishnan	Fishery Biology of small scads
61	Santu K.S.	UGC- Project	Prof.Dr.Babu Philip	Toxonomy and systematics of copepods from selected wet lands and its potential in live feed aquaculture
62	Sanu V.F.	DBT- Project	Dr.K.J.Joseph	Taxonomy and genetic characterization of Calanoid Copepods (Crustacea) from Lakshadweep Waters and Prospects as live feed for aquaculture
63	Satheesh T.B.	UGC-JRF	Prof.Dr.Babu Philip	Diversity of Barnacles
64	Shameeda C.H	University -SRF	Dr. C.K. Radhakrishnan	“Investigations on Stolephorus resources from Cochin area – A biological and biochemical approach”.
65	Shruthi Venugopal	Part time	Dr.R.Damodaran	Benthic Ecology
66	Shubhankar Ghosh	Part time	Dr.A.A.Mohamed Hatha	Lactic acid bacteria from estuarine and marine fishes as a possible probiont to treat microbial diseases in aquaculture



67	Shyam Kumar.S	Part time	Dr.A.V.Saramma	Micro algae culture and its biotechnology
68	Sini Salam	KSCSTE	Prof.Dr.Babu Philip	Synergy of in-situ data and remote sensing to study bacterial abundance and production of Indian Ocean
69	Smitha S.	UGC-BSR	Dr.Aneykutty Joseph	Nutraceuticals in Shellfish and Finfish Nutrition
70	Solly Solomon	MoES-CMLRE	Dr.R.Damodaran	Gene Mining for commercially important enzymes from marine organisms
71	Sooria P.M.	UJRF	Dr. N.R.Menon	Seasonality, structure and ecological efficiency of autotrophic picoplankton and their importance in the biogeochemistry of cochin backwaters.
72	Soumya K.C.	UGC-JRF	Dr.Aneykutty Joseph	Crustacean physiology Nutrition
73	Soumya Krishnankutty	MoES-CMLRE	Dr. A.A.Mohamed Hatha	Molecular Barcoding of macrobenthos along Kerala Coast
74	Sree Renjima.G	-	Dr. A.A.Mohamed Hatha	Fish eggs and larvae
75	Sreedevi.O.K	University JRF	Dr. S.Bijoy Nandan	Plankton and productivity of Kodungallur and Azhikode
76	Sreelekshmi S.	UGC-BSR	Dr. C.K. Radhakrishnan	Distribution and abundance of Mangroves of Kerala.
77	Sruthy.K.S.	KSCSTE	Dr.R.Damodaran	Bioactive Peptides from Crustaceans
78	Sudha.S	Part time	Dr.A.A.Mohamed Hatha	Food microbiology
79	Suresh Kumar.J	Part time	Prof.Dr.Babu Philip	Peroxidative stress in various human diseases
80	Susan Joy	UGC_ BSR	Prof.Dr.Babu Philip	Biochemical effects of physical and chemical stress on <i>Oreochromis mossambicus</i>



81	Thasneem T.A	University JRF	Dr.S.Bijoy Nandan	Estuarine Ecology
82	Thasneem T.R.	MoES-CMLRE	Dr.K.J.Joseph	Role of Microbenthos in Remineralisation of Shelf Sediments along Kerala Coast with Special reference to Kerala Coast
83	Vijayalakshmi K.C.	MoES-CMLRE	Dr.K.J.Joseph	Investigation on Bloom forming Algae
84	Vishnupriya S.	UJRF	Dr. C.K. Radhakrishnan	Diversity of potential antibiotic producing <i>Actinomycetes</i> in marine habitats along Kerala Coast
85	Wilsy Wilson	UGC-BSR	Dr.Rosamma Philip	Bioactive compounds from Marine Yeasts

## 7. Administrative Personnel

Sl.No.	Designation	No. of Posts
1.	Section Officer (H.G)	1
2.	Office Superintendent	1
3.	Asst. Section Officer	1
4.	Senior. Gr.Assistant	1
5.	Office Attendant	1

## 8. Technical Personnel

Sl.No.	Designation	No. of Posts
1.	Technical Asst. Grade III	1
2.	Lab Assistant	1
3.	Lab Attendant	1
4.	Specimen Collector	1
5.	Aquarium Assistant	1

## 9. Student Enrollment :

Sl.No.	Programme of Study	Men	Women	Total
1.	M.Sc Marine Biology	1	19	20
2.	M.Phil Life Sciences	0	6	6
3.	Ph.D	1	5	6



## **10. Research Facilities:**

### **a. Laboratories**

1. Marine Biology Wet Lab
2. Microbiology Lab
3. Biochemistry Lab
4. Instrumentation lab
5. Computer Lab
6. Electron Microscope Lab
7. Algology Lab (Marine Botany)
8. Aquaculture lab
9. Ecology lab
10. Fish Pathology Lab
11. Marine Ecotoxicology Lab

### **b. Major equipments available**

1. Fluorescence Microscope LEICA, Germany
2. Biologic Duo Flow Chromatographic system, BioRad,USA
3. Electrofocussing Unit
4. Lyophiliser
5. Ultramicrotome
6. Refrigerated centrifuges
7. HPLC
8. Particle Size Analyzer
9. Fermenter
10. Vacuum Concentrators
11. PAGE apparatus
12. Spectrophotometers
13. PCR Machines
14. Deep Freezers
15. Microscopes (Bright Field/ Phase Contrast/ Fluorescence)
16. Anaerobic Chamber
17. Atomic Absorption Spectrophotometer
18. Incubator Shaker (Jeio Tech,Korea)



19. Cold storage chamber (Sanyo,Japan)
20. Liquid Nitrogen cylinder (Thermo Scientific, USA)
21. UV-VIS Spectrophotometer,
22. Real Time PCR (ABI, USA)
23. Gas Chromatograph
24. Microbial ID System
25. Phase Contrast Microscope
26. Blood Analyser (Biochemical Analyser)
27. Microbial identification system
28. Gel Documentation system
29. Water Quality Analyser
30. Epifluorescence Microscope
31. Electrophoresis with Gel documentation system
32. Gradient PCR
33. Kjehl Plus-Digestion and Distillation Unit
34. TOC Analyser (2 Nos.)
35. Binocular Microscope
36. Rotary Vacuum Flash Evaporator
37. Dual Vertical Gel Electrophoresis Unit
38. Stereo Microscope

**c. Library : School of Marine Science Library**

**11. Distinguished visitors**

Sl.No.	Name	Affiliation	Remarks
1	Graham P Oliver	National Museum of Wales and School of Ocean Sciences, Bangor University, North Wales, United Kingdom	International Training Workshop on Bivalve Molluscs, ITW'01 (10 - 14 May 2016)
2	Prof. Trevor Platt	Plymouth Marine Laboratory, UK	3rd February 2016
3	Dr. Gustav Pauly	University of Florida, USA	30th November 2016
4	Dr S Ajmal Khan	Annamalai University, Porto Novo, Chennai	27-31 March 2017



## 12. Ph.Ds Awarded

Sl. No	Name	Reg. No.	Date	Guide	Area of Work
1	Ms.Anu Pavithran V.	3597	20/01/2016	Dr.S.Bijoy Nandan	“Abundance and diversity of macrofauna from selected intertidal habitats of South West coast of India”
2	Naveen Sathyan	3602	29/03/2016	Dr.Rosamma Philip	“Molecular and functional characterization of histone derived antimicrobial peptides from marine organisms”
3	Neethu C.S	3874	25/04/2016	Dr. A.V.Saramma	Marine Microbiology
4	Abhilash K.R	2896	10/06/2016	Dr. A.V.Saramma	Marine Biology
5	Afsal V V	3324	05/07/2016	Dr Rosamma Philip	Molecular and functional characterization of antimicrobial peptides in crustaceans
6	Thasneem T.A.	7947	23/11/2016	Dr.S.Bijoy Nandan	Marine Biology
7	Deborah Gnana Selvam A.	3660	09/02/2017	Dr. A.A. Mohamed Hatha	“Bacterial shrimp pathogens from Pokkali-cum-prawn fields along Cochin backwaters–Role of environmental stressors in disease outbreak.”

## 13. Publications

### a. Papers in Peer Reviewed Journals

Sl. No.	Name of Paper	Impact Factor, if any
<b>Dr. Rosamma Philip</b>		
1	Manomi Sarasan, Jayesh Puthumana, Neema Job, Jeonghoon Han, Jae-Seong Lee, Rosamma Philip 2017 Marine algicolous endophytic fungi- A promising drug resource of the era J. Microbiol. Biotechnol.2017 ; 27(1): Apr 5. PMID: 28376612 doi: 10.4014/jmb.1701.01036.	1.68



2	Solly Solomon, Bhavya Kachiprath, Jayanath G., Sajeevan T P., I S Bright Singh, Rosamma Philip 2016 High quality metagenomic DNA from marine sediments for genomic studies through a preprocessing approach. 3 Biotech (2016) 6:160 DOI 10.1007/s13205-016-0482-y.	0.992
3	Vrinda Sukumaran, Jasmin C., Sivakumar K.C., Blessy Jose, Rosamma Philip and I S Bright Singh 2016 Moulting-inhibiting fusion protein augments while polyclonal antisera attenuate moulting stages and duration in <i>Penaeus monodon</i> . General and Comparative Endocrinology 233, 32-42.	2.667
4	Priyaja, P., P. Jayesh Rosamma Philip I. S. Bright Singh 2016 Pyocyanin induced in vitro oxidative damage and its toxicity level in human, fish and insect cell lines for its selective biological applications Cytotechnology 68:143–155.	1.8
5	Hari Sankar, B. Philip, R. Philip, I.S.B. Singh 2016. Effect of probiotics on digestive enzyme activities and growth of cichlids, <i>Etroplus suratensis</i> (Pearl spot) and <i>Oreochromis mossambicus</i> (Tilapia). Aquaculture Nutrition doi:10.1111 anu.12452	1.511
6	Vrinda Sukumaran, Jasmin C., Sivakumar K.C., Blessy Jose, Rosamma Philip and I S Bright Singh 2016 Regulating gonad inhibition and vitellogenin/vitelin induction in <i>Penaeus monodon</i> using mature GIH fusion protein and polyclonal antisera. Comparative biochemistry and physiology. Part A, Molecular & integrative physiology 203 • September 2016 DOI: 10.1016/j.cbpa.2016.09.007	2.039
7	Archana K., Naveen Sathyan, Chaithanya E. R. Ambika Gopalakrishnan, Rosamma Philip 2017 Antimicrobial peptides from longfin snake eel, <i>Pisodonophis cancrivorus</i> (Richardson, 1848). Journal of the Marine Biological Association of India. doi: 10.6024/jmbai.2016.58.2.1924-0x	-
<b>Dr. A.V. Saramma</b>		
8	A A Mohamed Hatha, C S Neethu, S.M. Nikhil, K M Mujeeb Rahiman, K.P. Krishnan, <b>A V Saramma</b> -2016 - Relatively high antibiotic resistance among heterotrophic bacteria from arctic fjord sediments than water-evidence towards better selection pressure in the fjord sediments Polar research Volume 9 - Pages 382 - 388.	
9	Rintu Mary Sebastian Vijayalakshmy K C, Lakshmi S <b>A V Saramma</b> , and E M Mohammed 2016 - Synthesis and anti-algal effect of Zinc Ferrite nanoparticles Macromolecular symposia. Vol.361, Issue I	
10	Emilda Rosmine*, <b>Saramma Aikkarakunnath Varghese</b> 2016 - Isolation of actinomycetes from mangrove and estuarine sediments of Cochin and screening for antimicrobial activity Journal of coastal life medicine	





11	Sincy joseph and A.V.Saramma 2016 - Species diversity of Cyanobacteria in Cochin estuary J.Mar.Biol.Ass.India 58 (1) January-June 2016	
12	Rajisha M.P, Lakshmi S., Vijayalakshmi K.C and A.V.Saramma 2016 - Antioxidant activity of Cyanobacteria isolated from Cochin Estuary Indian Journal of Geo. Marine science Vol.45 (8) August 2016 pp 974-977	
13	K.C. Vijayalashmy, M. Abhijith, S. Lekshmi, M. Ajin, M.K. Megha, A.A. Mohamed Hatha and A.V.Saramma 2016 - Water discoloration, fish kills and occurrence of multispecific dinoflagellate bloom off kodikkal, Southwest coast of India Harmful Algae news No 55/2016	
<b>Dr.A.A.Mohamed Hatha</b>		
14	Nifty John and A.A.M Hatha (2017). Effect of stress factors commonly encountered in ornamental fish tanks on the survival and immune response of Koi carp, <i>Cyprinus carpio</i> (Linnaeus, 1758) against <i>Aeromonas hydrophila</i> infection. <b>Asian Fisheries Science Journal</b> , 30: 2	
15	Reshma Silvester, Deborah Alexander, Ally C Antony and A.A. Mohamed Hatha (2017) Genotyping and distribution of virulence factors in <i>V. parahaemolyticus</i> from seafood and environmental sources, south west coast of India. <i>Regional Studies in Marine Science</i> , 17(12):64-72. <a href="https://doi.org/10.1016/j.rsma.2017.03.007">https://doi.org/10.1016/j.rsma.2017.03.007</a>	(Elsevier, I.F. 0.86)
16	Reshma Silvester, Deborah Alexander, Ally C Antony and <b>A.A. Mohamed Hatha</b> (2017) GroEL-PCR-RFLP – an efficient tool to discriminate closely related pathogenic <i>Vibrio</i> species. <b>Microbial Pathogenesis</b> . DOI: 10.1016/j.micpath.201702.029	(Elsevier, I.F. 1.9)
17	Jaseetha Abdul Salam, <b>A.A. Mohamed Hatha</b> and Nilanjana Das (2017) Microbial-enhanced lindane removal by sugar cane ( <i>Saccharum officinarum</i> ) in doped soil applications in phytoremediation and bio-augmentation. <b>Journal of Environmental Management</b> , 193: 394-399.	(Elsevier, I.F. 3.131)
18	Jabir Thajudeen, Jesmi Yousuf, Vipindas Puthiyaveetil, Sherin Varghese, Aravind Singh and <b>A.A. Mohamed Hatha</b> (2017) Nitrogen fixing bacterial diversity in a tropical estuarine sediments. <b>World Journal of Microbiology and Biotechnology</b> , 33(2): 1-11. DOI: 10.1007/s11274-017-2205-x	(I.F. 1.532)
19	Indu, M. Nair., Anju, V and A.A. Mohamed Hatha (2017) Antibacterial activity of medicinal plants used in Ayurvedic medicine towards food and water borne pathogens. <i>Journal of Environmental Biology</i> , 38: DOI: <a href="http://doi.org/10.22438/jeb/38/2/MS-125">http://doi.org/10.22438/jeb/38/2/MS-125</a>	(I.F. 0.64)
20	Ally C. Antony, Mini K. Paul, Reshma Silvester, Aneesa P.A., Suresh K, Simmy Paul, Fathima P.A., <b>Mohamed Hatha Abdulla</b> (2017) Comparative evaluation of EMB agar and a chromogenic medium for differentiation of high metallic sheen producing non <i>E. coli</i> and typical <i>E. coli</i> colonies from food and environmental samples. <b>Journal of Pure and Applied Microbiology</b> , 10 (4): 2863-2870.	



21	3. Reshma Silvester, Deborah Gnanaselvam, Maya George and <b>A.A. Mohamed Hatha</b> (2017) Incidence and multiple antibiotic resistance of <i>Vibrio corallilyticus</i> , south west coast of India. Submitted to <b>Current Science</b> , <b>112 (8): 1749-1755. doi: 10.18520/cs/v112/i08/1749-1755</b>	(I.F. 0.844)
22	Sini Salam, Lekshmi S, Reshma Silvester, Krishnan, K.P., Saramma, A.V. and <b>A.A. Mohamed Hatha</b> (2017) Effect of environmental parameters on growth and enzyme production of cold adapted bacteria from water and sediment of Kongsfjord (7958 N, 12E), Ny-Alesund, Norwegian Arctic. <b>Journal of Environmental Biology. DOI : 10.22438</b>	(I.F. 0.64)
23	Priyaja, P., Dwivedi, R., Sini, S., Mohamed Hatha, A.A., Saravanane, N and M. Sudhakar (2016) Remote sensing of bacterial response to degrading phytoplankton in the Arabian Sea. <b>Environmental Monitoring and Assessment</b> , <b>188: 662</b> . DOI 10.1007/s10661-016-5666-8.	(Springer, I.F. 1.679)
24	Asla V., Neethu K.P., Athira V., Nashad, M. and <b>A.A. Mohamed Hatha</b> . (2016) Prevalence of antibiotic resistance among the gut associated bacteria of indigenous freshwater fishes <i>Aplocheilus lineatus</i> and <i>Etroplus maculatus</i> . <b>International Journal of Aquaculture</b> . DOI: 10.5376/ija.2016.06.0003	
25	Aneesa P Alikkunju, Neethu Sainjan, Reshma Silvester, Ajith Joseph, Mujeeb Rahiman, Radhakrishnan, Ally C Antony and <b>Mohamed Hatha</b> (2016) Screening and characterization of cold-active -galactosidase producing psychrotrophic <i>Enterobacter ludwigii</i> from the sediments of Arctic Fjord. <b>Applied Biochemistry and Biotechnology</b> . DOI 10.1007/s12010-016-2111-y.	(Springer, I.F. 1.239)
26	Sowmya M and <b>A.A. Mohamed Hatha</b> (2016) Cadmium and lead tolerance mechanisms in bacteria and role of halotolerant and moderately halophilic bacteria in their remediation. <b>Metal-Microbe Interaction and Bioremediation</b> (CRC Press, Book Chapter) In Press	
27	Ajin, A.M., Deborah Alexander, Reshma Silvester, Nashad, M and <b>A.A. Mohamed Hatha</b> (2016) Characterisation of blooming algae and bloom associated changes in the water quality parameters of traditional pokkali cum prawn fields along south west coast of India. <b>Environ-mental Monitoring and Assessment</b> , <b>188:145</b> . DOI 10.1007/s10661-016-5133-6.	(Springer, I.F. 1.679)
28	Rupesh Sinha, K.P. Krishnan, <b>A.A. Mohamed Hatha</b> , K.M. Mujeeb Rahiman, T. Divya David and Savita Kerkar (2016) Diversity of retrievable heterotrophic bacteria in Kongsfjorden an arctic fjord during the boreal summer of 2011. <b>Brazilian Journal of Microbiology</b> . DOI: 10.1016/j.bjm.2016.09.011.	(I.F. 0.8)



29	Mujeeb Rahiman, K.M., Deborah Gnana Selvam, Thomas, A.P and A.A. Mohamed Hatha (2016) Relative prevalence of antibiotic resistance among heterotrophic bacteria from natural and culture environments of fresh water prawn <i>Macrobrachium rosenbergii</i> . <b>Journal of World Aquaculture Society DOI: 10.1111/jwas.12287.</b>	(Wiley, I.F. 0.7)
30	Jabir, T., Jesmi, Y., Sudheesh,V.V., Ajith, J.C and A.A. Mohamed Hatha (2016) Nitrogen fixing organisms in the South Eastern Arabian Sea. <b>The Indian Ocean Bubble, 5: 7-8.</b>	
<b>Dr.Aneykutty Joseph</b>		
31	Jabir, T., Sheeja George., Anjana Raj., Sree Lakshmi and Aneykutty Joseph. (2016) Micro propagation and <i>Invitro</i> flowering of an Ornamental aquarium plant <i>Lindernia antipoda</i> (L.)Alston. <i>International Journal of Aquaculture.</i> , Vol 6 (8): 1-10.	
32	P. Lakshmi Devi., Aneykutty Joseph., Anup Mandal and Alphy Korath (2017) On the systematics of the genus <i>Scylla</i> de hann 1983 of cochin backwaters, a South Indian Estuary. <i>Journal of Biodiversity and Environmental Sciences</i> , Vol. 10 (2): 1-15	
33	Rajani S. Ganga and Aneykutty Joseph (2016) Can nitrogen limitation produce any dietary response in the marine microalga <i>Chlorella marina</i> - A combo diet in green water hatchery. <i>National Journal of Life sciences</i> . Vol. 13 (2): 133-136.	
<b>Dr S. Bijoy Nandan</b>		
34	Padmakumar, K. B., Lathika Cicily Thomas., M, Sudhakar and S, Bijoy Nandan. 2016. Extensive outbreaks of heterotrophic dinoflagellate <i>Noctiluca scintillans</i> blooms along coastal waters of the South Eastern Arabian Sea. ISSN 0020-7918, <b>Harmful Algae News No. 52: 11-12, IOC- UNESCO.</b>	
35	Sanu, V.F., S, Bijoy Nandanand M, Harikrishnan. 2016. Molecular identification and systematic assessment of <i>Labidocera madurae</i> A. Scott, 1909 (calanoid copepod) from Lakshadweep Archipelago, southwest coast of India, based on mitochondrial COI gene sequences, <i>Marine Biodiversity</i> , 46(1): 95-103, DOI 10.1007 / s12526-015-0326-8.	1.915
36	Rani, V., Sreelekshmi S, Asha C.V, Bijoy Nandan S. 2016. Forest structure and community composition of Cochin mangroves, South-West coast of India, submitted to <i>Proceedings of the National Academy of Sciences, India</i> . Section B: Biological Sciences, 1-9. DOI: 10.1007/s40011-016-0738-7,	IF: 0.40
37	Rani Varghese., S, Sreelekshmi., C.M, Preethy and S, Bijoy Nandan. 2016. Phenology and Litter-fall dynamics structuring ecosystem productivity in a tropical mangrove stand on South West Coast of India, <i>Regional studies in Marine Science</i> , 8 (3):400-407. DOI: 10.1016/j.rsma.2016.02.008,	



38	Akhilesh Vijay and S, Bijoy Nandan. 2016. Soil Quality Indicators and Microbial development in organic and conventionally farmed Paddy wetlands ecosystem in Kerala– India, ISSN 2250-3153. International journal of scientific and Research Publications.6 (6), p.112-11	
39	Vineetha, S., S, Bijoy Nandan., K.P, Rakhi Gopalan. 2016.A Comparative analysis of physicochemical characteristics of a Tropical Kole wetland impacted by hydrological fluctuations, ISSN 2229-5518, <i>International journal of Scientific and Engineering Research</i> 7(5), <b>Publisher: IJSER. pp. 1442-1449</b>	
40	Radhika, R., S, Bijoy Nandan and M, Harikrishnan. 2016. Morphological and molecular identification of marine copepod <i>Dioithona rigida</i> Giesbrecht, 1896 (Crustacea:Cyclopoida) based on mitochondrial COI gene sequences, from Lakshadweep sea, India. <i>Mitochondrial DNA</i> .6 (9): 8648- 8657. Publisher: Taylor and Francis group, Mitochondrial DNA,	<b>IF: 1.209</b>
41	Asha, C. V., Retina I. C., Suson P. S., and Bijoy Nandan S. 2016. Ecosystem analysis of the degrading Vembanad wetland ecosystem, the largest Ramsar site on the South West Coast of India-Measures for its sustainable management. <i>Regional Studies in Marine Science</i> . 8 (3):408-421, <b>Publisher: Elsevier</b>	
42	Anu,P.R., S. Bijoy Nandan, P.R. Jayachandran, N.D. Don Xavier .2016. Toxicity effects of copper on the marine diatom, <i>Chaetoceros calcitrans</i> , <i>Regional Studies in Marine Science</i> . 8 (3):498- 504 Publisher: Elsevier	
43	S., S, Bijoy Nandan and K, Athira. 2016. Occurrence of Mass Swarming of Family Acartiidae (Calanoid Copepods)(Zooplankton) in Ashtamudi Estuary, Kerala. <i>International Journal of Marine Science</i> . ISSN 1927-6648.6 (30):1 -8. Publisher: Bio Publisher, Sophia publishers, Canada.	
44	Oliver, P., P.R, Jayachandran and S, Bijoy Nandan. 2016. Cuspidaria cochinchensis Preston, 1916 transferred to the Corbulidae (Mollusca, Bivalvia) and assigned to the genus Cuneocorbula. Marine Biodiversity. 1-5. DOI 10.1007/s12526-016-0578-y.Publisher: Springer	<b>1.915</b>
45	Bijoy Nandan,S., Krishnapriya P.P., Akhilesh Vijay, Asha C.V., Jayachandran P.R and Krishnan, K.P.2016.Benthic Faunal Assemblage of the Arctic Kongsfjorden System, Norway, <i>International Journal of Marine Science</i> , ISSN 1927-6648.6 (54): 1-8. Publisher: <b>Biopublisher, Sophia publishers, Canada.</b>	
46	Suseela, Sreelekshmi., Chakkalakkal Mani, Preethy., Joseph, Philomina., Varghese, Rani., Sivasankaran, S. Bijoy Nandan., 2017. Mesozooplankton community structure in a degrading mangrove ecosystem of the Cochin coast, India. <i>Lakes and Reservoirs: Research and Management</i> . 20: 1–14, Online ISSN: 1440-1770. Publisher: John Wiley and sons, Australia, Ltd.	



47	Sreelekshmi, S., Rani Varghese., Philomina Joseph., C. M, Preethy and S, Bijoy Nandan. 2017. Structural characteristics and zonation pattern of mangroves from a Ramsar site, on the south west coast of India, <i>Indian Forester</i> , 143 (2), 96-100., ISSN No: 009 4816 (print), ISSN No: 2321- 094X (online),	<b>NASS IF: 4.27.</b>
48	Jayachandran P.R., S. Bijoy Nandan., V. F. Sanu., M. Jima, P.R., Anu., N. D. Don Xavier., Philomina Joseph., A.M. Midhun and C.V. Asha. 2017 Authentication of <i>Nassodonta insignis</i> H. Adams, 1867 (Gastropoda: Nassariidae) from the Kodungallur-Azhikode backwater, southwest coast of India by using mitochondrial COI marker, <i>Indian Journal of Geo Marine Sciences</i> (Accepted for publication, Ref: IJMS/MS 3413 dtd. 9-12-2016) Publisher: National Institute of Science Communication and Information Resources. CSIR	<b>IF: 0.422</b>
49	T.A Thasneem. S.Bijoy Nandan and P.N.Geetha 2017 Water Quality Status of Cochin estuary, India, <i>Indian Journal of Geo Marine Sciences</i> , (Accepted for publication, in press, Ref: IJMS/MS 3428, dtd. 2-03-2017). Publisher: National Institute of Science Communication and Information Resources. CSIR,	<b>IF: 0.422</b>
50	Krishnapriya PP, Minu M and S. Bijoy Nandan 2017 Composition and distribution of meiobenthos in Arctic Kongsfjord (Svalbard) with reference to carbon potential of selected fauna, <i>Indian Journal of Geo Marine Science</i> , (Accepted for publication, in press :Ref: IJMS/MS 3495 Dated:30- 03-2017) Publisher: National Institute of Science Communication and Information Resources. CSIR,	<b>IF: 0.422</b>
51	Ambily V and S. Bijoy Nandan 2017 Nutritional composition of <i>Arius subrostratus</i> (Valenciennes, 1840) from Cochin estuary, India, <i>Indian Journal of Geo Marine Science</i> , (Accepted for publication), <b>Publisher: National Institute of Science Communication and Information Resources, CSIR,</b>	<b>IF: 0.422</b>
<b>b. Book chapters</b>		
1	Indu M Nair and <b>A.A. Mohamed Hatha</b> (2017) The potential bactericidal properties of some plants commonly used in Ayurvedic medicinal practices of South India. In 'Holistic Healthcare – Possibilities and Challenges' Eds. Anne George, Oluwatobi Samuel Oluwafemi and Blessy Joseph. Published by CRC Press. ISBN 9781315366241. Pp. 105-136.	
2	Sowmya M and A.A. Mohamed Hatha (2016) Cadmium and lead tolerance mechanisms in bacteria and role of halotolerant and moderately halophilic bacteria in their remediation. <i>Metal-Microbe Interaction and Bioremediation</i> (CRC Press, Book Chapter) In Press.	



3	Philomina Joseph., Sreelekshmi S., Rani Varghese., Preethy C.M and Bijoy Nandan S. 2016. Benthic faunal diversity in Indian mangroves. In: <i>Advances in Fish and Wildlife Ecology and Biology Vol.7</i> , Prof.(Dr.) B. L. Kaul (Eds).	
4	Akhilesh Vijay and Bijoy Nandan S. 2017. Carbon Dynamics, Processes and Factors regulating Green House Gas Emissions from Wetlands, In: <i>Wetland Science: Perspectives from South Asia</i> (B.A.K. Prusty, R. Chandra, P.A. Azeez (Eds.)), DOI 10.1007/978-81-322-3715-0-13, Publisher: Springer (India) Pvt. Ltd. Page, 243-256.	
5	Vineetha, S., Bijoy Nandan, S and K.P, Rakhi Gopalan. 2016. Macro-benthic community structure along the temporal shift from non-paddy cultivating flooded phase) to paddy cultivating (paddy phase) phases in Kole paddy fields Vembanad Kole wetland, India. In: <i>Advances in Fish and Wildlife Ecology and Biology Vol.7</i> , B. L. Kaul (Eds.), <b>Publisher: Daya Publishing House, New Delhi.</b>	
<b>c. Books Published</b>		
1	Lathika Cicily Thomas., S, Bijoy Nandan and K.B, Padmakumar. 2016. <i>Micro-phytoplankton of North Eastern Arabian Sea-A winter monsoon analysis</i> . ISBN No.978-3-659-82153-0. <b>Publisher: LAP LAMBERT Academic Publishing, Germany, Cost: 69.90 euro.</b>	
2	Bijoy Nandan, S. 2016. <i>Vichithralokam Vibhinnalokam</i> (A book on issues related to biodiversity- Popular Science), (Malayalam), ISBN: 978-93-80095-16-5, P.138, (Cost-Rs.100/), (2 <sup>nd</sup> edition). <b>Publisher: Sahithya Pravarthaka Co-operative Society Ltd., Kottayam Ebook <a href="http://www.indulekha.com/nbs">http://www.indulekha.com/nbs</a></b>	
3	Bijoy Nandan, S., P. Graham Oliver, Jayachandran, P.R and Asha, C.V. (Eds.). 2016. Training manual- 1st International Training Workshop on Taxonomy of Bivalve Molluscs. Kochi, India, ISBN: 978-93-80095-79-0, 340 Publisher: Directorate of Public Relations and Publications, CUSAT	
4	Bijoy Nandan, S., P. Graham Oliver, Jayachandran, P.R and Asha, C.V. (Eds.). 2016. Training manual- 1st International Training Workshop on Taxonomy of Bivalve Molluscs. Kochi, India, ISBN: 978-93-80095-79-0, 340 Publisher: Directorate of Public Relations	
5	Preethy, C.M and Bijoy Nandan, S. 2016. Rampant urbanization- an amassed warning to Cochin Mangroves, Gujarat Institute of Desert Ecology ( <i>Guide</i> ) <i>Newsletter</i> , Gujarat Institute of Desert Ecology, Kachchh, Gujarat, January Issue, 2016.10-12.	



6	Rani Varghese and S, Bijoy Nandan. 2016. Mangrove ecosystem – an incredible Blue carbon Source, Gujarat Institute of Desert Ecology ( <i>Guide</i> ) <i>Newsletter</i> , Gujarat Institute of Desert Ecology, Kachchh, Gujarat, January Issue, 2016.12-1 <b>Publisher: Gujarat Institute of Desert Ecology, Gujarat</b>	
7	Compendium titled “Marine Biodiversity and Bioprospecting for Sustainable Livelihood” edited by Dr. Aneykutty Joseph Dr. Rosamma Philip.	
<b>d. Proceedings Edited</b>		
1	Aneykutty Joseph and Rosamma Philip 2016 Proceedings of the National Seminar on Marine Biodiversity and Bioprospecting for Sustainable Livelihood, 21-22 March 2016, CUSAT, Cochin.	
<b>e. Publications in Proceedings</b>		
1	Aneesa, P.A., Ally c Antony, Susan Joy, Reshma Silvester, Mujeeb Rahiman K.M. and <b>A.A. Mohamed Hatha</b> (2017) Optimization of fermentation parameters for the growth and production of cold active galactosidase by <i>Pantoea agglomerans</i> KS 60. Proceedings of the National Seminar on Marine Biodiversity and Bioprospecting for Sustainable Livelihood. Pp 155-160. ISBN 978-93-80095-85-1.	
2	Aneesa P A, Ajith Joseph, ReshmaSilvester, MujeebRahiman K M, Radhakrishnan C Kand <b>Mohamed Hatha A A.</b> (2016) A cold-active -galactosidase from a psychrotrophic Arctic sediment bacterium <i>Enterobacterludwigii</i> ks85:- Charecterization and application. 28th Kerala Science Congress (28-30 Jan 2016) Extended Abstracts, pp 1590-1595.	
3	Aneesa P.Alikkunju and A. A. Mohamed Hatha, Biotechnological potential of cold active enzymes, with special emphasis on -galactosidase producers (2016) Proceedings on National Seminar on Frontiers in Biotechnology (18-19 February 2016) pp 31.	
4	Rajani S. Ganga, Aneykutty Joseph and Alphi Korath. (2016)Productive response of Nitrogen limitation in the Growth as well as Dietary potential of <i>Pavlova lutheri</i> , a Marine Microalga used in Molluscan Hatchery in <i>Marine Biodiversity and Bioprospecting for Sustainable Livelihood</i> , Joseph. A & Philip. R (eds), pp21-34	
5	P. Lakshmi Devi and Aneykutty Joseph. (2016) Taxonomic Account of Brachyuran Crabs of Cochin backwaters – Taxonomic Account of Brachyuran Crabs of Cochin backwaters –Male Abdomen as a Reliable Taxonomic Tool in <i>Marine Biodiversity and Bioprospecting for Sustainable Livelihood</i> , Joseph. A & Philip. R (eds), pp98-105	



6	Neethu SL and Aneykutty Joseph. (2016) Effect of Stocking Density on the Growth Performance of <i>Litopenaeusvannamei</i> (Boone,1931) under Laboratory Condition in <i>Marine Biodiversity and Bioprospecting for Sustainable Livelihood</i> , Joseph. A & Philip. R (eds), pp 106-120	
7	P. Lakshmi Devi and Aneykutty Joseph. (2016) Taxonomic Account of Brachyuran Crabs of Cochin backwaters – First Male Pleopods as a Reliable Taxonomic Tool in <i>Marine Biodiversity and Bioprospecting for Sustainable Livelihood</i> , Joseph. A & Philip. R (eds), pp 126-134	
8	Rajani S. Ganga, Aneykutty Joseph and Alphi Korath. (2016) Productive response of Nitrogen limitation in the Growth as well as Dietary potential of <i>Pavlova lutheri</i> , a Marine Microalga used in Molluscan Hatchery in <i>Marine Biodiversity and Bioprospecting for Sustainable Livelihood</i> , Joseph. A & Philip. R (eds), pp 256-264	
9	Aswathy Krishnan, Rajani S. Ganga and Aneykutty Joseph. (2016) The Diatom <i>Nitzschiapalea</i> as a Potential Live Feed for Ornamental Fish and Molluscan Hatchery in <i>Marine Biodiversity and Bioprospecting for Sustainable Livelihood</i> , Joseph. A & Philip. R (eds), pp 286-301	
10	Susanna Mariya, K.C. Soumya and Aneykutty Joseph. (2016) Nutrient Profiling of the Brachyurian Crab <i>Sylla serrata</i> Collected from Cochin Backwater, a South Indian Estuary in <i>Marine Biodiversity and Bioprospecting for Sustainable Livelihood</i> , Joseph. A & Philip. R (eds), pp 310-321	
11	Smruthu Mohan and Aneykutty Joseph. (2016) Effect of Microalgal Diet on the Production of the Live Feed <i>Brachionus rotundiformis</i> under Laboratory Condition in <i>Marine Biodiversity and Bioprospecting for Sustainable Livelihood</i> , Joseph. A & Philip. R (eds), pp 322-328	
12	K. C. Soumya, S. Smitha and Aneykutty Joseph. (2016) Mineral Profiling of some selected Brachyuran crabs of Cochin BackWaters, a South Indian Estuary in <i>Marine Biodiversity and Bioprospecting for Sustainable Livelihood</i> , Joseph. A & Philip. R (eds), pp 329-339	
13	P. Athira Mol, K. C. Soumya, P. Lakshmi Devi and Aneykutty Joseph (2016). Reproductive Biology of Violet clawed Mangrove crab <i>Metapogra spsusmessor</i> (Forsk, 1775) of Cochin Backwaters, a South Indian estuary in <i>Marine Biodiversity and Bioprospecting for Sustainable Livelihood</i> , Joseph. A & Philip. R (eds), pp 340-353	
14	Aishwarya Nair, K S Sruthy, P. Jayesh, Solly Solomon, I S Bright Singh and Rosamma Philip 2016 Molecular characterization of a histone derived Antimicrobial peptide from Snake Eel, <i>Opichthus</i> sp. IN <i>Marine Biodiversity and Bioprospecting for Sustainable Livelihood</i> , Joseph. A & Philip. R (eds), pp. 185-197	





15	Divya T Babu, K Archana, I S Bright Singh, and Rosamma Philip 2016 Application of Marine actinomycetes as bioremediators in Penaeus monodon culture system In Marine Biodiversity and Bioprospecting for Sustainable Livelihood, Joseph. A & Philip. R (eds), pp 213-222	
16	Sreedevi N kutty, R Damodaran, and Rosamma Philip 2016 Hydrolytic potential of marine yeast isolated from Bay of Bengal In Marine Biodiversity and Bioprospecting for Sustainable Livelihood, Joseph. A & Philip. R (eds), pp 198-204	
17	Jima M., Krishnapriya P.P., Akhilesh Vijay, Reshma Mary Zachariah and Bijoy Nandan S. 2016. A preliminary observation on benthic faunal assemblage from Arctic Kongsfjord during summer phase 2015, In: Marine Biodiversity and Bioprospecting for sustainable livelihood (eds: Aneykutty Joseph and Rosamma Philip), pp. 121-125. (ISBN: 978-93-80095-85-1). Publisher: (Directorate of Public Relations and Publications, Cochin University of Science and Technology).	
18	Bijoy Nandan, S and Ambily.V. 2016. Conservation, Management and Implication of law in Biodiversity of Aquatic Resources, Proceedings National workshop on Biodiversity and Conservation of Aquatic resources, (BioCAR 2016) (eds. M. Nagoor Meeran, S. David Kingston and N. Jayakumar) held on 10/11/2016 to 11/11/2016 Fisheries Training and Research Centre, Parakkai, Kanyakumari District. pp.79 -92.	
<b>f. Abstracts Published</b>		
1	Jayanath G., Bhavya Kachiprath, Solly Solomon, Sowmya P Mohandas, Bright Singh I. S., Rosamma Philip. Exploration of microbial diversity in hypersaline environment through gene mining in national conference on Frontiers in Genetics and Genomics, Dept. of Genomic Science, Central University of Kerala, 7th and 8th April 2016, pp: 49, 50.	
2	Bhavya Kachiprath, Jayanath G., Solly Solomon, I. S. Bright Singh & Rosamma Philip. Standardisation of CTAB based protocol for metagenomic DNA isolation from saltpan and marine sediment samples in national conference on Frontiers in Genetics and Genomics, Dept. of Genomic Science, Central University of Kerala, 7th and 8th April 2016, pp: 52.	
3	Reshma Raju, Bhavya Kachiprath, Jayesh Puthumana, Solly Solomon, Jayanath G., Nusaira P., Anjali S. Mohan, Swapna P. Antony & Rosamma Philip. Viral and bacterial communities in the transition zone of Kongsfjorden, Arctic : a metagenomic study. National seminar on "Marine Ecosystem Health"(MEH 2017), Dept. of Marine Biology, Microbiology and Biochemistry, CUSAT, 16th & 17th March 2017. pp: 99. (Won second prize in poster presentation).	



4	Bhavya Kachiprath, Jayanath G., Solly Solomon, I. S. Bright Singh & Rosamma Philip. Exploring microbial diversity in marine coastal sediments using nested PCR. Extended abstracts of 28th Kerala Science Congress, 28-30 January, 2016. pp.2058-2059.	
5	Manomi S., Neema Job and Rosamma Philip. 2016. Endophytic fungi: A new wave of metabolites for future. Proceedings of the National Conference on Fungal Biotechnology-NCFB-16, pp.79.	
6	Manomi S., Neema Job and Rosamma Philip. 2016. Bioactive potential of endophytic black yeast <i>Hortea werneckii</i> from <i>Sargassum</i> sp. Proceedings of the 28th Kerala Science Congress, pp.1882-1883.	
7	Neema Job, Manomi S. and Rosamma Philip. 2016. Laccase production by an endophytic fungus <i>Alternaria tenuissima</i> isolated from mangrove apple, <i>Sonneratia caseolaris</i> . Proceedings of the National Conference on Fungal Biotechnology-NCFB-16, pp.129	
8	Neema Job, Manomi S. and Rosamma Philip. 2016. Endophytic <i>Penicillium citrinum</i> from <i>Kandelia candel</i> as a source of enzymes and antimicrobial compounds. Proceedings of the 28th Kerala Science Congress, pp. 2060-2061.	
9	Solly Solomon, Bhavya Kachiprath, Jayanath G., Jayesh P, Reshma Raju, Nusaira P, Anjali S Mohan, I S Bright Singh, Rosamma Philip. Relative abundance of marine viruses in arctic fjords and its implication in biogeochemical cycles in national conference on Frontiers in Genetics and Genomics, Dept. of Genomic Science, Central University of Kerala, 7th and 8th April 2016, pp: 71.	
10	Rajani S. Ganga, Aneykutty Joseph and Alphi Korath (2016). Productive response of Nitrogen limitation in the Growth as well as Dietary potential of <i>Pavlova lutheri</i> , a Marine Microalga used in Molluscan Hatchery in Book of Abstracts of Marine Biodiversity and Bioprospecting for Sustainable Livelihood, pp. 10.	
11	P Lakshmi Devi and Aneykutty Joseph (2016). Taxonomic Account of Brachyuran Crabs of Cochin backwaters – First Male Pleopods as a Reliable Taxonomic Tool in Book of Abstracts of Marine Biodiversity and Bioprospecting for Sustainable Livelihood, pp 54.	
12	P. Lakshmi Devi and Aneykutty Joseph (2016). Taxonomic Account of Brachyuran Crabs of Cochin backwaters – Taxonomic Account of Brachyuran Crabs of Cochin backwaters –Male Abdomen as a Reliable Taxonomic Tool in Book of Abstracts of Marine Biodiversity and Bioprospecting for Sustainable Livelihood, pp 35	
13	Neethu SL and Aneykutty Joseph(2016). Effect of Stocking Density on the Growth Performance of <i>Litopenaeus vannamei</i> (Boone,1931) under Laboratory Condition in Book of Abstracts of Marine Biodiversity and Bioprospecting for Sustainable Livelihood, pp 43.	



14	Rajani S Ganga and Aneykutty Joseph (2016). <i>In Vitro</i> Influence of Sodium Bicarbonate on Growth and Feed Quality potential of <i>Pavlova lutheri</i> , a Marine Microalga in Book of Abstracts of Marine Biodiversity and Bioprospecting for Sustainable Livelihood, pp 10.	
15	S. Smitha, K.C. Soumya and Aneykutty Joseph (2016). Extraction of <i>Crude Astaxanthin</i> from Shell Waste of <i>Aristeus alcocki</i> , <i>Charybdis feriata</i> and Skin Waste of <i>Lutjanus gibbus</i> and Comparative study of its Total Antioxidant Activity in Book of Abstracts of Marine Biodiversity and Bioprospecting for Sustainable Livelihood, pp 85	
16	Aswathy Krishnan, Rajani S. Ganga and Aneykutty Joseph (2016). The Diatom <i>Nitzschiapalea</i> as a Potential Live Feed for Ornamental Fish and Molluscan Hatchery" in Book of Abstracts of Marine Biodiversity and Bioprospecting for Sustainable Livelihood, pp 102	
17	Smruthu Mohan and Aneykutty Joseph (2016). Effect of Microalgal Diet on the Production of the Live Feed <i>Brachionus rotundiformis</i> under Laboratory Condition in Book of Abstracts of Marine Biodiversity and Bioprospecting for Sustainable Livelihood, pp 108	
18	Rajani S Ganga and Aneykutty Joseph (2016). Impact of phosphorus limitation in the culture medium on the growth kinetics, amount of chlorophyll, protein and carbohydrate contents of the microalga, <i>Isochrysis galbana</i> in the Book of Abstracts of 9th NABS National conference on New Biological Researches: Opportunities and Challenges for Sustainable Development. pp. 150	
19	Susanna Mariya, K.C. Soumya and Aneykutty Joseph (2016). Nutrient Profiling of the Brachyurian Crab <i>Sylla serrata</i> Collected from Cochin Backwater, a South Indian Estuary in Book of Abstracts of Marine Biodiversity and Bioprospecting for Sustainable Livelihood, pp 106	
20	P.Athira Mol, K. C. Soumya, P.Lakshmi Devi and Aneykutty Joseph (2016). Reproductive Biology of Violet clawed Mangrove crab <i>Metapogra spsussessor</i> (Forskal, 1775) of Cochin Backwaters, a South Indian estuary in Book of Abstracts of Marine Biodiversity and Bioprospecting for Sustainable Livelihood, pp 112	
21	Rajani S Ganga and Aneykutty Joseph (2016). Impact of phosphorus limitation in the culture medium on the growth kinetics, amount of chlorophyll, protein and carbohydrate contents of the microalga, <i>Isochrysis galbana</i> in the Book of Abstracts of 9th NABS National conference on New Biological Researches: Opportunities and Challenges for Sustainable Development. pp. 150	
22	Rajani S Ganga and Aneykutty Joseph (2016). Modulating nitrogen source in the culture medium-can we enrich the dietary potential of the microalga, <i>Isochrysis galbana</i> in the Book of Abstracts of 9th NABS National conference on New Biological Researches: Opportunities and Challenges for Sustainable Development. Pp	



23	G Harikrishnan and Aneykutty Joseph (2016). Influence of ethanol on shoaling and learned anti-predatory response in black tetra <i>Gymno corymbusternetzi</i> Boulenger 1895 in the Book of Abstracts of 9th NABS National conference on New Biological Researches: Opportunites and Challenges for Sustainable Development. pp 140.	
24	K. C. Soumya and Aneykutty Joseph (2016). Common leafy vegetables can be exploited for the production of leaf protein concentrates (LPC) with a subsequent possibility of utilization in aquafeed formulations in the Book of Abstracts of 9th NABS National conference on New Biological Researches: Opportunites and Challenges for Sustainable Development. pp. 139.	
25	Susanna Mariya, K. C. Soumya and Aneykutty Joseph (2016). Nutrient profiling of the brachyuran crab <i>scyllaolivacea</i> (herbst, 1796) collected from cochin backwaters, a south Indian estuary in the Book of Abstracts of 9th NABS National conference on New Biological Researches: Opportunites and Challenges for Sustainable Development. pp. 140	
26	Vadherkailashkumar Hirabhai and Aneykutty Joseph (2016). Effect of eyestalk ablation on ovarian development in spent females of <i>Macrobrachium rosenbergii</i> (De man) in the Book of Abstracts of 9th NABS National conference on New Biological Researches: Opportunites and Challenges for Sustainable Development. pp 83.	
27	M.S. Ambadi Kannan, K.C. Soumya and Aneykutty Joseph (2017), Screening for Antioxidant Potential in the Hemolymph of Herring Bow crab; <i>Varuna litterata</i> (Fabricius, 1798); National Seminar on Marine Ecosystem Health (MEH 2017) organized by the Department of Marine Biology, microbiology and Biochemistry, School of Marine Sciences, Cochin University of Science & Technology, 16-17 March, 2017	
28	K. C. Soumya, M. S. Ambadi Kannan and Aneykutty Joseph (2017) A study on the antioxidant potential of the solvent extract from the whole body of <i>Squilla mantis</i> .; National Seminar on Marine Ecosystem Health (MEH 2017) organized by the Department of Marine Biology, microbiology and Biochemistry, School of Marine Sciences, Cochin University of Science & Technology, 16-17 March 2017	

#### 14. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Sl. No.	Name of Participant	Name of Seminar / Conference/ Workshop	Role
<b>International :</b>			
1	Dr.S.Bijoy Nandan	(7 <sup>th</sup> Bilateral Seminar Italy- Japan) entitled 'Physical and Chemical impacts on Marine Organisms emerging trends and strategies for saving the Oceans held at Minamiboso, Chiba, Japan. 29 November – 2 December 2016.	Oral Presentation



2	Aneesa P A, Vipindas P V, Jayanath G, MujeebRahiman K M, Saramma A V, Rosamma Philip and <b>Mohamed Hatha A A.</b> , (2016)	Molecular Characterization of a gene encoding cold active beta-galactosidase with transglycosylation activity from a psychrotrophic bacterium <i>Enterobacter ludwigii</i> , Proceedings on CUSAT-NUS Joint International conference on Biotechnology and Neuroscience CUSAT, Cochin, India 19-21 December 2016.	Participation
3	Jabir T. Vipindas T. V and Mohamed Hatha A. A.	Nitrogen fixation by Sulfate reducing bacterial communities of a tropical (Cochin) estuary (2016). SCOR NIO International Symposium on Microbial Responses to Ocean Deoxygenation. National Institute of Oceanography, Goa 2-6 December 2016. (Best Poster Award)	Poster Presentation
<b>National</b>			
4	Manomi S.	Taxonomy, Biodiversity, Ex Situ Conservation and Applications of Fungi” (1st to 10th June 2016) MACS Agharkar Research Institute (ARI), Pune	Participant
5	Sruthy K. S.	1 <sup>st</sup> Hands-on Training Workshop on Hydra Biology (4th-8th July, 2016) at Developmental Biology Group, MACS-Agharkar Research Institute, Pune.	Participant
6	Jayanath G	1.A short term course on <b>Metagenomics and Microbiomes</b> under MHRD Scheme on Global Initiatives of Academic Networks (GIAN), February 20 to 25, 2017 at Saurashtra University, Rajkot 2.Training attended on Methods and applications in Sequence analysis Sponsored by the Department of Biotechnology Government of India. During 13 to 17, March, 2017, organized by the Bioinformatics Centre (DIC), IT – BT Complex college of horticulture, Kerala Agricultural University.	Participant
7	Radhika.R	One day Workshop on “Status of Periyar river Quality in Eloor-Edayar Region and Future Plans” organized by the Kerala State Pollution Control Board on 1 <sup>st</sup> August 2015 at IMA house, Kaloor, Ernakulam.	Participant



8	Radhika.R	National Seminar on Marine Ecosystem Health (MEH 2017) organized by Department of Marine Biology, Microbiology Biochemistry, Cochin University of Science & Technology during 16-17 March, 2017	Participant
9	Bhavya Kachiprath	<ol style="list-style-type: none"><li>1. MHRD-UGC-GIAN Government of India sponsored short term course on Metagenomics and Microbiomes organized by the UGC-CAS Department of Biosciences, Saurashtra University, Rajkot, Gujrat, India during 20<sup>th</sup> to 25<sup>th</sup> February, 2017.</li><li>2. Training on Methods and applications in sequence analysis organized by the Bioinformatics centre (DIC), IT-BT complex, College of Horticulture, Kerala Agricultural University, Thrissur on 13th to 17th March 2017.</li></ol>	Participant
10	M. Abhijith	<ol style="list-style-type: none"><li>1. National Seminar on Marine Ecosystem Health (MEH 2017) organized by Department of Marine Biology, Microbiology and Biochemistry, Cochin University of Science &amp; Technology during 16-17 March, 2017.</li><li>2. Workshop on Statistical Tools for Marine Biologists, funded by Government of Kerala, organized by Department of Marine Biology, Microbiology and Biochemistry, Cochin University of Science &amp; Technology during 27-31 March, 2017.</li></ol>	Participant
11	Vijayalakshmy KC	<ol style="list-style-type: none"><li>1. National Seminar on Marine Ecosystem Health (MEH 2017) organized by Department of Marine Biology, Microbiology and Biochemistry, Cochin University of Science &amp; Technology during 16-17 March, 2017.</li><li>2. Workshop on Statistical Tools for Marine Biologists, funded by Government of Kerala, organized by Department of Marine Biology, Microbiology and Biochemistry, Cochin University of Science &amp; Technology during 27-31 March, 2017.</li></ol>	Participant



12	Lakshmi S.	National Seminar on Marine Ecosystem Health (MEH 2017) organized by Department of Marine Biology, Microbiology and Biochemistry, Cochin University of Science & Technology during 16-17 March, 2017.	Participant
13	Jasmin K.A.	National Seminar on Marine Ecosystem Health (MEH 2017) organized by Department of Marine Biology, Microbiology and Biochemistry, Cochin University of Science & Technology during 16-17 March, 2017.	Participant
14	Sherin Varghese	Predominance of nir s harbouring bacterial community in the sediment cover of estuarine and coastal ecosystems of Cochin. 29th session of Kerala Science Congress, Mar Thoma College, Thiruvalla, 28th – 30th January 2017.	Participant
15	Jabir T.	Nitrogen fixing bacterial communities along the South West coast of India. National Seminar on Marine Ecosystem Health (MEH - 2017) Organized by Department of Marine Biology Microbiology and Biochemistry, CUSAT. pp 60-62.	Participant
16	Jima M	<i>National Conference on Polar Sciences, (NCPS 2017), May 16-17, 2017</i> Registration Number: NCPS2017/232.	Poster Presentation
17	Sreelekshmi.S	National seminar on Marine Biodiversity and Bioprospecting for Sustainable Livelihood (MBBSL 2016), 21 <sup>st</sup> and 22 <sup>nd</sup> March 2016.	Oral Presentation
18	Jima.M	National seminar on Marine Biodiversity and Bioprospecting for Sustainable Livelihood (MBBSL 2016), 21 <sup>st</sup> and 22 <sup>nd</sup> March 2016.	Poster presentation
19	Regina Hershey	National Seminar on 26 <sup>th</sup> Swadeshi Science Congress. 7 – 9 November 2016.	Oral presentation
20	Vineetha, S	National Seminar on 26 <sup>th</sup> Swadeshi Science Congress. 7 – 9 November 2016.	Oral Presentation
21	Vishnu Sagar, M.K	National Seminar on 26 <sup>th</sup> Swadeshi Science Congress. 7 – 9 November 2016.	Oral Presentation
22	Asha, C.V	National Seminar on 26 <sup>th</sup> Swadeshi Science Congress. 7 – 9 November 2016.	Oral Presentation



23	Jima, M	National Seminar on 26 <sup>th</sup> Swadeshi Science Congress. 7 – 9 November 2016.	Oral Presentation
24	Krishnapriya, P.P	National Seminar on 26 <sup>th</sup> Swadeshi Science Congress. 7 – 9 November 2016.	Oral Presentation
25	Philomina Joseph	National Seminar on 26 <sup>th</sup> Swadeshi Science Congress. 7 – 9 November 2016.	Oral Presentation
26	Santu, K.S.,	National Seminar on 26 <sup>th</sup> Swadeshi Science Congress. 7 – 9 November 2016.	Oral Presentation
27	Sreelekshmi, S	National Seminar on 26 <sup>th</sup> Swadeshi Science Congress. 7 – 9 November 2016.	Oral Presentation
28	Santu K.S.	29 <sup>th</sup> Kerala Science Congress, 28 <sup>th</sup> to 30 <sup>th</sup> January 2017 at Mar Thoma College, Thiruvalla, Pathanamthitta, Kerala.	Poster Presentation
29	Krishnapriya P.P,	29 <sup>th</sup> Kerala Science Congress, 28 <sup>th</sup> to 30 <sup>th</sup> January 2017 at Mar Thoma College, Thiruvalla, Pathanamthitta, Kerala.	Participant
30	Lathika Cicily Thomas	<i>National Seminar on Marine Ecosystem Health (MEH 2017)</i> 16-17 March 2017 organised by Dept. of Marine Biology, Microbiology & Biochemistry, CUSAT.	Oral Presentation
31	Krishnapriya P.P,	<i>National Conference on Polar Sciences, (NCPS 2017)</i> , May 16-17, 2017 Registration Number: NCPS2017/232.	Oral Presentation
32	Jayachndran P.R	1 <sup>st</sup> International training workshop on Taxonomy of Bivalve mollusk ITW'01, organized by Dept of Marine Biology, Microbiology and Biochemistry, CUSAT, <b>10<sup>th</sup> -14<sup>th</sup> May, 2016:</b>	Participant
33	Asha.C.V	1 <sup>st</sup> International training workshop on Taxonomy of Bivalve mollusk ITW'01, organized by Dept of Marine Biology, Microbiology and Biochemistry, CUSAT, <b>10<sup>th</sup> -14<sup>th</sup> May, 2016:</b>	Participant
34	Jima.M	1 <sup>st</sup> International training workshop on Taxonomy of Bivalve mollusk ITW'01, organized by Dept of Marine Biology, Microbiology and Biochemistry, CUSAT, <b>10<sup>th</sup> -14<sup>th</sup> May, 2016:</b>	Participant
35	Solly Solomon	Viral and bacterial communities in the transition zone of Kongsfjorden, Arctic. In the Abstracts of National Seminar on Marine Ecosystem Health, 2017 organized by the Department of Marine Biology, Microbiology and Biochemistry, Cochin University of Science and Technology, Cochin during 16-17 March, 2017. Pp 99-100.	Poster presentation





36	Swapna P. Antony	Molecular identification and phylogenetic analysis of RNA virus belonging to Family Rhabdoviridae from the sediments of Cochin Barmouth Region. In the Abstracts of National Seminar on Marine Ecosystem Health, 2017 organized by the Department of Marine Biology, Microbiology and Biochemistry, Cochin University of Science and Technology, Cochin during 16-17 March, 2017. Pp 109-110.	Poster Presentation
37	Swapna P. Antony	Participated and presented a paper during "INSPIRE Faculty Interaction cum Monitoring Meet" held at IISER, Pune during 3-4 Feb, 2017 conducted by the Department of Science and Technology, Govt. of India.	Participant
38	Dr. K.B. Padmakumar	National Workshop on " <b>Mud Banks of Kerala: Status, issues and societal concerns</b> ", organised by CSIR- National Institute of Oceanography, Regional Centre Kochi on 10 <sup>th</sup> - 11 <sup>th</sup> February 2017.	Participant
39	Dr. K.B. Padmakumar	National Seminar on " <b>Seaweeds- A source of Nutraceutical health care products and new materials- future perspectives</b> ", organised by Society of Fisheries Technologists (India) Kochi and CIFT, Kochi on 9 <sup>th</sup> February 2017.	Participant
40	Dr. K.B. Padmakumar	National Seminar on " <b>Marine Ecosystem Health (MEH 2017)</b> ", Organized by the Department of Marine Biology, Microbiology and Biochemistry, School of Marine Sciences, Cochin University of Science and Technology, Kochi-16, Kerala, during 16 <sup>th</sup> - 17 <sup>th</sup> March 2017.	Member-Organizing committee
41	Dr.S.Bijoy Nandan	Invited for giving talk on <i>Coastal and Marine Ecosystem Services</i> in National Symposium on "Marine Bioresources and Coastal Livelihoods (NSMBCL)" at Gujarat Institute of Desert Ecology on 4 <sup>th</sup> and 5 <sup>th</sup> March, 2016.	Resource Person
42	Dr.S.Bijoy Nandan	Invited for giving talk on <i>Sea and coast as ecosystems: Assessment of services</i> in connection with the World Ocean Day 2016 organised by Society of Marine Biologists and Marine Biology Alumni Association at CUSAT on 08 June 2016.	Resource Person



43	Dr.S.Bijoy Nandan	Inaugurated the Ozone Day celebration on 29 <sup>th</sup> September 2016 at SN College, Chempazanthy, Trivandrum.	Invited Guest
44	Dr.S.Bijoy Nandan	Invited for giving talk in the National Seminar on Conservation of Freshwater Biodiversity under changing Climate change and Land Cover 21 January 2017.	Resource Person
45	Dr.S.Bijoy Nandan	Plenary talk on <i>Carbon sequestration and Climate change</i> in the National Seminar on Environmental Degradation and Climate Change – A Holistic Approach, 15 March 2017 organised by School of Environmental Studies, CUSAT.	Resource Person
46	Dr.S.Bijoy Nandan	Seminar on Solid waste management and e waste management held in connection with World Environment day on 6-06-2017 at IMG, Trivandrum, in connection with the award presentation programme of the Pollution control – environment awards of the Kerala State Pollution Control Board.	Panel speaker and expert
47	Rosamma Philip	National consultation on Pharmaceuticals and Bio-fuel from Marine Biological Systems - Status, Constraints and Way Forward, 01-03 Feb 2016, National Centre for Aquatic Animal Health, CUSAT	Resource person

**Participation in Cruise/Expeditions**

1	Dr A A Mohamed Hatha	Winter Expedition to Arctic, Ny Alesund, September 2016	Member
2	Jayachandra P R	Summer Expedition to Artic, Ny Alesund July-August 2016	Member
3	Jabir Thajudeen	International Indian Ocean Expedition 2017- Central Arabian Sea	
4	Bhavya Kachiprath	Participated in an open ocean cruise in FORV Sagar Sampada (Cruise No. 353) for 20 days (14th November 2016 to 2nd December 2016).	Participant
5	DhanyaKesavan	Participated in an open ocean cruise in FORV Sagar Sampada (Cruise No. 360) for 20 days (13th May to 1st June 2017).	Participant
6	Anju M. V.	Participated in an open ocean cruise in FORV Sagar Sampada (Cruise No. 360) for 20 days (13th May to 1st June 2017).	Participant



7	Anooja V. V.	Participated in an open ocean cruise in FORV SagarSampada (Cruise No. 360) for 20 days (13th May to 1st June 2017).	Participant
8	Aishwarya Nair	Participated in an open ocean cruise in FORV SagarSampada (Cruise No. 360) for 20 days (13th May to 1st June 2017).	Participant
9	Ranju. R and Sooria. P. M	ORV Sagar Kanya (National Centre for Antarctic and Ocean Research), Goa. Cruise No.: SK 329, Period: 4th April to 4th May 2016	Participants
10	Dr. Smitha C K	Participated in an open ocean cruise in FORV SagarSampada (Cruise No. 353) for 20 days (14th November 2016 to 2nd December 2016).	Participant
11	Abhijit M, Ajith Joseph , Jabir T, Ajin A.M.	SUBA Diving Certification Course- Lakshdeep 2016	Participant

### 15 Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Sl. No.	Name of Faculty	Name of Organization	Role
1	Dr. A.A. Mohamed Hatha	Frontiers in Microbiology – Nature Publishing Group	Editorial Board Member
2	Dr. A.A. Mohamed Hatha	Journal of Environmental Biology	Editorial Board/ Reviewer
3	Dr. A.A. Mohamed Hatha	Institute of Alternate Economics	Chairman, Academic committee
4	Dr. A.A. Mohamed Hatha	Indian Journal of Marine Sciences, Journal of Environmental Biology (national Journals)	Reviewer
5	Dr. A.A. Mohamed Hatha	Environmental Monitoring and Assessment, Aquaculture, Journal of Aquaculture, PLOS One, Frontiers in Microbiology, Water Research, Journal of Infectious Diseases in Developing Countries (international journals)	Reviewer
6	Dr. A.A. Mohamed Hatha	Board of Studies in Environmental Sciences, Mahatma Gandhi University	Board Member
7	Dr. A.A. Mohamed Hatha	Board of Studies in Microbial Biotechnology, Bharathiar University	Board Member



8	Dr. A.A. Mohamed Hatha	Board of Studies in Marine Sciences, Bharathidasan University	Board Member
9	Dr. A.A. Mohamed Hatha	Board of Studies in Microbiology, Calicut University	Board Member
10	Dr. Rosamma Philip	Biosafety committee, Amrita Institute of medical Sciences, Kochi	Member
11	Dr. Rosamma Philip	Ethical Committee, SciGenom Labs, Kochi	Member
12	Dr. Rosamma Philip	Board of studies, M.Sc. Marine Biology, Pondicherry University	Member
13	Dr. Rosamma Philip	Board of Studies – B.Sc. Zoology, St. Teresa’s College, Cochin	Member
14	Dr. Rosamma Philip	Board of Studies - M.Tech in Marine Biotechnology (DBT, Govt. of India Sponsored Programme), National Centre for Aquatic Animal Health, Cochin University of Science and Technology, Cochin.	Member
15	Dr. Rosamma Philip	Assessment Committee for CAS of Scientists, ICAR	Member
16	Dr. Rosamma Philip	National Centre for aquatic Animal Health (NCAAH), CUSAT 2014 -15)	Advisory Board Member
17	Dr. Rosamma Philip	Society of Marine Biologists (SOMB)	Vice President
18	Dr. Rosamma Philip	Marine Biology Alumni Association (MBAA), Dept. of Marine Biology, Microbiology and Biochemistry, Cochin University of Science and Technology	Secretary
19	Dr.S.Bijoy Nandan	National Institute of Ecology (NIE),	Elected Member of Executive Council
20	Dr.S.Bijoy Nandan	Kerala State Pollution Control Board, State Pollution Control Awards	Member
21	Dr.S.Bijoy Nandan	Advisory Committee of Kendriya Vidyalaya Sangathan, Ernakulam,	Member
22	Dr.S.Bijoy Nandan	Regional Selection Committee to select Principals/Teachers from KendriyavidyalayaSangathan (KVS), Ernakulam,	Member
23	Dr.S.Bijoy Nandan	Kerala University of Fisheries and Ocean Studies, School of Aquaculture and Biotechnology vide KUFOS	Member, Governing council



24	Dr.S.Bijoy Nandan	Board of Studies in Zoology, St. Alberts College, Ernakulam	Member
25	Dr.S.Bijoy Nandan	Board of Studies, Mar Athanasius College, Kothamangalam,	Member
26	Dr.S.Bijoy Nandan	Haritha Vidyalaya School Awards	Judging committee member
27	Dr.S.Bijoy Nandan	Pollution Control Board Awards 2017,	Member judging committee
28	Dr.S.Bijoy Nandan	Kerala State Pollution Control Board State Pollution Control Awards (State Environment Awards)	Member
29	Dr.S.Bijoy Nandan	CUSAT, University Employees Information and Guidance Bureau,	Advisory committee member
30	Dr.S.Bijoy Nandan	University Grants Commission (UGC) – Special Assistance programme (SAP) in the Dept. of Marine Biology, CUSAT,	Dy. Coordinator
31	Dr.S.Bijoy Nandan	University Grants Commission (UGC) – Special Assistance programme (SAP) in the Dept. of Marine Biology, CUSAT	Coordinator
32	Dr. Swapna P. Antony	Board of Studies – B.Sc. Zoology, St. Teresa's College, Cochin	Member
33	Dr. Swapna P. Antony	Fish and Shellfish Immunology - Elsevier	Reviewer
34	Dr. Swapna P. Antony	Proceedings of National Academy of Sciences – Springer	Reviewer
35	Dr. Swapna P. Antony	BMC Complementary & Alternative Medicine – BioMed Central	Reviewer
36	Dr. K. B. Padmakumar	<i>Harmful Algae News: IOC- UNESCO Newsletter on Toxic algae and Algal Blooms.</i>	Regional Editor (India)

### 16. Awards/ Honours/ Fellowships etc. received

Sl. No.	Name of Recipient	Name of Fellowship/ Honour /Award	Awarding Agency
1	Ms. Anju R.	English Debate 1st prize (SARGAM 2017- COCHIN UNIVERSITY ARTS FEST	<b>CUSAT</b>
2	Mr. Hari Praved P.	<b>Cartoon 1st Prize</b> (SARGAM 2017- COCHIN UNIVERSITY ARTS FEST	<b>CUSAT</b>



3	<b>Jabir T. Vipindas</b> T. V and Mohamed Hatha A. A.	Best Poster Award Nitrogen fixation by Sulfate reducing bacterial communities of a tropical (Cochin) estuary. SCOR NIO International Symposium on Microbial Responses to Ocean Deoxygenation 2-6 December 2016.	National Institute of Oceanography, Goa
4	Reshma Raju, Bhavya Kachiprath, Jayesh Puthumana, <b>Solly Solomon</b> , Jayanath G, Nusaira P, Anjali S Mohan, Swapna P Antony & Rosamma Philip.	<b>Second Prize</b> for Poster presentation Viral and bacterial communities in the transition zone of Kongsfjorden, Arctic: A metagenomic study, National Seminar on Marine Ecosystem Health (MEH 2017), 16th to 17th March 2017,	Department of Marine Biology, Microbiology & Biochemistry, CUSAT.
5	Dr. K.B. Padmakumar	Start up Grant	UGC

### 17. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	'Modeling biogeochemical cycles in coastal oceans' – Duration 5 Years (2013-18).	Space Application Center, ISRO, Govt. of India.	INR 52,42,000/-	Dr.A.A.Mohamed Hatha
2	'Role of microbenthos on remineralisation of shelf sediments along Kerala coast' -Duration 5 Years (2012-17).	Centre for Marine Living Resources and Ecology (CMLRE), MoES, Govt. of India.	INR 70,00,000/-	Dr.A.A.Mohamed Hatha
3	'Marine Biodiversity along Kerala Coast' - Duration – 5 years (2012-17).	Centre for Marine Living Resources and Ecology (CMLRE), MoES, Govt. of India.	INR 60,50,000/-	Dr.A.A.Mohamed Hatha
4	'Role of heterotrophic bacteria and cyanobacteria in the Nitrogen cycle in the Cochin estuary ad coastal waters with special reference to nitrification, denitrification and nitrogen fixing capabilities'- Duration –5 years.(2011-16)	Ministry of Earth Sciences (MoES), Govt. of India.	INR 44,64,500/-	Dr.A.A.Mohamed Hatha



5	Culturable diversity of heterotrophic bacteria in Arctic water and sediment and their contribution to phosphorus cycle.	Funded by Ministry of Earth Sciences and Co-ordinated by National Center for Antartic and Ocean Research, Goa.	Logistic support only	Dr.A.A.Mohamed Hatha
6	'Marine Biodiversity along Kerala Coast' - Duration – 5 years (2012-17).	Centre for Marine Living Resources and Ecology (CMLRE), MoES, Govt. of India.	INR 60,50,000/-	Dr.A.A.Mohamed Hatha
7	'Role of heterotrophic bacteria and cyanobacteria in the Nitrogen cycle in the Cochin estuary ad coastal waters with special reference to nitrification, denitrification and nitrogen fixing capabilities'- Duration – 5 years. (2011-16)	Ministry of Earth Sciences (MoES), Govt. of India.	INR 44,64,500/-	Dr.A.A.Mohamed Hatha
8	Culturable diversity of heterotrophic bacteria in Arctic water and sediment and their contribution to phosphorus cycle.	Funded by Ministry of Earth Sciences and Co-ordinated by National Center for Antartic and Ocean Research, Goa.	Logistic support only	Dr.A.A.Mohamed Hatha
9	Soft bottom Meiobenthic fauna as proxies of the functional character of selected Arctic fjords funded by National Centre for Antarctic and Ocean Research ( <b>INTERNATIONAL COLLABORATIVE RESEARCH PROGRAMME</b> ), Ministry of Earth Science	NCAOR- Ministry of Earth Sciences	Logistic support only	Dr.S.Bijoy Nandan



10	Feeding ecology of meiofauna in the Arctic fjords, funded by National Centre for Antarctic and Ocean Research ( <b>INTERNATIONAL COLLABORATIVE RESEARCH PROGRAMME</b> ), Ministry of Earth Science	NCAOR- Ministry of Earth Sciences	Logistic support only	Dr.S.Bijoy Nandan
11	Carbon potential and fluxes with special reference to Greenhouse gas emissions from the Coastal ecosystems of Kerala	DoECC, Govt. of India	32.2 lakhs	Dr. S. Bijoy Nandan
12	Sea Water Quality Criteria- Toxicity Effects of Selected Heavy Metals and Pesticides on Marine Organisms.	MoES (ICMAM-PD), Govt. of India	296.15 lakhs	Dr. S. Bijoy Nandan
13	Impact of Climate variability on the India Ocean: Role of gelatinous zooplankton structuring food web structure and community assemblages, Endorsement no. IIOE2-EP 18, May 2017 ( <b>INTERNATIONAL COLLABORATIVE RESEARCH PROGRAMME</b> ), Ministry of Earth Science	Ministry of Earth Sciences, Indian National Centre for Ocean Information Services (INCOIS)	Logistic support only	Dr.S.Bijoy Nandan
14	Harmful Algal Blooms: Monitoring and culturing of selected species	MoES, Govt. of India	79 lakhs	Dr.A V Saramma
15	Bioactive peptides from marine organisms and novel genes for commercially important enzymes from marine microbes 2012-2017	MoES, Govt. of India	Rs. 120 Lakhs	Dr. Rosamma Philip
16	Metagenomic Characterization of Marine viruses: Functional and Phylogenetic Perspectives	DST (DST-INSPIRE Faculty), Govt. of India	35 Lakhs	Dr. Swapna P. Antony





International Project (As Principal Investigator)		
<b>Arctic Research Programme</b>		
1	Functional diversity of heterotrophic bacteria in the water and surficial sediments of Kongsfjord with special reference to those involved in carbon cycle. Funded by Ministry of Earth Sciences and Co-ordinated by National Center for Antartic and Ocean Research, Goa. (Funding support restricted to international travel, stay at Arctic research station, field support for sample collection and consumables at station). Since 2015	Dr. A.A. Mohamed Hatha
2	Community analysis and molecular characterization of meiobenthos from Kongsfjorden- Arctic, funded by National Centre for Antarctic and Ocean Research, (INTERNATIONAL COLLABORATIVE RESEARCH PROGRAMME), Partial funding: Ministry of Earth Sciences order MoES/Arctic/1/2007-PC-I (PartII).	Dr S Bijoy Nandan

### 18. Research Programmes and Activities:

Sl. No	Problem / Topic	Investigator (s)
1	Marine biodiversity	Dr. S Bijoy Nandan
2	Marine Ecotoxicology	Dr. S Bijoy Nandan
3	Benthic Ecology	Dr. S. Bijoy Nandan
4	Antimicrobial peptides from marine biota	Dr. Rosamma Philip
5	Marine Microbial diversity	Dr. Rosamma Philip
6	Marine microbes and their applications in aquaculture	Dr. Rosamma Philip
7	Marine Endophytes and bioactive compounds	Dr. Rosamma Philip
8	Harmful algal blooms	Dr. A.V. Saramma
9	Marine bioactive Compounds	Dr. A.V. Saramma
10	Psychrophilic bacteria	Dr. A.A. Mohamed Hatha
11	Microbial Diversity	Dr. A.A. Mohamed Hatha
12	Foodborne pathogens	Dr. A.A. Mohamed Hatha
13	Probiotics	Dr. A.A. Mohamed Hatha
14	Fish/ shrimp Pathology	Dr. A.A. Mohamed Hatha



15	Cold active enzymes from Psychrophilic bacteria	Dr. A.A. Mohamed Hatha
16	Aquaculture	Dr. Aneykutty Joseph
17	In vitro propagation of aquarium plants	Dr. Aneykutty Joseph
18	Metagenomic characterization of marine viruses	Dr. Swapna P. Antony
19	Molecular Immunology of Fish and Shellfish	Dr. Swapna P. Antony
20	Aquaculture	Dr. Swapna P. Antony

### 19. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl. No.	Title	Duration	Convenor/ Coordinator	Funding Agency
1	National Seminar on 'Marine Ecosystem Health' (MEH 2017) organized by Department of Marine Biology, Microbiology Biochemistry, Cochin University of Science & Technology	16-17 March, 2015.	Dr. AA Mohamed Hatha	UGC, KSCSTE
2	Workshop on 'Statistical Tools for Researchers in Marine Biology'	27- 31 st March 2017.	Dr Rosamma Philip	Govt. of Kerala
3	Special Lecture on 'What colour is the ocean?' by Prof. Trevor Platt, Plymouth Marine Laboratory, UK	3rd February 2016	Dr. AA Mohamed Hatha	SOMB
4	Special Lecture on Biodiversity of Coral Reef Ecosystems by Dr. Gustav Pauly, University of Florida, USA –	30th November 2016	Dr Rosamma Philip	MBAA
5	Special Lecture on 'Learning arts and Human body by Dr. C. P. Unnikrishnan, Kathakali Artist	22 February 2017 –	Dr AA Mohamed Hatha	SOMB
6	World Environment Day 2016 Special Lecture on Major threats to our Oceans by Dr N Nandini Menon	5 th June 2016	Dr Rosamma Philip	MBAA



7	World Ocean Day 2016 Special Lecture on 'Sea and Coast as Ecosystems : Assessment on Services ' by Prof. S Bijoy Nandan	8 th June 2016	Dr Rosamma Philip	MBAA
8	Essay Competition on 'Impact of Climate change on Marine Ecosystems'	3 <sup>rd</sup> June 2016	Dr Rosamma Philip	MBAA

## 20. Consultancy Work

Sl. No	Name of Consultancy	Name of Consultant	Sponsoring Agency
1	Hydrochemistry of Vembanad wetland ecosystem with special reference to pollution problems and its management measures, funded by <u>Kerala State Pollution Control Board</u> . <b>Rs. 6.5 lakhs</b> , University order No.PL B2/20034/2013 dtd.07/07/14. <b>2014 March on wards:</b>	Dr.S.Bijoy Nandan	Kerala State Pollution Control Board.
2	Microbial assay of coir pith based aerobic composting media (2016) Rs. 0.45	Dr.A.A.Mohamed Hatha	Omega Ecotech, Coimbatore
3	Baseline Marine Environmental Survey for Cochin Port (2016) Rs. 3.36 Lakhs	Dr.A.A.Mohamed Hatha	L & T IEL, Hyderabad
4	Evaluation of the efficacy of air disinfection machine Rs. 0.2 Lakhs	Dr.A.A.Mohamed Hatha	M/s Electronic Control and Discharge Systems Private Limited, Cochin (2016, 2017)
5	Baseline Marine Environmental Survey for Minor Ports in Alappuzha (2015-16) Rs. 1.2 Lakhs	Dr.A.A.Mohamed Hatha	Kitco, Govt. of Kerala



## DEPARTMENT OF MARINE GEOLOGY & GEOPHYSICS

### 1. Brief History

Earth Science education is enhancing its relevance and scope globally owing to recent advances in geoexploration and its role in resolving environmental and development issues. CUSAT is one of the premier Universities in the country to begin a full fledged post graduate programme in Marine Geology in the year 1976 taking into account the global advancement in general and national needs in particular in the field of Marine Sciences. A 3-year M.Sc (Tech.) programme in Marine Geophysics was introduced in 1992 which has now been restructured into a 2-year M.Sc. programme. Both the programmes had been designed to aim at the development of manpower in the fields of Marine Geology and Geophysics with a special emphasis on offshore areas with a view to cater the needs of various research institutions and survey organizations as well as multinational companies engaged in mineral exploration, sea bed surveys, remote sensing and oil and ground water prospecting. The students of this Department are absorbed in various Universities, Central, State, Public sector organizations like ONGC, GSI, NIO, NGRI, CGWB, NCESS, NCAOR, IIG, WIHH and MNCs like Reliance, Shell, Cairn Energy, Total, Schlumberger, CGG etc. Several major research projects funded by external agencies have been under taken are in operation in the Department.

### 2. Programmes of Study/Research:

1. M.Sc Marine Geology
2. M.Sc Marine Geophysics
3. Five Year Integrated M.Sc. Geosciences (Course Approved but not started yet due to inadequate faculty)
4. Ph.D

### 3. Faculty Members

Sl. No.	Name	Designation	Qualification	Specialization
1.	Dr.K.Sajan	Professor	M.Sc. Ph.D	Estuarine and Coastal Sedimentology & Geochemistry



2.	Dr.C.G.Nambiar	Professor	M.Sc. Ph.D	Geochemistry, Mineralogy, Petrology, Structural Geology
3.	Dr.M.Ravisankar	Associate Professor	M.Sc. Ph.D	Optoelectronics & PC-based instrumentation
4.	Dr. K. R. Baiju	Assistant Professor	M.Sc. Ph. D	Structural Geology & Metamorphology
5.	Dr. N. R. Nisha	Assistant Professor	M.Sc. Ph. D	Marine Micropaleontology, Paleoclimatology/ Marine Geology
6.	Dr. Ajayakumar P	Assistant Professor	M.Sc. Ph. D	Gravity & Seismic

#### 4. Adjunct Faculty

Sl.No.	Name	Designation	Qualification	Specialization
1	Dr. K. T. Damodaran	Adjunct Faculty	M.Sc. Ph. D	Mineral Resources and Geochemistry.

#### 5. Guest Lecturers

Sl.No.	Name	Designation	Qualification	Specialization
1	Dr. Reji Srinivas	Guest Lecturer	M.Sc. Ph. D	Sedimentology
2	Dr. Girish Gopinath	Guest Lecturer	M.Sc. Ph. D	Hydrogeology, Remote Sensing
3	Mr. Juby Varghese	Guest Lecturer	M.Sc.	Marine Geophysics

#### 6. Contract Lecturers

Sl.No.	Name	Designation	Qualification	Specialization
1	Mr. Binumon. A	Contract Lecturer	M.Sc., M.Tech	Sedimentology

#### 7. Research Scholars

Sl. No.	Name	Funding Agency	Guide	Area of work
1	Uthaman.C.P	Nil	Dr.K.Sajan	Sediment Distribution and Physical Characteristics of Sediments along the West Coast of India



2	Anu R	UJRF	Dr. K. Sajan	Post-seismic deformation studies along major subduction zones in the Indian Ocean
3	Abhilash K S	Kerala SC/ST Dept. Fellowship	Dr. K. Sajan	Geophysical Investigations on the major Indian Ocean Ridges.
4	Jishnu.B.K	Nil	Dr.C.G.Nambiar	Trace element Geochemistry of Sulphides in Gold bearing S-CO <sub>3</sub> -SiO <sub>2</sub> Associations of the Wynad Gold Field (WGF) and Attapadi-Pudur Gold Field (APGF)
5	Harishanth S	KSCSTE	Dr.C.G.Nambiar	Mineralogy of ilmenite in the source rocks for Manavala-kurichi placer deposits
6	Saradhi P.Kumar	Nil	Dr. K.R.Baiju	Texture, Mineralogy, Geochemistry and Provenance study of various Sedimentary Rocks of Southern India.
7	Shoby Sankar	Nil	Dr. K.R.Baiju	Studies on Sedimentological, Geochemical, and Structural aspects of Petroliferous of Basins Southern India.
8	Sui. A.S.	UGC(RGNF)	Dr. K.R. Baiju	Geochemistry, Geochronology of Metapelites of South India
9	Amaldev. T.	UGC(RGNF)	Dr. K.R. Baiju	Studies on Petrology, Geochemistry, Geochronology and structural aspects of igneous and metamorphic rocks of south western Dharwar craton
10	Anish. A.U.	FDP	Dr.K.R. Baiju	Studies on Neotectonism of Southern India
11	Manju Narayan	UGC-JRF	Dr.K. R. Baiju	Geochronology and fluid characterization of gold hosted rocks in Southern Granulite Terrain, India



12	Anu-sha A. P.	KSCSTE	Dr. K. R. Baiju	Petrology, Geochemistry and Geochronological studies of charnockites and associated rocks of western Madurai block, Southern India
13	Jose George	Nil	Dr. N. R. Nisha	Impact of hypoxia in the Sediments of Southern Arabian Sea: A multi proxy approach.

## 8. Administrative Personnel

Sl. No.	Designation	No. of posts
1.	Section Officer	1
2.	Assistant	2
3.	Computer Assistant	1
4.	Office Attendant	1

## 9. Technical Personnel

Sl.No.	Designation	No. of posts
1	Technical Assistant	1 (on daily wage)
2	Laboratory Assistant	1

## 10. Student Enrollment

Sl. No.	Programme of study	Men	Women	Total
1	I Year Marine Geology	2	7	9
2	II Year Marine Geology	4	4	8
3.	I Year Marine Geophysics	6	7	13
4	II Year Marine Geophysics	8	4	12

## 11. Research Facilities

### a) Laboratories

1. Mineralogy & Petrology Lab
2. Geochemistry Lab
3. Geochemistry Instrumentation Lab
4. Sedimentology Lab
5. Rock Cutting & Polishing Lab



6. Micropaleontology Lab
7. Gravity & Seismic Lab
8. Electronics Lab
9. Computer Lab
10. Geological Museum

**b) Major Equipments**

1. Petrological Microscopes
2. Ore Microscope with CCT camera (Leica make)
3. Rock core driller
4. Rock cutting, Polishing & Lapping machine
5. Flame Photometer
6. Spectrophotometer
7. Binocular Stereoscope Microscopes with CCT camera (Leica make)
8. Gravimeter
9. Proton Precession Magnetometer
10. Resistivity meter
11. Soil-water analysis kit

**12. Library : School of Marine Science Library**

**13. Distinguished Visitors:**

Sl.No	Name	Affiliation	Remarks
1	Dr Samuel Bently Dr. Kenneth A Rose	Lousiana State University, USA	Collaborative Research envisaged
2	B. S. Ravishankar Training Consultant	Informatics India Ltd., Bangalore	
3	Suresh Thampi S. Specialist Gephysicist	The Behrain Petroleum Company, (Bapco)	
4	T, M, Mahadevan Retd. Director	AMD/DAE Hyderabad	Inauguration of National Workshop
5	M. Jayananda	Centre for Earth &Space Sciences, University of Hyderabad	Invited speaker





6	Sanal Vasudevan Project Manager	Fugro Survey, Middle East	Alumni member, came for addressing students
7	Navas Mytheen QC Geophysicist	ARGAS, KSA	Alumni member, came for addressing students
8	Avinash Vasudevan Chief Geophysicist	Fugro Survey (India) Pvt Ltd	Alumni member, came for addressing students
9	Prof. Jason	Plymouth University, UK	As part of visit by British scholars for collaborative research
10	Prof. Lain Stewart	Plymouth University, UK	As part of visit by British scholars for collaborative research
11	Dr. M. Sudhakar Director	CMLRE	Invited speaker
12	Dr. S. Rajan Co-ordinator	INCOIS Hyderabad	Invited speaker and passed the way for collaborative work plan
13	Dr. M. K. Devarajan Head - Exploration	Geomysore Service India, Bangalore	Invited speaker
14	Dr. Bewno Joseph Former HOD	Govt. College, Kottayam	Alumni member, came for addressing students
15	Prof. Gajanan Narayanrao Jadhav, Professor	IIT Bombay	Invited speaker
16	Prof. M. Radhakrishna	IIT Bombay	Invited speaker
17	Dr. Sajeev U S Assistant Professor	Govt. College Kottayam	Visited as part of WWS programme

### 15. Ph.D. s Awarded

Sl.No	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Certain geological Aspects of the Eastern Betul Belt	M. N. Praveen	Dr. C. G. Nambiar

### 15. Publications

#### a) Papers



Sl. No	Name of paper
1	Ajayakumar P., Baiju K. R. and Mahadevan T. M., (2016) Status of Karurambam-Painavu-Trichur shear zone, Southern Granulite Terrain in the context of Late Mesozoic dynamic evolution of Western Ghats: a geophysical-geological perspective, Current Science, Vol. III, No. II, 10, pp.1847-1853.
2	Ajayakumar P., Rejendran S. and Mahadevan T M (2016) Geophysical Lineaments of Western Ghats and adjoining coastal areas of Central Kerala, Southern India and their temporal development, Geoscience Frontiers (article in press)
3	T. Amaldev, M. Santosh, Li Tang, K.R. Baiju, T. Tsunogae and M. Sathyanarayanan (2016) Mesoarchean convergent margin processes and crustal evolution: petrologic, geochemical and zircon U-Pb and Lu-Hf data from the Mercara Suture Zone, Southern India, Gondwana Research, Volume 37C, Pages 182-204.
4	Ajayakumar P. and Mahadevan T. M., (2016) A Geophysical overview of the lithospheric structure and evolution of the Sahyadris of Central Kerala, India, 2016 Annual Convention and 13 <sup>th</sup> International Conference on Gondwana to Asia, Trivandrum, IAGR conference series no.22, pp. 92-94
5	T. Amaldev, K.R. Baiju, M. Santosh, T. Tsunogae, T. Pradeepkumar, K. Sajeev and M. Sathyanarayanan (2016) Petrological, geochemical and fluid inclusion characteristics of mafic granulites from the Mercara Suture Zone, Southern India: Implications for deep subduction and subsequent exhumation, 2016 Annual Convention and 13 <sup>th</sup> International Conference on Gondwana to Asia, Trivandrum, IAGR conference series no.22, pp. 71-74.
6	Dr. N. R. Nisha and Dr. P. Ajayakumar, Assistant Professors have attended the faculty development program on "Effective and Innovative Teaching" conducted by Deen Dayal Upadhyay Kaushal Kendra of CUSAT, from March 7-11, 2017.
7	Dr. P. Ajayakumar and Dr. N. R. Nisha, Assistant Professors have participated in the National workshop on "Mud Banks of Kerala: status, Issues and societal concerns" conducted by CSIR- NIO, Kochi on 10 <sup>th</sup> & 11 <sup>th</sup> February 2017.
8	Dr. N. R. Nisha, Assistant Professor has participated in the UGC sponsored National workshop on Applied Statistical Techniques held during January 19-21, 2017 at the Department of Statistics, CUSAT.

**16. Participation in Seminar/Conference/Refresher courses etc. by Faculty / Students**

Name of participant	Name of seminar/conference/workshop	Role
<b>Dr. K. Sajan</b>	A talk on Earthquakes at Thazava Adithya Vilasam School as a part of the Science Popularization Programme in January 2017	<b>Speaker</b>



<b>Dr. K.R. Baiju</b>	Nominated to the District Level Environmental Appraisal Committee (DEAC) by the District Collector, Ernakulam.	<b>Member</b>
<b>Dr. Ajayakumar P.</b>	Short course entitled "Geodynamic Processes and evolution of geophysical fields, tectonics and climate" conducted by Centre for Earth Sciences, Indian Institute of Science, Bangalore from 19 <sup>th</sup> -23 <sup>rd</sup> September 2016.	<b>Participant</b>
	Faculty development program on "Effective and Innovative Teaching" conducted by Deen Dayal Upadhyay Kaushal Kendra of CUSAT, from March 7-11, 2017.	<b>Participant</b>
	National workshop on "Mud Banks of Kerala: status, Issues and societal concerns" conducted by CSIR-NIO, Kochi on 10 <sup>th</sup> & 11 <sup>th</sup> February 2017.	<b>Participant</b>
<b>Dr. N.R. Nisha</b>	Faculty development program on "Effective and Innovative Teaching" conducted by Deen Dayal Upadhyay Kaushal Kendra of CUSAT, from March 7-11, 2017.	<b>Participant</b>
	National workshop on "Mud Banks of Kerala: status, Issues and societal concerns" conducted by CSIR-NIO, Kochi on 10 <sup>th</sup> & 11 <sup>th</sup> February 2017.	<b>Participant</b>
	UGC sponsored National workshop on Applied Statistical Techniques held during January 19-21, 2017 at the Department of Statistics, CUSAT.	<b>Participant</b>
<b>Dr. Laju Michael UGC-DSK PDF</b>	Short course entitled "Geodynamic Processes and evolution of geophysical fields, tectonics and climate" conducted by Centre for Earth Sciences, Indian Institute of Science, Bangalore from 19 <sup>th</sup> -23 <sup>rd</sup> September 2016.	<b>Participant</b>
	National Workshop on "Mud banks of Kerala: Status, Issues & Societal Concerns" conducted by CSIR-National Institute of Oceanography (NIO), Regional centre, Kochi on 10 <sup>th</sup> & 11 <sup>th</sup> February 2017.	<b>Participant</b>
	National workshop on Applied statistical Techniques held during January 19-22, 2017 at Department of Statistics, CUSAT.	<b>Participant</b>



<b>Mr. Amaldev T.</b> Research Scholar	Short course entitled “Geodynamic Processes and evolution of geophysical fields, tectonics and climate” conducted by Centre for Earth Sciences, Indian Institute of Science, Bangalore from 19 <sup>th</sup> -23 <sup>rd</sup> September 2016.	<b>Participant</b>
	Author workshop lead by Ms. Fernanda Ogochi (Publisher, Elsevier Amsterdam) and Prof. M. Santosh in connection with the 2016 Annual Convention and 13 <sup>th</sup> International Conference on Gondwana to Asia organized by the Department of Geology, University of Kerala	<b>Poster presented</b>
<b>Mr. Sui A.S.</b> Research Scholar	MoES Sponsored International Conference GEM 2017, GEOLOGY: EMERGING METHODS &APPLICATIONS at Christ College, Irinjalakuda on February 6-8, 2017.	<b>Poster presented</b>
<b>Mr. Harisanth S</b> Research Scholar	National Workshop on “Mud banks of Kerala: Status, Issues &Societal Concerns” conducted by CSIR-National Institute of Oceanography(NIO), Regional centre, Kochi on 10 <sup>th</sup> &11 <sup>th</sup> February 2017.	<b>Participant</b>
	National workshop on Applied statistical Techniques held during January 19-22, 2017 at Department of Statistics, CUSAT.	<b>Participant</b>
<b>Mrs. Anu R.</b> Research Scholar	Author workshop lead by Ms. Fernanda Ogochi (Publisher, Elsevier Amsterdam) and Prof. M. Santosh in connection with the 2016 Annual Convention and 13 <sup>th</sup> International Conference on Gondwana to Asia organized by the Department of Geology, University of Kerala	<b>Participant</b>
	National workshop on Applied statistical Techniques held during January 19-22, 2017 at Department of Statistics, CUSAT.	<b>Participant</b>
<b>Mr. Abhilash K. S.</b> Research Scholar	Short course entitled “Geodynamic Processes and evolution of geophysical fields, tectonics and climate” conducted by Centre for Earth Sciences, Indian Institute of Science, Bangalore from 19 <sup>th</sup> -23 <sup>rd</sup> September 2016.	<b>Participant</b>
	National workshop on Applied statistical Techniques held during January 19-22, 2017 at Department of Statistics, CUSAT.	<b>Participant</b>



Mr. Deepak Salim, Miss Kalyani Sivan of II semester M.Sc. Marine Geology and Miss Jasnamol John of II semester M.Sc. Marine Geophysics	Summer Research fellowship 2017 of Indian National Science Academy. Miss Jaleena Sunny of II semester M.Sc. Marine Geophysics has got selection for summer internship at NGRI, Hyderabad.	<b>Participant</b>
Miss. Sangeeth Sundaresan, Miss. Annmary P.J., Mr. Jibin Joseph, Miss. Jaleena Sunny, & Miss. Jasna Mol John of II semester M.Sc. Marine Geophysics and Mr. Jittu Mathai & Miss. Kalyani Sivan of II semester M.Sc. Marine Geology	National workshop on "Mud banks of Kerala: Status, Issues & Societal Concerns" conducted by CSIR-National Institute of Oceanography (NIO), Regional Centre, Kochi on 10 <sup>th</sup> & 11 <sup>th</sup> February 2017	<b>Participant</b>

### 17. Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
Dr. K. Sajan	Geological Society of India	Fellow
Dr. C.G. Nambiar	IAGR – International Association of Gondwana Research	Research Member
Dr. K.R. Baiju	Geological Society of India	Fellow

### 18. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	A high resolution study of benthic foraminifera and pteropodes of Southern Arabian sea OMZ	UGC	6 lakh	Dr. N. R. Nisha
2	Magnetic and Gravity studies to understand the crustal structure and tectonic evolution of the Sahyadri mountain ranges (in north Kerala-Nilgiri and Southern Coorg segments) and adjoining areas of the South Indian high grade domain	DST under SERB-EEQ Scheme	32 lakh	Dr. Ajayakumar P.

**19. Research Programmes and Activities:**

Sl. No.	Problem / Topic	Investigator (s)
1.	<p><b>Geophysical Studies</b> Gravity and magnetic studies in the Southern Granulite Terrane(SGT) to understand the deep crustal structure and evolution tectonism, evolution of the major shear /fault system namely Palghat-Kaveri Fault, Periyar Fault, Achenkovil-Tenmalai shear/fault system, and Bavali Shear system Microseismicity studies along the West coast of India to understand the ongoing stress build up in coastal Kerala, in particular Kochi, being the hub of urbanization and industrialization. This will answer the questions asked during the past few year's micro termers in and around Idukki and Trissur districts of Kerala.</p> <p>Crustal deformation studies using GPS data to understand the seismogenesis of the Central Kerala, especially to understand the nature of Idukki reservoir induced seismicity and associated mechanism.</p> <p>Site response studies using digital seismometer will enhance the knowledge regarding the soil response to seismic waves in the coastal urban agglomeration areas. Kochi is one of the fast growing urban agglomeration in southern India.</p> <p>A collaboration in Marine Geophysical studies (marine gravity, magnetic and seismic) will provide an overall picture of the evolution and tectonism of the Western Continental Margin of India, especially the evolution and structural features of Kerala-Konkan Basin, Laxmi Ridge and Laccadevis Basin.</p>	Dr. Ajayakumar.P.
2.	<p><b>Sedimentological and Geochemical Investigation</b> Sedimentological investigations along with geochemical analysis will enlighten the estuarine and coastal dynamics, its stability and degree of vulnerability, the processes responsible for the inundate source indexing, mitigation measures and sustainable management of the environment/eco system.</p>	Dr.K.Sajan
3	<p><b>Hard Rock Geological Investigations</b> The department is well equipped with advanced petrological and ore microscopes and a rock cutting polishing and grinding machine. The Department also have a fairly good geochemistry lab.</p> <p>Petrological, Mineralogical and Geochemical studies of igneous and metamorphic rocks of the Madurai Granulite Block, and Kerala Khondalite Block, Southern India</p>	Dr.K.R.Baiju & Dr.C.G.Nambiar



	<p>The Madurai Granulite Block (MGB) is the largest single granulite block among the different tectonic units in the SGT and is bounded by the Palghat-Cauvery Shear system (PCS) in the north and the Achankovil Shear (ACS) in the south. It is essentially a high- grade metamorphic terrain comprising granulite facies rocks. The major rock types include charnockites, mafic granulites, hornblende-biotite gneisses, migmatitic gneisses, garnet- cordierite-sillimanite gneisses, garnet-biotite gneiss, marbles, sapphirine-bearing granulites, and other quartzo-feldspathic gneisses Kerala Khondalite Block is the southernmost tectonic block of SGT, comprising the Trivandrum Block and the Nagrcoil Block. The dominant rock types are Khondalites and leptinites and charnockites.</p> <p>Mercara shear zone is a curvilinear shear zone extending from the western coast of South India and converging with the Moyar shear zone in the east. It is sandwiched between the southwestern part of the Dharwar Craton in the north and the Coorg Block in the south. Major rock types in the shear zone include charnockite, TTG (tonalite-trondhjemite granodiorite) gneisses, khondalite, mafic granulites, quartz mica schists, kyanite-sillimanite bearing metapelites, metagabbros etc. Syenitic and granitic younger intrusives are also intruded into the shear zone (Santosh et al., 2014b). The Mercara group of rocks was elucidated to be a part of the Sargur Supracrustals of Coorg, consisting mostly of st-ky- grt-sil-bearing pelites, banded magnetite quartzite and pyroxene granulite bodies amidst charnockites and gneisses. A study is solicited on the Petrological, Mineralogy, Geochemistry and Geochronology of igneous and metamorphic rocks of the above. The studies along with the geophysical investigations will reveal valuable information on the tectonics and evolution of the region.</p>	
4	<p><b>Micropaleontological and Paleooceanographical studies</b></p> <p>In recent years, there is growing realization among the researchers to investigate shallow marine sequences and coastal stretches for reconstructing the history of past climatic and oceanographic changes. Microfossils play a vital role in deciphering the climatic history of any region and multiproxy studies provide better insight into the understanding of the complex inter relationships among the biota, the sediments, ecological condition and sea level history.</p> <p>Kerala has a coast line of 680 Km and has a thick marine deposit along the coastal tracts. These sedimentary deposits will have clear signals of the world wide marine transgression and regression. A systematic bio-geo-chrono-stratigraphic study of the various deposits of Kerala using microfossil proxies (foraminifera, petropods and ostracods) will enhance our understanding of the depositional history, the transgression-regression cycles, the monsoonal variability etc., during the past.</p>	Dr.N.R.Nisha



	<p>The micropaleontological working group of the department is currently engaged in the study of the variability of benthic foraminifera and pteropods above, below and within the Oxygen Minimum Zone (OMZ) of the Arabian Sea in order to construct an oxygen index for the Arabian Sea. We are also dealing with the studies on ocean acidification and its effects on the biota of the Arabian Sea.</p> <p>In view of the above we propose here a multi proxy micropaleontological analysis for various research groups of the Geological Survey of India including the marine wing and also request for sharing of the core samples collected during the microseismic studies (done by GSI, Hyderabad) recently in and around Kochi.</p> <p>The Department of Marine Geology and Geophysics has a well-equipped micropaleontological laboratory where we can pursue advanced research in the concerned field.</p>	
5.	<p><b>Heavy mineral Studies</b></p> <p>The beach and dune sands in India contain light heavy minerals (HMs) like ilmenite, rutile, garnet, zircon, monazite and sillimanite. A combination of favourable factors like the hinterland geology, coastal geomorphology, sub-tropical to tropical climate and intricate network of drainage, aided by wind and coastal processes like waves and currents, have influenced the formation of beach and adjoining dune sands. The ultimate source for the heavy minerals of Kerala coast are the country rocks of Kerala like the khondalites, charnockites, granite gneisses and minor intrusive along with the Tertiary and Quaternary sediments occurring in the coastal plains. We have conducted detailed studies on the provenances aspects of heavy minerals from various river basins as part of different Ph. D researches carried out in the Department. We are very much equipped with instruments for basic heavy mineral studies. The study also intended to assign grades of different economic minerals in the placers and a viable mineral beneficiation process for industrial application</p>	Dr.K.Sajan & Dr.K.R.Baiju

**20 Seminar/Conference/Workshop/Refresher Courses conducted by the Dept. :**

The Department has conducted a National Seminar on “EMERGING TRENDS IN GEOSCIENCE- ARCHEAN TO ANTHROPOCENE” (Arche-An 2017) on 21-22 March 2017 in honour of Professor Dr. C. G. Nambiar on his retirement from University service. The seminar was inaugurated by Shri. T.M. Mahadevan, Former Director of Atomic Mineral Division. Dr. M. Sudhakar, Director of CMLRE, Kochi, Dr





S. Rajan, Co-ordinator, IIOE-2, INCOIS, Hyderabad, Dr. M. K. Devarajan, Head Exploration Geomysore Services (India)

Pvt. Ltd., Prof. G. N. Jadhav & Prof. M. Radhakrishna Professors, IIT Bombay, Prof. P.Seralathan, Former director, School of Marine Sciences, CUSAT were the invited speakers for the two day National seminar.

### **21 Consultancy Work :**

1. Department completed one consultancy work for M/S Green Stone Rock Productions Pvt.Ltd and submitted report on the geological setting and geophysical aspects of the proposed quarry site at Balal.
2. Expertise has been extended to M/S Black Stone, Mukkam, Kozhikode with regards to the feasibility of quarrying.



## DEPARTMENT OF MATHEMATICS

### 1. Brief history of the Department :

The combined Department of Mathematics and Statistics came in to existence in November 1976, with the major objective of developing it to a Centre of Excellence in this region in mathematical sciences and applications and to provide facilities for training, study and research in these areas. This Department was bifurcated to form an independent Department of Mathematics on 1st January, 1996. The Department conducts a Masters Degree programme, M.Phil. Programme in Mathematics and Ph.D. programmes. The students of M.Sc. (Mathematics) generally take up teaching positions or opt for research. Apart from giving instruction in post graduate courses, the Department has from the very beginning taken the leadership in promoting research in mathematics and its applications, especially in this part of the country. This was realized in a two-fold way one, by guiding young researchers to do their doctoral work and two, by conducting extension programmes which will improve the instruction at the P.G.level in colleges and encourage youngsters to take up research. Thrust areas of research are Algebra, Semigroups Theory, Universal Algebras and Category Theory, Algebraic Geometry, Stochastic Control theory, Retrial Queues, Graph Theory, Fuzzy Mathematics, Wavelet Analysis, Operator Theory, Topology and Fluid Mechanics. The department has been receiving a library grant from NBHM since 1991. The department library has about 7500 books and subscribes 12 Indian and 3 foreign journals, and Mathscinet. Also, the department has been co-ordinating the Mathematical Olympiads and related training programmes for school children with the assistance of NBHM since 1990. In association with Azim Premji Foundation and Ramanujan Mathematical Society, the department has organized many training programmes for school teachers.

### 2. Programmes of Study/Research

- (1) M.Sc. Mathematics
- (2) M.Phil Mathematics
- (3) Ph.D.

### 3. Faculty Members

Sl. No.	Name	Designation	Qualification	Specialisation
1.	Dr. A.Vijayakumar	Professor & Head	M.Sc., Ph.D.	Graph Theory, Discrete Mathematics



2.	Dr. P.G. Romeo	Professor	M.Sc., Ph.D.	Algebra
3.	Dr. Kiran Kumar V.B.	Assistant Professor	M.Sc., M.Phil, Ph.D.	Functional Analysis and Operator Theory.
4.	Dr. Ambily A.A.	Assistant Professor	M.Sc., M.Phil, Ph.D.	Commutative Algebra, Algebraic K-theory
5.	Dr. Noufal. A. (KattunkalVeedu)	Assistant Professor	M.Sc., M.Phil, Ph.D.	Functional Analysis, Approximation Theory, Integral Transforms, Signal Processing.
6.	Dr. B.Lakshmy	Adjunct Faculty	M.Sc., Ph.D.	Mathematical Statistics, Stochastic Processes, Operations Research

#### 4. Emeritus Professor / Scientist (If any)

Sl. No.	Name	Designation	Qualification	Specialisation
1.	Dr. A. Krishnamoorthy	Emeritus Scientist (Period: 01.11.2013 to 31.10.2016)	M.Sc. Ph.D.	
2.	Dr. M.N.N.Namboodiri	Emeritus Professor (Period: 07.10.2015 – 06.10.2017)	M.Sc. Ph.D.	Functional Analysis, Operator Theory

#### 5. Research/Project Staff

Sl.No.	Name	Designation	Qualification	Specilisation
1.	Dhanya Shajin	Project Fellow (Period: 01.11.2013 to 31.10.2016)	M.Sc. M.Phil.	Stochastic Processes

#### 6. Research Scholars

Sl. No.	Name	Funding Agency	Guide	Area of Work
<b>Part-time</b>				
1	Satheesh Kumar. S	-	Dr. M.N. Narayanan Namboodiri	Acoustic Modelling using Wavelets
2	Susan Mathew Panakkal	-	Dr. M. Jathavedan	Fluid Mechanics
3	Sathian M.K	-	Dr. A. Krishnamoorthy	Stochastic modeling analysis and application
4	Pravas.K	-	Dr. A. Vijayakumar	Some problems in graph theory and related topics



5	Didimos K.V	-	Dr. R.S. Chakravarti	Theories of Matter, Spinors & Geometric Algebra
6	Vinitha. T.	-	Dr. T.P. Johnson	Some Problems in Topology Analysis.
7	Elizabeth Reshma M.T.	-	Dr. T.P. Johnson	Some Problems in Analysis Lattice Theory Topology.
8	Manjunath A.S.	-	Dr. A. Krishnamoorthy	Stochastic Modeling and Analysis
9	Abdul Rof. V.	-	Dr. A. Krishnamoorthy	Stochastic Models
10	Anju S. Mattam	-	Dr. SasiGopalan	Study of Properties of Fuzzy Soft Sets in Algebraic Structures
11	Yogesh Prasad. N.	-	Dr. T.P. Johnson	Some Problems in Lattice Theory, Topology and Related Topics
12	Anu Varghese	-	Dr. A. Vijayakumar	Some Problems in Algebraic Graph Theory
13	Savitha K.S.		Dr. A. Vijayakumar	Some Problems in Graph Theory and Interconnection Networks
14	Sindhurani P.J.		Dr. T.P. Johnson	Indian Contributions to Studies on Algebra with Special Reference to Intermittent Equations.
15	Nisha A.B	-	Dr. T.P. Johnson	Mathematical Morphology and Function Approximation
16	Prince Joseph		Dr. A. Krishnamoorthy	Stochastic Modelling Analysis
17	Jaison Jacob		Dr. B. Lakshmy	Stochastic Modelling in their Analysis and Applications
18	Tijo James	-	Dr. A. Vijayakumar	Graph Classes
19	Smisha M.A.	-	Dr. P.G. Romeo	A Study on Semigroup Amalgams
20	Sindhu. S.		Dr. A. Krishnamoorthy	Stochastic Modelling
21	AnuNuthan Joshua	-	Dr. A. Krishnamoorthy	Stochastic Modelling
22	Shajeeb P.U.	-	Dr. A. Krishnamoorthy	Stochastic Modelling Analysis and Applications



Full-time				
23	Seethu Varghese	KSCSTE	Dr. A. Vijayakumar	Cartesian Product of Graphs
24	Akhila. R.	-	Dr. P.G. Romeo	Semirings
25	Savitha K.N.		Dr. SasiGopalan	Optimization of Wavelet Functions & its Application in Image Processing
26	Pinky	UGC JRF	Dr. T.P. Johnson	Some Problems in Topology Lattice Theory and Related Topics
27	Lejo J. Manavalan	KSCSTE	Dr. P.G. Romeo	Semigroup and Algebraic Geometry
28	Linu Pinto	UJRF	Dr. SasiGopalan	Mathematical Database and Functional Analysis in Data Mining using Intelligent Systems
29	Femy N.S.	UJRF	Dr. SasiGopalan	Advances in Applied Mathematics to Pattern Recognition
30	Anupriya C.S.	UGC JRF	Dr. SasiGopalan	Application of Fuzzy Algebra to Automato Theory
31	Rasila V.A.	KSCSTE JRF	Dr. A. Vijayakumar	Some Aspects of Cayley Graphs
32	BintuSyam		Dr. P.G. Romeo	Category Theory Related Study of Regular Semigroups
33	Rahul Rajan	UGC CSIR	Dr. V.B. Kiran Kumar	Approximation Techniques for Infinite Dimensional Operators
34	Siji Michael	UGC CSIR	Dr. P.G. Romeo	Semigroups
35	Ajan K.A.	FDP	Dr. T.P. Johnson	General Topology
36	Sreejamol. P.R.	FDP	Dr. P.G. Romeo	Semigroups
37	Binitha Benny	FDP	Dr. A. Krishnamoorthy	Stochastic Modelling
38	Divya. V.	FDP	Dr. A. Krishnamoorthy	Stochastic Modelling

## 7. Administrative Personnel

Sl. No.	Designation	No. of Posts
1.	Section Officer	1
2.	Asst. Section Officer	1



3.	Office Supdt. Hr.Gr.	1
4	Computer Assistant Gr.II	1(w.e.f.22.02.2017)
4.	Professional Asst. Gr.I	1
5.	Peon	1
6.	Sweeper-cum-Cleaner	1

## 8. Student Enrollment

Sl. No.	Programme of Study	Men	Women	Total
1.	M.Sc Mathematics	14	35	49
2.	M.Phil (Maths)	1	9	10
3.	Ph.D.	11	22	33

## 9. Research Facilities

### a. Computer Lab

More than 20 Computers connected through Local Area Network and all with hi-speed Internet Connectivity. Printers are also made available. Each of the faculty members, office and department library are also provided with computers with hi-speed Internet connectivity.

### b. Library

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
Books as on 31.03.2016 : 9419 Total Number of Indian Journals : 12 Number of Foreign Journals purchased by the central library and donating to the department library : 6	As on 31.03.2017 : 370

## 10. Distinguished visitors

Sl. No.	Name	Topic	Period
1.	Prof. David Yost Centre for Informatics & Applied Optimization Faculty of Science & Technolgy Federation Uty, Australia.	“Lower Board Theorems for General polytopes”	03.10.2016
2.	Professor K.Srinivas The Institute of Mathematical Sciences Chennai	“Secure communication through insecure channels!”	28.09.2016



3.	Dr. Vishnu Namboothiri. K. Assistant Professor of Mathematics, Government College for Women, TVM.	“Some Applications of the Ramanujan Sum”	11.01.2017
4.	Dr. P.B. Vinod Kumar Professor & Head, Dept. of Mathematics, Rajagiri School foEngg. & Technology, Kakkanad.	“Introduction to Fractals”	18.01.2017
5.	Dr. G. Sajith HOD, Dept. of Mathematics, SS College, Areacode, Malappuram.	“An invitation to integral geometry”	08.02.2017
6.	Dr. Sandipan De PDF, ISI, Bangalore.	Family of subfactors arising from an infinite crossed product of a Kac algebra	08.03.2017
7.	Dr. Saranya G. Nair PDF, ISI Bangalore.	“Page Rank algorithm: Mathematics behind Google search”	08.03.2017
8.	Dr. Manoj Kummini Associate Professor Chennai Mathematical Institute	Field Extensions and Geometry” and “Finite Extensions of Rings and Galois Theory”	24.03.2017

## 11. Ph.Ds Awarded

Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1.	Control Policies in Repair of k-out-of-n Systems.	Sathian M.K.	Prof. A. Krishnamoorthy
2.	Non-deterministic Fuzzification using multilattices.	Gireesan K.K.	Prof. B. Lakshmy
3.	“On Queueing Inventory Models – Product Form Solution, Reservation, Cancellation and Common Life Time”	DhanyaShajin	Prof. A. Krishnamoorthy
4.	Queues with Interruption in Random/Markovian Environment.	Jaya. S.	Prof. B. Lakshmy



## 12. Publications of Faculty Members

### a. Papers

Author	Name of Paper	Impact Factor, if any
Prof. A. Vijayakumar	Forwarding indices and bisection width of Sierpinski graphs.(with Savitha K S), Bull ICA (2016).	
	Convex Median and Anti-Median at Prescribed Distance (with Pravas, K.), Journal of Combinatorial Optimization (2016).	
	Component factors of the Cartesian product of graphs,(with Chitra,M.R.)Asian-European Journal of Mathematics, (2016).	
	The diameter variability of product graphs,(with Chitra M.R.), The Journal of Combinatorial Mathematics and Combinatorial Computing,(2016).	
	Some network topological notions of the Mycielskian of a graph (with K S Savitha), AKCE International Journal of Graphs and Combinatorics (2016).	
	Reciprocal Graphs (with G. Indulal), Malaya J.Mat.4, (2016), 380-387.	
	Seethu Varghese, A. Vijayakumar, On the power domination number of graph products, CALDAM 2016, LNCS, vol. 9602, pp: 357-367, Springer (2016).	
Paul Dorbec, Seethu Varghese, A. Vijayakumar, Heredity for generalized power domination, Discrete Mathematics and Theoretical Computer Science 18 (3) (2016).		
Prof. P.G. Romeo	On Bordered Set of Rings; (jointly with R. Akhila), Malaya Bulletin of Mathematik, Vol.4, Issue 3, 2016, 463-467.	
	Additive Bordered Set Derived from a Ring; (jointly with R. Akhila), Southeast Asian Bulletin of Mathematics (to appear).	
	Embedding of Rees Matrix Semigroup Amalgam (jointly with Smisha M A), Proceedings of ICSSA-2015, ISBN 978-93-80095-80-6, March 2016.	





Prof. A. Krishnamoorthy	Map/ph/1 retrial queue with constant retrial rate, working vacations and a finite buffer for arrivals Neural, Parallel, and Scientific Computations 24 (2016) 107-120 (with C. Sreenivasan).	
	Gi/m/1 type queueing-inventory systems with postponed work, reservation, cancellation and common life time Indian J. Pure Appl. Math., 47(2): 357-388, June 2016 invited paper (with DhanyaShajin and B.lakshmy) Guest Edited by Professor M.K. Ghosh.	
	Reliability of a k-out-of-n system with repair by a single server extending service to external customers with pre-emption, Electronic Jl. of Reliability Theory & Applications, No2 (41) Volume 11, 61-93, June 2016. (with Sathian, M.K. and V.C. Narayanan).	
	Reliability of a k-out-of-n system with a single server extending non-preemptive service to external customers- Part I, Electronic Jl. of Reliability Theory & Applications, to appear in No3 (42) Volume 11, September 2016, 23 pages (with Sathian, M.K. and V.C. Narayanan).	
	Reliability of a k-out-of-n system with a single server extending non-preemptive service to external customers- Part I Electronic Jl. of Reliability Theory & Applications, to appear in No. 3 (42) Volume 11, September 2016, 20 pages (with Sathian, M.K. and V.C. Narayanan).	
	Review of methods for research and design of broadband wireless networks with linear topology, invited paper, Indian J. Pure Appl. Math., 47(2): 329-342, June 2016 Special issue Guest Edited by Professor M.K. Ghosh, 2016 (V.M. Vishnevsky, Dmitry Kozyrev and Andrei Larionov).	
	Product form solution of a Queueing Inventory problem with two rates of service, Theory of Automation and Control 2016 (with DhanyaShajin, Binitha Benny and Rasimechik).	
	A relook at queueing-inventory system with reservation, cancellation and common life time, Communications in Applied Analysis 20, 545-574, 2016 (with DhanyaShajin, Binitha Benny, T. G. Deepak)	
	Stochastic decomposition in retrial queueing inventory system, 11 <sup>th</sup> International Conference on Queueing Theory and Network Applications (QTNA), Wellington, New Zealand, December 2016, DOI: <a href="http://dx.doi.org/10.1145/3016032.3016043">http://dx.doi.org/10.1145/3016032.3016043</a> (with DhanyaShajin).	
	Reliability of a k-out-of-n system with Repair Facility – Essential & Inessential Services CCIN 678, 89-97, 2016 doi 10.1007/978-3-319-51917-3_9 (with M. K. Sathian, V.C. Narayanan, V. M. Vishnevsky).	



Dr. Ambily A.A.	A.A. Ambily and Ravi A. Rao, Normality of the DSER elementary orthogonal group, Preprint, arXiv:1703.04083 [math.AC].	
Dr. V.B. Kiran Kumar	“Preconditioners in Spectral Approximation” (Ann. Funct. Anal.7(2016), no.2, 326-337).	
	Real Powers of Bounded Linear Operators (with Sabu Sebastian) Int.J.Appl.Comput.Math.3 (2017), no.2, 645-650.	

### c. Books

Sl.No.	Name of Book
1.	Prof. P.G. Romeo - Semigroups Algebras and Applications, ISBN 978-93-80095-86-6, Proceedings of the International Conference ICSSA-2015, Cochin University Publication, March, 2016.

### 13. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Prof. A.Vijayakumar	Annual Conference on Ramanujan Mathematical Society at National College, Trichy, during 18 - 20 June 2016.	Invited talk
	13 <sup>th</sup> International Congress on Mathematical Education – 2016(ICME013) held at Hamburg, Germany, during 24 – 31 July 2016.	Invited talk
	INSPIRE Camp at Trichy on 04.10.16	Invited talk
	INSPIRE Camp at Noorul Islam University on 06.10.16	Invited talk
	“Walk with Scholar Programme” conducted by St.Joseph’s College, Devagiri, on 17.10.16	Participation
	International Conference on Theoretical Computer Science & Discrete Mathematics organized by Kalasalingam University, Madurai, during 19-21 December 2016.	Invited talk
	TEQUIP Workshop on Graph Theory, Algorithm and Applications, organized by BMS College of Engineering, Bangalore.	Invited talk
	National Workshop on Complex Networks, organized by Department of Future Studies, University of Kerala, Thiruvananthapuram, on 19.01.17.	Inaugural address



	Workshop on Teacher Education organized by SCERT, Thiruvananthapuram, on 24.01.17.	Participation
	National Seminar on Recent Trends in Mathematics, organized by BCM College, Kottayam, on 18.02.17.	Invited talk
Prof. P.G. Romeo	“Cross connections and balanced categories”, Department of Mathematics, University of Coimbra, Portugal, June 27, 2016.	Invited talk
	“On lattice of biordered ideals of regular rings” International Conference on Semigroups and Automata (CSA-2016), University of Lisbon, Lisbon, Portugal, June 20-24, 2016.	Invited talk
	“Cross connections and concordant semigroups”, Faculty of Science, University of Porto, Porto, Portugal, June 28, 2016.	Invited talk
	“Biordered sets of rings with involution”, International Conference on Algebra and its Applications (ICAA-2014), Department of Mathematics, Aligarh Muslim University, Aligarh, November 12-14, 2016.	Invited talk
	“On Biordered sets, Regular rings and Projection Lattices”, National Seminar on Algebra and Analysis, Department of Mathematics, University College, Thiruvananthapuram, Kerala, February 01-03, 2017.	Invited talk
	Prof. C. Kochumman Memorial Lecture, Department of Mathematics, Mar Thoma College, Tiruvalla, March 06, 2017.	Invited talk
Dr. Kiran Kumar V.B.	“Preconditioners” at the Colloquium on Research opportunities in Functional Analysis, organized by Cheemeni Engineering College, Trikkaripur on 25.02.2017.	Invited talk
	“Introduction to Wavelet basis” at the Department of Mathematics, SNM College, Malliankara on 17.02.2017.	Invited talk
	“Bases and their Applications” at the National Seminar on Recent trends in Applied Mathematics, organized by Department of Mathematics, Govt. College, Madappally on 05.12.2016.	Invited talk
	“Vector Calculus” at the MATHLET programme organized by Department of Mathematics, Panampilly Memorial Govt. College, Chalakkudy on 11.11.2016.	Invited talk



	“Linear Algebra – Done Right” at the Department of Mathematics, Thunchan Memorial Govt. College, Tirur on 23.06.2016.	Invited talk
	International Conference on Functional Analysis (in honor of TSSRK Rao) 22-24 September, 2016 organized by Indian Statistical Institute, Bangalore.	Participation
	International Conference on Recent Advances in Operator Theory and Operator Algebra (OTOA-2016), December 2016 organized by Indian Statistical Institute, Bangalore.	Participation
	Refresher Course for College teachers on “Linear Algebra in Control Theory – An Introduction” held at Kerala School of Mathematic from 20-23 October, 2016.	Participation
Dr.Ambily A.A.	International seminar titled “Recent research trends in Mathematics (RRTM - 2016)”, 05-07 December, 2016.	Invited talk
	National seminar on Advanced Number Theory and Algebra, 14 - 15 November 2016.	Invited talk
	4th Level of “Young Talent Nurture” programme at IIST, Trivandrum during 24th May to 6th June, 2016.	Resource person
	International Conference in K-Theory, held at Western Sydney University, 01-05 August, 2016.	Invited talk
Dr. A. Noufal	International Conference on Functional Analysis (TSSRK Fest – A Celebration of T.S.S.R.K. Rao’s 60 <sup>th</sup> Birthday) organized by ISI, Bangalore, during 22 – 24 September 2016.	Participation
	Refresher Course for College Teachers in Kerala State-I, organized by Kerala School of Mathematics, during 20 – 23 October 2016.	Participation
	“Introduction to Wavelet Analysis” at St.Joseph’s College, Kozhikode, on 23.01.2017.	Invited Talk
	“Wavelets on $C^N$ ” as a part of Ramanujan Day Celebrations organized at St.Mary’s College, Thrissur, on 30.01.2017	Invited Talk
	International Conference on ‘Emerging Trends in Applied Mathematics and Computer Science’ held at St.Thomas College, Thrissur, during 13 – 14 December 2016.	Invited Talk



#### 14. Participation in Seminar/Conference/Refresher Courses etc by Research Scholars.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Savitha K.N.	International Conference on Mathematical Modelling and Computational Methods in Science and Engineering at Alagappa University Karaikudy on 21.02.2017.	Paper presentation
Abdul Rof. V.	PTMT-2016 at SRV University Tirupati	Paper presentation
	International Conference on Space at DGMMES, Mampad College.	Paper presentation
Linu Pinto	Research Workshop on Analysis at CUSAT during 25 – 28 July 2016	Paper presentation
	International Conference on Advanced Computing and Communication Systems at Sri Eshwar College of Engineering, Coimbatore during 6 - 7 January 2017.	Paper presentation
Sindhurani P.J.	Research Workshop on Analysis at CUSAT ON 25 – 28 July 2016	Paper presentation
	Kerala School of Astronomy and Mathematics at Amrita Vishwavidyapeetham at Amritapuri Campus.	Paper presentation
Nisha A.B.	Mathematical Morphology : A Complete Lattice Approach at NSRDGT Vidya Academy of Science and Technology on 18.02.2017.	Paper presentation
Sindhu. S.	International Seminar on Applied Probability at KKTM Government College, Pullut, on 09.01.2017.	Participation
Divya. V.	International Seminar on Applied Probability at KKTM Government College, Pullut, on 09.01.2017	Participation
Binitha Benny	International Seminar on Applied Probability at KKTM Government College, Pullut, on 09.01.2017	Participation
Prince Joseph	Refresher course for College Teachers at KSOM, Calicut.	Participation
Anu Varghese	Matrix Analysis of Split Graphs at National Seminar on Recent Trends in Mathematics, BCM College, Kottayam.	Paper presentation
Femy N.S.	Recent Developments in Fuzzy Set Theory at Christ College, Irinjalakuda, on 16 – 17 February 2017	Participation
Anupriya C.S.	Recent Developments in Fuzzy Set Theory at Christ College, Irinjalakuda, on 16 – 17 February 2017.	Paper presentation
Akhila R.	INSACT 2017 at S.B. College, Changanassery, 8 – 10 February 2017.	Paper presentation



Savitha K.S.	International Conference on Theoretical Computer Science and Discrete Mathematics (ICTCSDM-2016) at Kalasalingam University, Krishnankoil, from 19 – 21 December 2016.	Paper presentation
	29 <sup>th</sup> Kerala Science Congress at Marthoma College, Thiruvalla, from 28 – 30 January 2017.	Paper presentation
Sreejamol P.R.	International Conference at AMU, UP, from 12 – 14 November 2016.	Paper presentation
	National Seminar at University College, Trivandrum, from 1 – 3 February 2017.	Paper presentation
Rahul Rajan	II Discussion Meeting of Advances in Non-Commutative Mathematics at ISI Bangalore from 11 – 13 January 2017.	Participation
	Algebra of Coding Theory at S B College, Changanassery, 8 – 10 February 2017.	Participation
Bintu Syam	National Seminar at University College Trivandrum 1 – 3 February 2017.	Participation
Tijo James	ICTCSDM 2016, Kalasalingam University, Tamilnadu, on 19.12.2016.	Paper presentation
Seethu Varghese	International Conference on Theoretical Computer Science and Discrete Mathematics (ICTCSDM-2016) at Kalasalingam University, Krishnankoil, from 19 – 21 December 2016.	Participation
Pravas. K.	International Conference on Theoretical Computer Science and Discrete Mathematics (ICTCSDM-2016) at Kalasalingam University, Krishnankoil, from 19 – 21 December 2016.	Paper presentation
	29 <sup>th</sup> Kerala Science Congress 28 – 30 January 2017, Marthoma College, Thiruvalla.	Paper presentation

**15. Role of Faculty in International/National Organizations/Institutions/ Editorial Boards :**

Name of faculty	Name of Organizations	Role
Prof. A. Vijayakumar	Mathematical Reviews (1988 –), Zentralblatt Math (2006 –).	Reviewer
	Indian National Mathematical Olympiad (National Board for Higher Mathematics, Department of Atomic Energy) (1990 – 2017 April)	Regional Co-ordinator
	INSPIRE programme of DST	Mentor



## 16. Sponsored Research Projects

Title of the Project	Sponsoring Agency	Amount	Investigator(s)
Indo-Russian Project on 'Telecommunication in Highways- Elaboration of Mathematical Models, Methods, Algorithms and Computer Tools for Quality of Service Evaluation of Broadband Wireless Networks, Multimedia Information Transmission along main Transport Systems and their Safety Control'. (2015-2018)	DST	Rs.40,00,000/-	Dr. A. KRISHNAMOORTHY Emeritus Professor, Principal Investigator.  Dr. B. Lakshmy, Co- Investigator.
Emeritus Scientist, Kerala State Council for Science Technology & Environment. (2013 – 2016)	KSCSTE	Rs.17,00,000/-	Dr. A. KRISHNAMOORTHY Emeritus Professor.

## 17. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl. No.	Title	Duration	Coordinator	Funding Agency
1	Mathematics Problems Workshop (National Level).	4 – 5 February 2017	Dr. V.B. Kiran Kumar	State Plan Grant
2	Research Workshop on Analysis (National level),	25 – 28 July 2016	Dr. V.B. Kiran Kumar & Dr. A.Noufal	KSCSTE

### THE REGIONAL MATHEMATICAL OLYMPIAD-2016 : A REPORT

S.Shreya (SaraswathiVidyanikethan Public School, Elamakkara) topped the Regional Mathematical Olympiad sponsored by the National Board for Higher Mathematics and coordinated by the Department of Mathematics, CUSAT held on 9<sup>th</sup> October 2016. Adwaith H Sivam (St. Antony's Public School, Anakkal, Kottayam), Allen Joseph (Govt. Model H.S.S Cheeril, Wayanad), Devika M. Narayanan, Fathima Zarin Faizal (Saraswathi Vidyanikethan Public School, Elamakkara) were also awarded KSCSTE cash prize, Prof. C S Venkataraman and Prof. W H Abdi memorial prizes in the Merit Evening to be held on 14th January 2017. Prof. K Poulouse Jacob (PVC) was the ChiefGuest.



## DEPARTMENT OF PHYSICS

### 1. Brief History of the Department

The Department of Physics was established in 1962 as the Ernakulam centre of the Kerala University. It became part of the University of Cochin in the year 1971, which was later reorganized into the full fledged Cochin University of Science and Technology. Prof. K. Venkateswarlu was the founder Head of the Department of Physics.

The Department, right from its inception was committed to excel in its post graduate teaching and impart state of the art research training to students who opt for advanced studies in Physics. The Department offers the postgraduate courses of M.Sc. and M.Phil. and the research course leading to the Ph.D. degree. Till now, the Department has continuously maintained a creditable record of excellence in postgraduate teaching and research in Physics. Over the years, the eminent faculty members of the Department have put in relentless efforts to maintain the high standards of teaching and nurture a unique research culture, compatible with international standards. The unique style of teaching and the rich research culture developed have made the Department the dream destination of the young generation of Kerala to pursue higher studies in Physics. The Department has produced about 215 PhDs and close to 1100 research publications in leading international/ national journals. The research areas of the Department encompass both experimental and theoretical fields and can be broadly classified as Materials Science, Spectroscopy, Nanoscience and Nanotechnology, Gravitation and Cosmology and Particle Physics. The Department is well known within India and abroad for its commendable contributions in teaching and research.

### 2. Programmes of Study/Research: M.Sc., M.Phil. & Ph.D.

### 3. Faculty Members:

Sl.No.	Name	Designation	Qualification	Specialisation
1	Dr. M. Junaid Bushiri	Professor	Ph.D.	Nanomaterials Thin films Spectroscopy Electronics
2	Dr. M.K. Jayaraj	Professor	Ph.D.	Optoelectronic Materials and Devices





3	Dr. B. Pradeep	Professor	Ph.D.	Thin films
4	Dr. M.R. Anantharaman	Professor	Ph.D.	Magnetism and Nanotechnology
5	Dr. S. Jayalekshmi	Professor	Ph.D.	Energy Storage Devices, Polymer and Organic LEDs and FETs, Polymer Nanocomposites
6	Dr. Titus K. Mathew	Associate Professor	Ph.D.	Gravitation and Cosmology
7	Dr. V.S. Pardeep	Inspire Faculty	Ph.D.	Energy Materials

#### 4. Emeritus Professor/Scientist (if any):

Sl. No.	Name	Designation	Qualification	Specialisation
1	Dr. K. P. Vijayakumar	Emeritus Scientist (CSIR)	Ph.D.	Thin film solar Cells
2	Dr. C. Sudha Kartha	Emeritus Scientist (KSCSTE)	Ph.D.	Holography
3	Dr. Godfrey Louis	Adjunct Faculty	M.Sc., Ph.D.	Experimental Solid State Physics, Astrobiology
4	Dr. Sabir M.	Adjunct Faculty	M.Sc., Ph.D.	Quantum Computation
5	Dr. Raveendranathan M.	Adjunct Faculty	M.Sc., Ph.D.	Quantum Information
6	Dr. Ramesh Babu T.	Adjunct Faculty	M.Sc., Ph.D.	Particle Physics

#### 5. Research/Project Staff

Sl. No.	Name	Designation	Qualification	Specialisation
1	Manu Shaji	DST-SERB Project Staff	M.Sc.	Thin Film Transistors
2	Jisha J Pillai	Junior Research Fellow	M Sc.	Photorefractive Polymers
3	Dr. Sreekumar R.	DST Young Scientist Scheme	Ph.D.	Photovoltaics
4	Dr. Rajesh Menon M.R.	Research Associate	Ph.D.	Thin film solar cells

**7. Research Scholars**

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Subha P. P.	UGC-RFSMS	M.K. Jayaraj	Metal Oxide Gas Sensor
2	Shijeesh M.R.	UGC-RFSMS	M.K. Jayaraj	Thin Film Transistors
3	Anjana R.	CSIR	M.K. Jayaraj	Up conversion Phosphors
4	Kurias K Markose	KSCSTE	M.K. Jayaraj	Solar Cell
5	Jasna M.	UGC-RFSMS	M.K. Jayaraj	Thin Film Transistors
6	Anitha Jose	UGC	M.K. Jayaraj	Sensors
7	Anju K.S.	CSIR	M.K. Jayaraj	Surface Enhanced Raman Spectroscopy
8	Mary Vijila	Part-time	Titus KMathew	Luminescent materials
9	Shajira P S	Part-Time	M Junaid Bushiri	Functional Nanomaterials
10	Bini B Nair	Part-time	M. Junaid Bushiri	Nano materials
11	Ganesh Chandra Prabhu	Part-time	M. Junaid Bushiri	Magnetic Nano particles
12	Satheesh M.	UGC-RGNF	M. Junaid Bushiri	Magnetic micro and Nano particles
13	Abdul Rasheed Paloly	UJRF	M. Junaid Bushiri	Thin films and nanostructured materials
14	Krishna Sagar C.K.	UGC-RFSMS	M. Junaid Bushiri	Luminescent Nano Materials
15	Beena Mol	UGC-RFSMS	M. Junaid Bushiri	Synthesis and studies on Physical and Optical Properties of a few functional materials
15	Johnny Thomas	UJRF	M. Junaid Bushiri	Synthesis and characterization of transition metal dichalcogenide nanocomposites.
16	Divya N.G.	UJRF	M. Junaid Bushiri	Synthesis and characterisation of technologically important semiconducting nanomaterials



17	Jubimol J.	UGC-RFSMS	Godfrey Louis	Optical characterization of semiconductor thin films used for photovoltaic application
18	Thaskeena A.A.	KSCSTE	Godfrey Louis	Some astrobiological issues in astronomy and astrophysics
19	Gincy Sunny	UGC-RFSMS	K. P. Vijayakumar	Thin Film Solar Cells
20	Geethu R.	UGC-RFSMS	K. P. Vijayakumar	Thin Film Solar Cells
21.	Sreejith M.S.	UGC-RFSMS	K. P. Vijayakumar	Thin Film Solar Cells
22	Gisa Grace Ninan	UGC-RFSMS	K. P. Vijayakumar	Thin Film Solar Cells
23.	Titu Thomas	Part-time	K. P. Vijayakumar	Thin Film Solar Cells
24	Rajesh C.S.	RGNF	C. Sudha Kartha	Holography
25	Aswathy G.	U-JRF	C. Sudha Kartha	Holography
26	Anshad A	UGC-RFSMS	C. Sudha Kartha	Photorefractive materials
27	Prasia P.	Part-time	V.C. Kuriakose	Massive Gravity
28	Lini Devassy	UGC- RFSMS	V.C. Kuriakose	Bose-Einstein Condensation
29	Prasobh C B	Part-time	V C Kuriakose	Higher Dimensional Black Holes
30	Athira Sasidharan	DST - INSPIRE	Titus K Mathew	Cosmology
31	Paxy George	UJRF	Titus K Mathew	Decaying vacuum and dark energy
32	K.RajagopalanNair	Full-time	Titus K Mathew	Cosmology
33	Jerin Mohan N.D.	UGC - BSR (RFSMS)	Titus K Mathew	Cosmology
34	Krishna P.B	KSCSTE	Titus K Mathew	Dark energy and quantum entanglement
35	Shareef V.M.	CSIR - JRF	Titus K Mathew	Cosmology
36	Dintomon Joy J.	UGC - BSR (RFSMS)	M. Sabir	Quantum information and Quantum communication
37	Sreejith P	Part-time	B. Pradeep	Compound semiconducting sulphide thin films



38	Abhilash A	Part- time	B. Pradeep	Compound semiconducting sulphide thin films
39	Anuroop R	UGC - BSR (RFSMS)	B. Pradeep	Compound semiconducting selenide thin films
40	Hiba Rahman E	Part-time	B. Pradeep	Compound semiconducting sulphide thin films
41	Aravind. P. B	UGC - BSR (RFSMS)	M R Anantharaman	Magnetic Materials, 2D Materials
42	Sreeram P R	UGC JRF	M R Anantharaman	Thermoelectric Materials
43	Thoufeeq S	UGC JRF	M R Anantharaman	Metamaterials
44	Archana V N	KSCSTE	M R Anantharaman	Ferrofluids
45	Anjitha Biju	UGC JRF	M R Anantharaman	Ferrogel Fibres
46	Sivaraj K S	Part-time	M R Anantharaman	Multiferroics
47	Vinayasree S	Part-time	M R Anantharaman	Ferrofluids
48	Manoj M	UGC-RFSMS	S Jayalekshmi	Energy Storage
49	Anil Kumar K M	Teacher Fellow	S Jayalekshmi	Energy Storage
50	Ranjini R Mohan	DST-Women Scientist Scheme	S Jayalekshmi	Organic Field Effect Transistors
51	Joseph John	Teacher Fellow	S Jayalekshmi	Functionalized Conducting Polymers
52	Saheeda P	Teacher Fellow	S Jayalekshmi	Polymer Nanocomposites as Biological sensors
53	Sabira K	Teacher Fellow	S Jayalekshmi	Conducting polymer nanocomposites as chemical sensors
54	Abhilash A	DST-SERB JRF	S Jayalekshmi	Polymer LEDs
55	Jinisha B	UGC-RFSMS	S Jayalekshmi	Energy Storage
56	Muhammed Shareef V.	CSIR-JRF	Titus K Mathew	Dark Energy and Gravitational Waves



57	Shajira P.S.	Teacher Fellow	S Jayalekshmi	Physical Properties of tin dioxide
58	Nima K.S.	Full-time	M. Sabir	Non-linear dynamics
59	Sijith E.	Full-time	T. Ramesh Babu	Experimental Studies in Neutrino Physics
60	Rijeesh K.	Full-time	T. Ramesh Babu	Experimental Studies in Neutrino Physics
61	Anilkumar K.M.	Teacher Fellow	S. Jayalekshmi	Energy Materials
62	Prasobh C.B.	Part-time	V.C. Kuriakose	Higher Dimensional Black Holes
63	Namitha Asokan T.	Teacher Fellow	B. Pradeep	Chalcogenide Thin Films

## 8. Administrative Personnel

Sl. No.	Designation	No. of Posts
1	Head of the Department	1
2	Section Officer	1
3	Senior Grade Assistant	2
4	Assistant	1
5	Computer Assistant	2
6	Assistant Librarian	1
7	Library Assistant	1
8	Lab Assistant	3
9	Instrument Technician	1
10	Store keeper	1

## 9. Technical Personnel

Sl. No.	Designation	No. of Posts *
1	Technical Assistant Grade II	1
2	Technical Assistant Grade III	1
3	Technical Assistant	1

**\* All Posts are vacant**

## 11. Student Enrollment

Sl. No.	Programme of Study	Men	Women	Total
1	M.Sc.	20	11	31
2	M.Phil.	2	5	7
3	Ph.D.	2	3	5



## 10. Research Facilities

### a. Laboratories:

1. Micro Electronics Lab (1) & Lab (2)
2. Optics Lab
3. Nanophotonic & Opto Electronics Lab
4. Magnetics Lab
5. Solid State Physics Lab
6. Thin Film Photovoltaic Lab
7. Advanced Materials Lab
8. Nano Functional Materials Lab
9. Astrobiology Lab

### b. Major equipments:

- ◆ Automated spray pyrolytic deposition systems
- ◆ Hydrothermal oven with temperature controller-3
- ◆ X-ray Diffractometer
- ◆ Field Emission Scanning Electron Microscope (FESEM)
- ◆ X-Ray Photoelectron Spectrometer (XPS)
- ◆ UV-Visible-NIR spectrophotometer
- ◆ FTIR spectrometer
- ◆ Hall effect measurement system
- ◆ Electronic balance
- ◆ Fluorescence Spectrometer
- ◆ Keithley conductivity measurement set up
- ◆ High temperature furnace
- ◆ Stylus Profiler
- ◆ Programmable magnetic stirrer with heater
- ◆ Spectroscopic Ellipsometer
- ◆ Microscope
- ◆ RF sputtering system 2



- ◆ Electron beam evaporator
- ◆ Pulsed laser ablation system 2
- ◆ Nd:YAG laser with forth harmonics
- ◆ HR XRD
- ◆ Atomic force microscope
- ◆ Micro Raman spectrometer
- ◆ Monochromator with CCD
- ◆ Keithley semiconductor parameter analyser with micro probe station

### c. Library

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
No.of books as on 31.03.2016 - 14043 (Deducted total number of written off books from the previous year's figures)	196
No.of journals as on 31.03.2016 - 13	10

### 11. Distinguished visitors

Sl. No.	Name	Affiliation	Remarks
1	Prof. Usha Philipose	Department of Physics, University of North Texas	
2	Prof. R.P.R.C. Aiyar	CRNTS, IIT	
3	Prof. Nirmala R.	Department of Physics, IIT Madras, Chennai	
4	Prof. Gopakumar A.	TIFR, Mumbai	
5	Prof. Suresh P.K.	University of Hyderabad	
6	Prof. Rajeev S G	Department of Mathematics, Rochester University, USA	
7	Prof. Patric Das Gupta	Department of Astronomy and Astrophysics, University of Delhi, Delhi	
8	Prof. M.R.N. Murthy	IISc, Bangalore	
9	Prof. Mukundan Thelekkat	University of Bayeruth, Germany	
10	Dr. Ravindranathan Thampi	School of Chemical & Bioprocess Engineering, Dublin	



11	Prof. T R Govindarajan	Institute of Maths Science, Chennai	
12	Prof. Taru Ghosh	IUCAA, Pune	
13	Prof. Assem Paranjappe	IUCAA, Pune	
14	Prof. Ujjaini Alam	ISI, Kolkatta	
15	Prof. Moncy V John	M G University, Kottayam	
16	Prof. Indhulekha	M G University, Kottayam	
17	Prof. Venketeswara Pai G.	Harish Chandra Research Institute, Allahabad	
18	Prof. Rohini M Godbole	Centre for High Energy Physics, Indian Institute of Science, Bangalore	
19	Prof.C. Vijayan	Department of Physics, IIT Madras	
20	Prof. Reji Philip	Raman Research Institute, Bangalore	
21	Dr. Rahul R Nair	University of Manchester,UK	

## 12. Ph.Ds Awarded

Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Growth and characterization of pulsed laser deposited BaPbO <sub>3</sub> conductive oxide thin film electrodes for ferroelectric and Cr doped BiFeO <sub>3</sub> for multiferroic applications	SATISH B.	Prof. M.K. Jayaraj
2	Growth and characterization of p-type transparent semiconducting oxides for optoelectronic applications	SARITHA A.C.	Prof. M.K. Jayaraj
3	Photoluminescence investigation of hydrothermally grown ZnO and 3d transition metal (Mn/Co/Ni/Cu) doped ZnO nanostructures	VINOD R.	Prof. M. Junaid Bushiri
4	Solvo-hydrothermal growth and photoluminescence studies of micro and nano structured Zinc Sulfide for bio-imaging applications	SAJAN P.	Prof. M. Junaid Bushiri
5	Tailoring the properties of spray deposited SnO <sub>2</sub> and ZnO thin films for solar energy applications	Deepu D.R.	C. Sudha Kartha
6	Thermodynamics and geometrothermodynamics of black holes in modified theories of gravity	Jishnu Suresh	V.C. Kuriakose





7	Studies on cosmology and thermodynamics of holographic dark energy	P. Praseetha	Titus K Mathew
8	An investigation on the optoelectronic and thermoelectric properties of reactive evaporated degenerate and non degenerate p-type semiconducting compound selenide thin films for photovoltaic and thermoelectric applications	Urmila K.S.	B. Pradeep
9	Swift Heavy Ion Irradiation and Thermal Annealing Induced Modification of Structural, Topographical and Magnetic Properties in Monolayer and Bilayer Films Based on FeNiMoB and Zinc Ferrite	Lisha Raghavan	M.R. Anantharaman
10	Tailoring Magnetic, Mechanical and Dielectric Properties of Magnetorheological Elastomers based on Natural Rubber and Iron by Magnetic Field Assisted Curing for Possible Applications	M.P. Vasudevan Namboori	M.R. Anantharaman
11	Manifestation of Colossal Thermoelectric Power by Charge Ordered Small and Intermediate Bandwidth Manganites	Lija K Joy	M.R. Anantharaman
12	New studies on the versatile roles of polyaniline and its composites in polymer based optoelectronic and energy storage devices.	Anand P.B.	S. Jayalekshmi

### 13. Publications

#### a. Papers

Sl. No.	Name of Paper	Impact Factor if any
1	Siril V. S., K. N. Madhusoodanan, Sinjumol K. Rajan, and Godfrey Louis, "Study on ammonia gas sensing property of hydrothermally synthesized pure ZnO nanorods", AIP Conference Proceedings <b>1849</b> , 020033 (2017). <a href="http://dx.doi.org/10.1063/1.4984180">http://dx.doi.org/10.1063/1.4984180</a>	
2	J. Jubimol, D.R. Deepu, C S. Rajesh, G. Aswathy, C. S. Kartha, Godfrey Louis and K. P. Vijayakumar, "Photoluminescence Based Investigations Of Precursor Related Impacts On Silver Doped ZnO Thin Films," in 13th International Conference on Fiber Optics and Photonics, p. W3A.24 (2016) <a href="https://doi.org/10.1364/Photonics.2016.W3A.24">https://doi.org/10.1364/ Photonics.2016.W3A.24</a>	



3	R R Prabhu, A C Saritha, M R Shijeesh, M K Jayaraj, Fabrication of p-CuO/n-ZnO heterojunction diode via sol-gel spin coating technique, Materials Science and Engineering: <b>B 220</b> , 82-90 (2017)	2.331
4	L Chacko, A K Swetha, R Anjana, M K Jayaraj, P M Aneesh, Wasp-waisted magnetism in hydrothermally grown MoS <sub>2</sub> nanoflakes Materials Research Express, <b>3</b> (11), 116102 (2016)	0.968
5	V G Sreeja, G Vinitha, R Reshmi, E I Anila, M K Jayaraj, Study of nonlinear absorption properties of reduced graphene oxide by Z-scan technique, AIP Conference Proceedings <b>1832</b> (1), 140010 (2017)	
6	V G Sreeja, G Vinitha, R Reshmi, E I Anila, M K Jayaraj, Effect of reduction time on third order optical nonlinearity of reduced graphene oxide, Optical Materials, <b>66</b> , 460-468 (2017)	2.183
7	V G Sreeja, A Cheruvalathu, R Reshmi, E I Anila, S Thomas, M K Jayaraj, Effect of thickness on nonlinear absorption properties of graphite oxide thin films, Optical Materials, <b>60</b> , 450-455 (2016)	2.183
8	K Hasna, A Antony, J Puigdollers, K R Kumar, M K Jayaraj, Fabrication of cost-effective, highly reproducible large area arrays of nanotriangular pillars for surface enhanced Raman scattering substrates, Nano research, <b>9</b> (10), 3075-3083 (2016)	8.893
9	K K Markose, R Anjana, P P Subha, A Antony, M K Jayaraj, Enhancement of a-Si: H solar cell efficiency by Y <sub>2</sub> O <sub>3</sub> : Yb <sup>3+</sup> , Er <sup>3+</sup> near infrared spectral upconverter, SPIE Optics+ Photonics for Sustainable Energy, 99370X-99370X-10 (2016)	
10	A C Saritha, M R Shijeesh, L S Vikas, R R Prabhu, M K Jayaraj, Growth and characterization of p-ZnO: Cu thin film and its homojunction application, Journal of Physics D: Applied Physics <b>49</b> (29), 295105 (2016)	2.772
11	R Anjana, P P Subha, K K Markose, M K Jayaraj, Preparation of ZnO nanoparticles showing upconversion luminescence through simple chemical method, AIP Conference Proceedings <b>1731</b> (1), 050078 (2016)	
12	C V M Vijila, K K A Rahman, NS Parvathy, M K Jayaraj, Synthesis of silver nanowires using hydrothermal technique for flexible transparent electrode application, AIP Conference Proceedings <b>1731</b> (1), 080073 (2016)	
13	L S Vikas, K A Vanaja, P P Subha, M K Jayaraj, Fast UV sensing properties of n-ZnO nanorods/p-GaN heterojunction, Sensors and Actuators A: Physical <b>242</b> , 116-122 (2016)	2.201
14	K Hasna, K Lakshmi, M K Jayaraj, K R Kumar, M V Matham, Development of high-sensitive, reproducible colloidal surface-enhanced Raman spectroscopy active substrate using silver nanocubes for potential biosensing applications, Journal of Nanophotonics <b>10</b> (2), 026020-026020 (2016)	1.488



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33	Rapid room temperature crystallization of TiO <sub>2</sub> nanotubes, Aijo John K, Manju Thankamoniamma, Joaquim Puigdollers, Anuroop R., B. Pradeep, Thoudinja Shripathie and Rachel Reena Philip, <i>CrystEngComm</i> , <b>19</b> , 1585-1589 (2017)	3.849
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46	Poly(ethylene oxide) (PEO) – Poly(vinyl pyrrolidone) (PVP) blend polymer based solid electrolyte membranes for developing solid state magnesium ion cells, K. M. Anilkumar, B. Jinisha, M. Manoj, S Jayalekshmi, <i>European Polymer Journal</i> <b>89</b> 249–262 (2017)	3.7
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54	Semiconducting thienylene–biphenylenevinylene hybrid polymers: Synthesis, characterization and application prospects in polymer LEDs, Vidya Gopia, Sreekanth J. Varma, M.V. Mahesh Kumard, S. Prathapan S. Jayalekshmi, Rani Joseph, Dyes and Pigments, <b>126</b> , 303–312 (2016)	3.7
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56	Impressive nonlinear optical response exhibited by Poly(vinylidene fluoride)(PVDF)/Reduced graphene oxide(RGO) nanocomposite films: K. Sabira, P.Saheeda, M.C.Divyasree S. Jayalekshmi Journal of Optics and Laser Technology (in press)	2.109



#### 14. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar /Conference/ Workshop	Role
Dr. V.C. Kuriakose	V SERC School on Nonlinear Dynamics at PSG College of Technology, Coimbatore, Dec.1-21, 2016.	Resource Person
Sajan P.	"Photoluminescence from Solvo-hydrothermally grown Cu doped ZnS", Sajan. P and M. Junaid Bushiri, National Conference on Nanomaterials and Nanobiotechnology, Chennai Nanogathering (CNG-NCNN'17), Feb 7-8, 2017, University of Madras, Guindy Campus Chennai-25.	Poster presentation
Krishna Sagar C.K.	CEMAT 2016, IISc Bangalore July 18-19, 2016.	Poster presentation
Dr. M. Junaid Bushiri	CEMAT 2016, IISc Bangalore July 18-19, 2016.	Poster presentation
Dr. M. Junaid Bushiri	Recent Trends in Materials Science, Sadakathullah Appa College, Tirunelveli.	Invited Talk
Dr. M. Junaid Bushiri	Human Resource Development Centre, Kannur University Refresher Course in Nano Science, 03/ March 2017	As resource person
Dr. M. Junaid Bushiri	Human Resource Development Centre, University of Kerala Short term course on Research Methodology	As resource person
Dr. M. Junaid Bushiri	"Photoluminescence from Solvo-hydrothermally grown Cu doped ZnS", Sajan. P and M. Junaid Bushiri, National Conference on Nanomaterials and Nanobiotechnology, Chennai Nanogathering (CNG-NCNN'17), Feb 7-8, 2017, University of Madras, Guindy Campus Chennai-25.	Poster presentation
Sreeram P.R.	"Lead free Rare Earth Yb Containing Manganites as a potential Thermoelectric material" P R Sreeram, Lija K Joy, Bharath Chandran, Senoy Thomas, and M R Anantharaman; Critical and strategic materials for advanced Technologies [CSMAT2017] from March 9-11, 2017; Munnar	Oral Presentation
Manoj M.	Polyaniline coated CNT-Sulfur composite as cathode materials for lithium sulfur battery, ICAFM Chennai-2017	Poster Presentation
Jinisha B.	Fe <sub>2</sub> O <sub>3</sub> -GO based anode material with solid polymer electrolytes for Li-ion storage and applications, ICAFM Chennai-2017	Poster Presentation



Abhilash A.	Novel type of Phenylene vinylene based segmented block copolymers with prospective aspects in polymer light emitting diodes, ICAFM Chennai-2017	Oral Presentation
Saheeda P.	Transparent and flexible nanocomposite films of Polyvinyl alcohol/Multi walled carbon nanotube for optical limiting applications, ICSEM-2016, October 20-22, 2016, RVCE-Bengaluru, India.	Poster Presentation
Saheeda P.	Fluorescent Multi walled carbon nanotube / Polyvinyl alcohol nanocomposite films synthesised through green routes, SCICON'16, 19-21 December, 2016, AMRITA Vishwa Vidyapeetham, Coimbatore, India.	Poster Presentation
K. Sabira	Excellent UV Shielding using free- standing, flexible PVDF/ZnO Nanocomposite Films, ICSEM-2016, October 20-22, 2016, RVCE- Bengaluru, India	Poster Presentation
K. Sabira	White photo luminescence from free standing, flexible PVDF/ZnO nanocomposite films, SCICON'16,19-21December, 2016, Amrita Vishwa Vidyapeetham, Coimbatore, India	Poster Presentation
Joseph John	Investigations on the structural, morphological, optical and thermal properties of polypyrrole doped with dodecylbenzene sulfonic acid, International Conference on Advances in Functional Materials, ICAFM-2017, January, 6-8, 2017, Anna University, Chennai, India	Poster Presentation
Joseph John	Lithium Doped Polypyrrole as Cathode Material for Flexible Li-ion Battery	Poster Presentation

## 16. Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
Prof. M.K.Jayaraj	College of Engineering Thalassery	Member Board of Governors
Prof. M.K. Jayaraj	St Alberts College	Member Board of studies
Prof. M.K. Jayaraj	Christ College	Member Board of studies
Prof. M.K. Jayaraj	St Joseph's College, Irinjalakuda	Member Board of studies
Prof. M.K. Jayaraj	St Theresa's College, EKM	Member Board of studies
Prof. M.K. Jayaraj	Inter University Instrumentation centre, M.G.University	Executive and Academic Committee member
Prof. M.K. Jayaraj	STIC	Faculty Management Committee





Prof. M.K. Jayaraj	CUSAT	Member Syndicate
Prof. M.R. Anantharaman	CUSAT	Member Syndicate
Dr. M. Junaid Bushiri	CUSAT	Member Senate
Dr. Godfrey Louis	CUSAT	Chairman, Board of Studies in Physics
Dr. M. Junaid Bushiri	Kerala University	Member Board of studies in Physics (PG)
Dr. M. Junaid Bushiri	Kannur University	Member Board of studies in Physics (PG)
Dr. M. Junaid Bushiri	Calicut University	Member Board of studies in Physics (PG)
Dr. M. Junaid Bushiri	Mahatma Gandhi University	Member Board of studies in Physics (PG)
Dr. M. Junaid Bushiri	Member	Board of Studies in NanoScience, CUSAT
Dr. M. Junaid Bushiri	Kerala University	Member Faculty of Science
Dr. M. Junaid Bushiri	KSCSTE Student Project Evaluation Committee	Member
Dr. Titus K Mathew	St. Teresa's College, Ernakulam	Member of Board of studies
Dr. Titus K Mathew	Modern Physics Letters (Journal)	Member of Reviewer Board
Dr. Titus K Mathew	Canadian Journal of Physics	Member of Reviewer Board
Dr. Titus K Mathew	Thirty Meter Telescope, Hawai, USA	Member of the Fundamental Science Development Group
Prof. S. Jayalekshmi	Cochin University	Member, Board of Studies in Physics
Prof. S. Jayalekshmi	Cochin University	Member, Board of Studies in Photonics
Prof. S. Jayalekshmi	Cochin University	Member, Faculty of Science
Prof. S. Jayalekshmi	Cochin University	Member, Placement cell
Prof. S. Jayalekshmi	St. Teresa's College, Ernakulam	Member, Board of Studies in Physics



Prof. M.R. Anantharaman	Inter University Center for Nanomaterials and Devices (IUCND), CUSAT	Honorary Director
Prof. M.R. Anantharaman	CUSAT	Syndicate Member (Governing Council)
Prof. M.R. Anantharaman	CUSAT	Senate Member
Prof. M.R. Anantharaman	CUSAT	Member - Academic Council
Prof. M.R. Anantharaman	Board of Studies in NanoScience, CUSAT	Chairman
Prof. M.R. Anantharaman	Board of Studies in Physics, CUSAT	Member
Prof. M.R. Anantharaman	Board of Studies in Nanotechnology, Calicut University, Calicut	Member
Prof. M.R. Anantharaman	Board of Studies in NanoScience, Kerala University, Trivandrum	Member
Prof. M.R. Anantharaman	Board of Studies in Physics, Bharathiar University, Coimbatore	Member
Prof. M.R. Anantharaman	Editorial board member of Journal of Nanofluids	Member

### 18. Awards/ Honours/ Fellows

Sl. No.	Name of Recipient	Name of Fellowship/ Honour /Award	Awarding Agency
1	Prof. M.K. Jayaraj	The Mid Career Award	UGC
2	Prof. M.R. Anantharaman	BSR Faculty Fellowship	UGC
3	Gisa Grace Ninan	Best Oral Presentation Award	Society for Educational & Scientific Research
4	Anshad A.	Kerala Science Congress Best Paper Award	KSCSTE
5	Vikas	Kerala Science Congress Best Paper Award	KSCSTE
6	Rajesh C.S.	Best Oral Presentation Award	MS University, Thirunelveli



## 19. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	Growth of carbon nano tubes for transparent electronic application	KSCSTE	23.756 lakhs	M.K.Jayaraj, S.Jayalekshmi and R.Reshmi
2	Upconversion Phosphors for solar cell applications	DST-SERB	26.52 lakhs	M.K.Jayaraj, Rajeev Kumar K, VanajaK.A. and Aldrin Antony
3	Artificial muscles based on ferrogel fibres	DST-SERB	46 Lakhs	Prof. M R Anantharaman
4	Core-shell nanostructures based on ferrites by plasma polymerization for enhanced magnetization and giant dielectric permittivity	DST-DAAD	6.5 Lakhs	Prof. M. R Anantharaman
5	Synthesis of new light emitting polymers and fabrication of polymer LEDs with desired characteristics	DST-SERB	47 Lakhs	Prof.S.Jayalekshmi, Prof.S.Prathapan, Prof.K.Rani Joseph
6	Semiconducting polymer-graphene hybrid materials for organic field effect transistor applications	DST-WOS-A	15 Lakhs	Prof.S.Jayalekshmi (Mentor), Ranjini.R.Mohan (PI)

## 21. Research Programmes and Activities:

Sl. No.	Problem / Topic	Investigator (s)
1	Surface enhanced Raman Spectroscopy	M.K. Jayaraj
2	Up Conversion Phosphors	M.K. Jayaraj
3	Photovoltaics	M.K. Jayaraj, Sreekumar R Rajeev Kumar K
4	Transparent electronics	M.K. Jayaraj and Saji K.J
5	Luminiscent, magnetic and hydrogen storage materials	M. Junaid Bushiri
6	Li and Mg ion cells and super-capacitors for energy storage	S. Jayalekshmi, C. Gouri, Bibin John
7	Polymer and organic LEDs	S. Jayalekshmi, Narayanan Unni, Praveen Ramamoorthy
8	Organic FETs	S. Jayalekshmi, M.K. Jayaraj
9	Polymer nanocomposites	S. Jayalekshmi

**23. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department:**

Sl. No.	Title	Duration	Coordinator	Funding Agency
1	Workshop on Innovations in Research Awareness and Psi fest 2017	March 18-22, 2017	Prof. S. Jayalekshmi	DDF and University fund
2.	Workshop on Physics : Scope and Awareness, for school children	One week (April 4-8, 2017)	Dr.V.S. Pradeep	D.D.F
3	Magnetic Research Advancements 2K17	April 21, 2017		
4	Workshop on statistical analysis in Cosmology	January 12-14, 2017	Dr. Titus K Mathew	IUCAA
5	Workshop on Dark Energy	September 5-6, 2016	Dr. Titus K Mathew	UGC
6	Workshop on Contemporary Advances in Materials for Energy	February 3-4, 2017		



## DEPARTMENT OF PHYSICAL OCEANOGRAPHY

### 1. Brief History of the Department

Oceanography is a subject of past, recent and future, aimed at exploring the horizons of knowledge pertaining to the hydro environment of this planet – as we also attempt to search extra terrestrial bodies, probing for H<sub>2</sub>O. As a course designed for graduates, teaching and

research commenced way back 50 years ago in erstwhile Kerala University (in 1965) and evolved to mature into a full-fledged program of this department. The master's program now covers topics on air-sea interaction, coastal and estuarine oceanography, coastal zone management, sea-state analysis, modeling, environmental oceanography, ocean remote sensing, ocean impact assessment etc. Placements are at NIO, NCESS, NPOL, NIOT, IISc, IIT, SAC, NRSA and so on, while some find positions abroad and private. The M. Tech. Ocean Technology program further supports in-depth studies in such frontier areas of Oceanography like acoustics, dynamics, coastal structures, instrumentation and so on, aimed to mould skilled candidates in this realm. The department also gives emphasis to doctoral programs in the thrust areas of oceanography and the recent awardees have theses in the topics like pollution routing, Ocean remote sensing, coastal zone management and GIS, open ocean processes and so on.

This department has a dedicated lifeline of highly qualified decorated scientists and researchers serving the nation in varied capacities. Also, time in and out, valued projects from Eu, MoES, SAC, DST, MHRD, AICTE and UGC have been executed by the faculty attached to this department. Members have often associated themselves with international bodies/ scientists & teachers from foreign countries in their pursuit for academic excellence. A number of students have qualified the NET – CSIR – UGC test to secure positions in national laboratories/institutions. The department houses sophisticated instruments like ocean current meters, automatic sedimentation analyzer, bathythermograph, echo sounder, tide cum wave gauges, ship borne data acquisition systems, ADCP, CTD etc.

### 2. Programmes of Study/Research

- a. M.Sc. Oceanography
- b. M.Tech. Ocean Technology
- c. Ph.D. Programme in Oceanography

**3. Faculty Members**

Sl. No.	Name	Designation	Qualification	Specialisation
1	Dr.A.N.Balchand	Professor and Head of the Department	M.Sc. (CUSAT) Ph.D. (CUSAT)	Environmental Oceanography
2	Dr. R Sajeev	Associate Professor	M. Sc (CUSAT) Ph.D (CUSAT)	Coastal Oceanography
3	Sr. P. K Saji	Assistant Professor	M.Sc. (CUSAT) Ph.D (CUSAT)	Ocean Atmosphere Interaction
4	Dr. V. Vijith	Assistant Professor	M.Sc. (CUSAT) Ph.D (Goa University)	Estuarine Modelling

**4. Assistant Professors on Contract**

Sl. No.	Name	Qualification	Specialization
1	Dr. Santhosh K.M.	M.Sc. (CUSAT) Ph.D. (Mangalore University)	Remote Sensing
2	Mr. Lix K. John.	M.Sc. (CUSAT)	Air-Sea Interaction

**5. Visiting Faculty : Dr. T.K. Sivadas, Retd. Scientist, CIFT****6. Research Staff/Project Staff :**

Sl. No.	Name	Designation	Qualification	Specialisation
1	Mr Vasudevan S	Junior Research Fellow	M. Sc. Marine Sciences	Coastal Oceanography
2	Mrs. Nisa Anil	Junior Research Fellow	M.Sc. Oceanography	Air-Sea Interaction

**7. Research Scholars**

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Salini. T. C		Dr.R.Sajeev	Physical processes and their influence on the Biological productivity of Andaman Sea
2	P. Chandrasekharan		Dr.R.Sajeev	Ocean Atmospheric Coupling in the Arabian Sea
3	Muhammed Shafeeque	CMFRI, DRDO	Dr.A.N.Balchand	South Eastern Arabian Sea Studies based on Satellite Oceanography



4	E. K. Simon		Dr. R. Sajeev/ Dr. Basil Mathew	Air Sea Interaction in the Tropical Indian Ocean and its influence on Monsoon over Southern Peninsular India
5	Vimal Kumar K.G.	CMLRI, Kochi	Dr. R. Sajeev	Oceanic Mesoscale features in the Bay of Bengal
6	Nisa Anil		Dr. R. Sajeev	Air-Sea Interaction Processes over the Indo-Pacific Region
7	Jayaprakash C		Dr. R Sajeev	Distribution of Rare Earth Elements in surface sediments with in the Territorial Waters along west coast of India
8	Vasudevan. S.	SAC, Ahmedabad	Dr. R Sajeev	Shoreline dynamics of Kerala Coast
9	Lix. K. John		Dr. R Sajeev	An Investigation on the Air Sea interaction process over the Eastern Arabian sea
10	Elizabeth Shani. N. X	NPOL, DRDO	Dr. R Sajeev/ Dr. Nimmy R Nair	Modeling of Underwater ambient noise and light field
11	Jinesh. V. K		Dr. R. Sajeev/ Dr. C.Revichandran	Dynamic of upwelling and coastal currents along the SW cost of India

## 8. Administrative Personnel

Sl. No.	Designation	No. of Posts
1	Section Officer	1
2	Assistant Section Officer	1
3	Computer Assistant	1
4	Office Attendant	1(Vacant) - Reported

## 9. Technical Personnel

Sl.No.	Designation	No. of Posts
1.	Lab Technician	1(Vacant) -Reported

**10. Student Enrollment**

Sl.No.	Programme of Study	Men	Women	Total
1	M.Sc. Oceanography	5	9	14
2.	M.Tech Ocean Technology	3	6	9

**11. Research Facilities****a. Laboratories (List out Major equipments available)**

Ocean current meter
Salinometer and bathy thermograph
Digital water analyzer
Lux Meter
Current meter
3 D ACM Current Meter
Van Dorn Water Samplers
Portable Echo Sounder
Wave Cum Tide Gauge
CTD
GPS
CTD
Mapping device
Aneroid barometer
Horizontal Water Sampler
Shallow Water ADCP

**b. Others : Computer Laboratory equipped for Modelling and Remote Sensing Ocean Applications****12. Distinguished visitors**

Sl.No.	Name	Affiliation	Remarks
1	Dr. N. P. Kurian	(Retd) Director, Centre of Earth Science Studies, Trivandrum	Discussion on Academic matters.
2	Dr M. R. Ramesh Kumar	Dy. Director, NIO, Goa	Special lectures on role of oceans and atmosphere in climate change.
3	Prof. A.D. Rao	Professor & Head, Centre for Atmospheric Sciences, IIT, Delhi	Student interaction program / Talk by





4	Prof. S.Sundar	Department of Ocean Engineering, IIT Chennai	Student interaction program / Talk by
5	Prof. P. Shanmugham	Department of Ocean Engineering, IIT Chennai	Student interaction program / Talk by
6	Prof. Prasad Bhaskar	Professor and Head, Department of Ocean Engineering and Naval Architecture, IIT Kharagpur	Student interaction program / Talk by

### 13 Ph. Ds Awarded

Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1.	Studies on upwelling and downwelling along the west coast of India-Relative roles of local versus remote forcing.	Dr. Phiros Shah	Dr. R. Sajeev
2.	ANN based data mining techniques to achieve improved accuracy to predict ISMR from Ocean-Atmosphere state variables.	Dr. Maya L. Pai	Dr. A.N.Balchand/ Dr. Pramod
3.	Studies on the annual, Interannual and climatic variabilities of Indian Ocean warm pool.	Dr. P. K. Saji	Dr. A.N.Balchand

### 14. Publications

#### a. Papers

Sl. No.	Name of Paper	Impact Factor, if any
1.	Nisa Anil, M.R.Rameshkumar, R.Sajeev and P.K.Saji (2016). Role of distinct flavours of IOD events on Indian Summer Monsoon. Nat. Hazards. 82: 1317 – 1326. DOI 10.1007/s11069-016-2245-9.	1.746
2.	The response of Andaman Sea to different El Niño events and its implications to coral reef bleaching. Lix J. K <sup>1</sup> , Sajeev R <sup>1</sup> , Grinson-George <sup>2</sup> and Santosh K M <sup>1</sup> . Paper presented in UGC Sponsored National Seminar on Marine Ecosystem Health (MEH 2017) on 16-17 March 2017. Organized by the Dept. of Marine Biology, Microbiology & Biochemistry, CUSAT.	
3.	C. Jayaprakash, R. Sajeev & A. Anil Kumar: Distribution of Rare Earth Elements in the inner shelf sediments, off the southwest coast of India. Indian Journal of Geo-Marine Sciences. Vol. 45(12), December 2016.	0.40
4	Can the Drought/Flood Monsoon Conditions over the Indian subcontinent be forecasted using Artificial Neural Networks? Maya L. Pai, K. V. Pramod, A. N. Balchand, M. R. Ramesh Kumar. Indian Journal of Geo-Marine Sciences. Vol. 46(4), April 2017, pp.669 – 677.	0.316



5	J.K. Lix, R. Venkatesan, George Grinson, R.R. Rao, V.K. Jineesh, Muthiah M. Arul, G. Vengatesan, S. Ramasundaram, R. Sundar, M.A. Atmanand (2016). Differential bleaching of corals based on El Nino type and intensity in the Andaman Sea, southeast Bay of Bengal. <i>Environmental Monitoring and Assessment</i> . DOI: 10.1007/s10661-016-5176-8	1.687
6	Venkatesan R., Lix J.K., Phanindra Reddy A., Arul Muthiah M., Atmanand M.A. (2016). Two decades of operating the Indian Moored Buoy Network: Significance and impact, <i>Journal of Operational Oceanography</i> . DOI: 10.1080/1755876X.2016.1182792	3.342
7	Lix J.K and Sajeev R (2017) The upper Oceanic response of Eastern Arabian Sea to the tropical cyclone Nanauk. <i>Workshop on Two Decades of Observing the Oceans</i> conducted by Ocean Observation Systems, NIOT on 22 April 2017.	
8	Santosh.K.M., Radha Ramanan Pillai (2017). Implementing GIS in Classroom: Technology for Teaching in the Digital World. Proc. International conference on Digitized Dialogue across the Curriculum organised by CTE Kerala chapter & IQAC at Thiruvithancode, Tamil Nadu on Feb. 17, 2017.	

**15. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ students**

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. R. Sajeev	National Workshop on “Mud banks of Kerala: Status, Issues & Societal Concerns” conducted by CSIR-National Institute of Oceanography (NIO), Regional Centre, Kochi on 10-12 February 2017.	Participant
	UGC Sponsored National Seminar on Marine Ecosystem Health (MEH 2017) on 16-17 March 2017. Organised by the Dept. of Marine Biology, Microbiology & Biochemistry, CUSAT.	Participant
	National Seminar on “Emerging Trends in Geoscience – Archean to Anthropocene (Arche-An 2017). Organized by the Department of Marine Geology and Geophysics, CUSAT. 21-22 March, 2017.	Participant
Dr. Santosh. K. M	International conference on Digitized Dialogue across the Curriculum organized by CTE Kerala chapter & IQAC at Thiruvithancode, Tamil Nadu on Feb. 17, 2017.	Speaker-Gave lecture and presented a paper.
	MudBanks of Kerala: Status, Issues & Societal Concerns	Participant
	National Workshop on Indian Summer Monsoon: Recent Advances	Participant



Dr. A. N. Balchand	Mudbanks of Kerala, organized by CSIR -NIO, 10 - 11 February 2017	Co-chair to a session
	“Monsoons”, Seminar organized by Dept of Atmospheric Sciences, 3 March 2017	Participant / Inauguration session
	“Marine Ecosystem Health”, Seminar organized by Department of Marine Biology, Microbiology and Biochemistry, 16 March 2017	Participant / Presidential address - Inauguration session
	“Emerging Trends”, Seminar organized by Department of Atmospheric Sciences, 3 May 2017	Participant / Inauguration session
Dr. V. Vijith	National workshop on Indian Summer Monsoon: Recent advances, Department of Atmospheric, CUSAT, 3 March 2017	Participant
Lix John K	Mud Banks of Kerala: Status, Issues & Societal Concerns	Participant
	National Workshop on Indian Summer Monsoon: Recent Advances	Participant
	National Seminar on Marine Ecosystem Health	Oral presentation
	Workshop on Two Decades of Observing the Oceans	Poster presentation

### 16. Role of Faculty in International/national Organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
Dr. A N Balchand	EU- ARTISTICC	Scientific Investigator

### 17. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour /Award	Awarding Agency
P. K. Saji	Ph. D.	CUSAT
Lix John K	Best paper award	Dept. of Marine Biology, Microbiology and Biochemistry, CUSAT
Lix John K	Third prize in poster presentations	Ocean Observations Systems, National Institute of Ocean Technology, Chennai

## 18. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	Application of Altimetry (AltiKa) and Ocean Color (Oceansat II) in the studies of mesoscale features of the South-eastern Arabian Sea [SALTSEAS]	SAC (2013-2016)	Rs 24.6 Lakhs,	A N Balchand, PI and Ajith Joseph, Co-PI
2	ARTISTICCC	EU	Approx. One Crore	K T Thompson, SIF [PI] and A N Balchand, DPO from CUSAT and Dr Ramesh Kumar, NIO
3	NORKLIMA (INDIA – CLIM)	NERSC, Norway ANNA University DPO, CUSAT	Approx. Rs 50 Lakhs	Ajith Joseph, A N Balchand Consultant, Faculty from ANNA Uty and NANSEN
5	SAC Project – Modelling Coastal Sediment Transport and its impact on Coastal environment	SAC	26.15 Lakhs	Dr. R.Sajeev (PI) and Ratheesh Ramakrishnan, SAC (Co-PI)

## 19. Research Programmes and Activities:

Sl. No.	Problem / Topic	Investigator (s)
1	Climate Change and Coastal Zone Management	Dr.A N Balchand
2	Coastal Oceanography	Dr. R Sajeev
3	Ocean Atmosphere Interaction	Dr. P K Saji
4	Estuarine Modelling	Dr. V.Vijith
5	Remote Sensing	K.M. Santhosh
6	Air-Sea Interaction	Lix. K.John



## DEPARTMENT OF POLYMER SCIENCE AND RUBBER TECHNOLOGY

### 1. Brief History of the Department

The Department of Polymer Science and Rubber Technology (P.S. & R.T.) established in 1971 is one of the pioneers in the area of education and research in Polymer Science and Engineering. In collaboration with the Rubber Research Institute of India the B.Tech. Programme was started in the year 1972. The starting of the M.Tech. Programme in the year 1985 was a major milestone in the growth of the Department.

The highly motivated faculty members with experience in Universities outside India have to their credit about 800 research publications in internationally reputed journals. More than 90 students have already taken their Ph.D. Degrees from the Department. The Department organises International Symposia on Advances in Polymer Technology (APT) once in two years to bring the polymer scientists, technologists, and engineers working in academic institutions, industry and research organizations to a common platform. Almost 100% placement of the B.Tech. and M.Tech. students, mainly through campus selection, in major tyre companies, polymer manufacturing/processing industries, and research institutions have been the tradition of the Department. Alumni of the Department are in senior positions in major polymer based industries in India, and in multinational corporations.

The B. Tech programme in Polymer Science and Rubber Technology was restructured to an eight-semester post +2 pattern in 2002 in collaboration with the Eindhoven University of Technology, The Netherlands under the MHO programme. It was then thoroughly revamped in 2009 and designated as B. Tech in Polymer Science and Engineering. The revised curriculum has been designed to equip students in basic science and engineering skills, and to provide them up-to-date knowledge, and skills in the production, characterization, processing, and testing of polymers and polymer products. Practical training sessions at the Rubber Research Institute of India, Kottayam, Central Institute of Plastic Engineering and Technology, Chennai and other research institutions, and in-plant training in Tyre/ Polymer Industries are the highlights of this course.

Teaching and research are intertwined in the four semester M.Tech. Programme in Polymer Technology. The first two semesters of the programme comprises of lectures, laboratory work, and seminars. The students spend the third and fourth



semesters in a research project either in a research institution/industry R & D division or in the University.

The Department has a very active research community. The Department successfully completed international collaborations which include the sandwich Ph.D. programmes with the Eindhoven University of Technology (TUE), and the Twente University of the Netherlands. Modification of rubber products using electron beam (BARC), Conducting polymers for developing pressure sensors (ISRO), Use of carbon nano-tubes for improved mechanical and electrical properties (DST), Modification of natural rubber (AICTE), Specialty composites (UGC- SAP), and Bio-degradable polymers are some of the completed projects. UGC has sanctioned Rs. 1.24 crores through SAP DRS II to the Department for the project proposal entitled 'Development of non-carcinogenic binary accelerator based vulcanization system for natural rubber'.

Major facilities in the Department include basic rubber/plastic processing equipments, Windsor Injection Moulding Machine, Shimadzu Autograph Universal Testing Machines (50 kN and 10kN), Alpha Technologies RPA2000 Rubber Process Analyser, TA Dynamic Mechanical Analyser Q800, TA DSC Q100, TA TGA Q50, Hitachi U-V Visible NIR Spectrophotometer, Bruker Tensor 27 FTIR, Zwick Impact Tester, Atago Abbe Refractometer, Keithley 2182 Nano Voltmeter, Waters 515 HPLC, Brookfield Viscometer, Carl Zeiss Stereo Microscope, Thermo Hake (Rheomix) Poly Lab System, Buchi Parallel evaporator, Buchi Rotavapor, Ektron Mooney Viscometer, Ektron Flexometer, Particle Size Analyzer and Impedance Analyzer.

## 2. Programmes of Study/Research

- a) B.Tech Course in Polymer science & Engineering
- b) M.Tech Course in Polymer Technology
- c) Ph.D. Programme in Polymer Technology

## 3. Faculty Members

Sl.No.	Name	Designation	Qualification	Specialization
1	Dr. Honey John	Professor & Head	M.Sc., M.Tech., Ph.D.	Polymer Science / Polymer Technology
2	Dr. Sunil K. Narayanankutty (On Deputation as Controller of Examinations)	Professor (On deputation as Controller of Examinations)	M.Tech., Ph.D	Polymer Science/ Technology



3	Dr. Thomas Kurian	Professor	B.Sc., B.Tech., M.Tech., Ph.D.(IIT Kgp), M.B.A., PGDTRM. (Former JSPS Post-Doctoral Fellow and JSPS BRIDGE Fellow, Yamagata University, Japan)	Polymer Science/ Technology
4	Dr. Sailaja G.S.	Associate Professor	Ph.D.	Biomaterials Nanotechnology Cancer Therapy Membranes for Fuel Cells
5	Dr. Prasanth R	Associate Professor	Ph.D	Energy Storage
6	Dr. Jayalatha Gopalakrishnan G.	Assistant Professor	B.Tech., M.Tech., Ph.D.	Polymer Science / Polymer Technology
7	Ms. Abhitha K.	Assistant Professor	M.Tech.	Polymer Technology
8	Dr. Jinu Jacob George	Asst. Professor	B.Tech., M.Tech., Ph.D	Polymer Technology
9	Dr. Jyotishkumar P	INSPIRE Faculty	Ph.D	Polymer Technology

#### 4. Emeritus Professor/Scientist (if any)

1. Dr. C.P. Raghunadhan Nair
2. Dr. Rani Joseph

#### 5. Research/Project Staff

Sl. No.	Name	Designation	Qualification	Specilisation
1	Jesna Louis	Junior Project Fellow	Integrated M.Sc.	Chemistry
2	Neethu Narayanan	Junior Research Fellow	M.Tech.	Plastic Engineering
3	Athul S	Project Fellow	M.Sc.	Chemistry
4	Ananjana K	Junior Research Fellow	M.Sc., M.Phil.	Chemistry



## 6. Research Scholars

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Nisha T. P	CSIR	Dr. Honey John	Nanohybrids for Electronic and opto-electronic applications
2	Meera Sathyan	CSIR	Dr. Honey John	Magnetic nanohybrids for electronic and electromagnetic application
3	Archana Babu		Prof. Sunil K. Narayanankutty	Polymer Nanocomposites
4	Aswin A	DAT	Dr. Sailaja G.S	Antimicrobial formulations from NR Latex
5	Liz Hennah George	UGC	Dr. Sailaja G.S	Metal organic Framework (Co-ordination polymers)
6	Sneha K. R	KSCSTE	Dr. Sailaja G.S	Radiopaque Polymer Composites
7	Sirajunnisa P	UGC	Dr. Sailaja G.S	Polymeric derivatives for bioimaging
8	Sumitha N.S	CSIR	Dr. Sailaja G.S	Polymer functionalized nanomaterials for Cancer Therapy
9	Teena P. Varghese		Dr. Jayalatha Gopalakrishnan G.	Epoxy nanocomposites
10	Lakshmi Variar C.V		Prof. Sunil K. Narayanankutty	Polymer Nanocomposites
11	Dhanya V	-	Dr. Sailaja G.S	Polymeric bone graft materials
12	Ananjana K	DST -SERB	Dr. Sailaja G.S	Magnetic materials for cancer therapy
13	Poornima M. P		Dr. Jinu Jacob George	Shape memory effect of polyurethane based blends
14	Praseetha R. Nair	WSD-KSCSTE	Dr. Sailaja G.S	Hexbal scaffolds in bone regeneration





## 7. Administrative Personnel

Sl.No.	Designation	No. of Posts
1	Section Officer	1
2	Sr. Gr. Assistant	1
3	Assistant	1
4	Computer Assistant	1
5	Peon	1
6	Sweeper-cum-Cleaner	1

## 8. Technical Personnel

Sl.No.	Designation	No. of Posts
1	Store Keeper	1
2	Technician Gr.II	1
3	Workshop Attender	1
4	Assistant Librarian	1

## 9. Student Enrollment

Sl. No.	Programme of Study	Men	Women	Total
1	B.Tech.	15	5	20
2	M.Tech.	3	8	11
3	Ph.D	13	1	14

## 10. Research Facilities

### a. Laboratories

**Sophisticated Testing Lab (3 Nos)**

**Research Chemical Lab (2 Nos.)**

### b. Library

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year		Additions during the current year
Books	3999	17
Journals	10	

**d. Others****11. Distinguished visitors**

Sl.No.	Name	Affiliation	Remarks
1	Dr. Siby Varghese	Joint Director RRII, Kottayam	Special Lecture
2	Mr. Aji	Manager, HF mixing group	Special Lecture
3	Dr. K. Parameswari Arun	asst. prof. Karunya University	Special Lecture
4	Dr. Sreekala	Sree Sankara College, Kalady	Special Lecture
5	Ms. Nisha V S	St. Albert College, Kochi	Special Lecture
6	Dr. Jinesh Paul	UC College Aluva	Special Lecture
7	Prof. Suresh C. Pillai	Materials and Manufacturing Research & Department of Environmental Sciences Institute of Technology Sligo, Ireland	Invited Lecture
8	Mr. Nachimuthu	Anna University	Invited Lecture
9	Mr. Varghese Idicula	General Manager – Technical, Indigo Paints Pvt Ltd.	Invited Lecture
10	Mr. Praveen Kumar C S	Senior Officer Projects – Kerala Indigo and HBC paint.	Invited Lecture
11	Dr. Anand Sreenivasan	NIT Trichy	Invited Lecture
12	Dr. K.E. George	Principal, AISAT, Kochi	Invited Lecture
13	Dr.T.O. Varghese	(Director, CBPST, Kochi)	Invited Lecture
14	14. Dr. Syed Amanulla	Asst.Prof. CBPST Kochi	Invited Lecture
15	15. Dr.Yamuna A	Asst.Prof, DOE, University of Kerala	Invited Lecture
16	Dr. Shibu Eappen	Scientist E1, STIC, CUSAT	Invited Lecture



## 12. Ph.Ds Awarded

Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
	Effect of II-VI Semiconductor Nanomaterials and Electron Irradiation on Polystyrene (PS) & Poly (ethylene-co-vinyl acetate)(EVA)	Mr. Jose Sebastian	Prof. Eby Thomas Thachil
	Preparation of low protein latex: Effect of different cure systems and fillers on its properties	Mr. Abhilash G	Prof. Rani Joseph
	Hydroxyapatite Exfoliated Graphite Reinforced Polyolefins for High Performance Applications	Ms. Dennymol P.V	Prof. Rani Joseph
	Biocomposites of Regenerated Cellulose with Conducting Materials for Nonlinear Optical Application	Mr. Sreejesh P.R.	Dr. Rani Joseph
	Development of Functionalised Carbon Nanotube/Polyaniline Composites for Electrical Applications	Ms. Sobha A.P	Prof. Sunil K. Narayanankutty
	Development and Evaluation of Ash Filled Polymer Composites	Ms. Ayswarya E.P.	Dr. Eby Thomas Thachil
	Utilization of waste expanded polystyrene in the processing of rubbers and unsaturated polyester	RenjuV.S	Dr. Eby Thomas Thachil
	Modification of Thermoplastic Elastomers Based on Polypropylene/ Polybutadiene Blend Using Nanoclay and Carbon Nanofibre.	Ms. Sreedevi P.G	Dr. Rani Joseph
	Flexible Conducting/Magnetic Nano Composites based on Natural Rubber	Teena Thomas	Dr. Eby Thomas Thachil
	Synergistic Effect of short fibre and nano kaolin clay on polystyrene/high density polyethylene blends	Tresa Sunitha George.	Dr. K.E George,
	Studies on Rubber Nanocomposites based Encapsulants for Underwater Applications	P. Annadurai	Dr. Santhanakrishna Prof. Rani Joseph
	In-situ Synthesis and Optical Nonlinearity of CdS and ZnS Quantum Dot-Functional Polymer Composites	Mr.Jolly V. Antony	Prof.Philip Kurian Prof.V.P.N. Nampoori



## 1. Publications

### a. Papers

Sl. No.	Name of Paper	Impact Factor, if any
1	Evaluation of TBBS and TBzTD based binary accelerator systems in natural rubber compounds, Abhitha K., Thomas Kurian and Jayabalan L., <i>Rubber Science</i> , 29(2), (2016), 199-206	-
2	Non-regulated Accelerator (DCBS/DBBS) Incorporated Natural Rubber Formulations - Cure Characteristics and Mechanical Properties, Abhitha K. and Thomas Kurian, <i>International Journal of Research and Scientific Innovation (IJRSI)</i> . Volume IV, Issue VIS, June-2017, 01-06	1.694
3	"Sodium carbonate catalyzed aminolytic degradation of PET", Neena George and Thomas Kurian, <i>Progress in Rubber, Plastics and Recycling Technology</i> , vol. 32, No.3, 2016, 153-168, 2016.	<b>0.33</b>
4	"Isolation and characterization of cellulose nanofibrils from arecanut husk fibre", Julie Chandra C. S., Neena George, Sunil K. Narayanankutty, <i>Carbohydrate Polymers</i> , 142, 158 – 166, 2016.	<b>4.219</b>
5	"Polyaniline coated cellulose fibre/polyvinylalcohol composites with high dielectric permittivity and low percolation threshold", V.P.Anju, Sunil K. Narayanankutty, <i>AIP Advances</i> , 6(1), 015109, 2016	<b>1.444</b>
6	T. Jose, G. Moni, S. Salini, A. J. Raju, J.J. George, S.C. George, Multifunctional Multi-walled Carbon Nanotubes Reinforced Natural Rubber Nanocomposites", <i>Industrial Crops and Products</i> , 105, 63-73, (2017)	3.4
7	D. Basu, A. Das, D.Y. Wang, J. J. George, K. W. Stöckelhuber, R. Boldt, A. Leuteritz and G. Heinrich, "Fire-safe and environmentally friendly nanocomposites based on layered double hydroxides and ethylene propylene diene elastomer", <i>RSC Advances</i> , 6, 26425-26436, (2016)	3.1
8	Aqueous Dispersions of Latex Compounding Ingredients by Wet Ball Milling: Effect of Ball Size and Milling Time on Dispersion Quality, K.Anand, Siby Varghese and Thomas Kurian, <i>Trans Indian Inst Met</i> (2017) 70(6):1593–1600.	
9	Non-regulated Accelerator (DCBS/DBBS) Incorporated Natural Rubber Formulations - Cure Characteristics and Mechanical Properties, Abhitha K. and Thomas Kurian June 2017 Page No.: 01-06, <i>International Journal of Research and Scientific Innovation(IJRSI)</i> ISSN: 2321 – 2705, 2nd Special Issue on Engineering & Technology, Volume IV & Issue VIS.	
10	Role of surfactants on the stability of nano-zinc oxide dispersions, <i>Particulate Science and Technology</i> (communicated) DOI: 10.1080/02726351.2015.1131787.	



11	Effect of starch nanocrystals on natural rubber latex vulcanizate properties, Progress in Rubber Plastics and Recycling Technology published by Smithers Rapra, UK. (in press)	
12	Effect of nanoparticulate Zinc Oxide on the Properties of natural Rubber Vulcanizates produced by Latex Compounding, K. Anand, Siby Varghese and Thomas Kurian, KGK Kauschuk Gummi Kunststoffe (Germany), 1-2 2017, Pages: 34 - 39.	
13	Combined Effect of a Bio-Filler and Pro-Oxidants on the Degradation of Linear Low Density Polyethylene, Anna Dilfi K. F., Thomas Kurian, Raghul Subin S., and Saritha G. Bhat, International Journal of Engineering and Information Systems (IJEAIS) ISSN: 2000-000X Vol. 1 Issue 3, May – 2017, Pages: 19-36.	
14	Effect of Maleation on the Mechanical Properties and Biodegradation of Linear Low Density Polyethylene-starch Blends, Anna Dilfi K. F., Thomas Kurian, Raghul Subin S., and Saritha G. Bhat, International Journal of Engineering and Information Systems (IJEAIS) ISSN: 2000-000X Vol. 1 Issue 2, April – 2017, Pages: 101-110.	
15	Evaluation of TBBS and TBzTD based Binary Accelerator Systems in Natural Rubber Compounds, K. Abhitha, Thomas Kurian and L. Jayabalan, Rubber Science, 29 (2), 2016: Pages 199 – 206.	
16	Optical limiting properties of in situ reduced graphene oxide/polymer nano composites, M.N. Muralidharan, S. Mathew, A. Seema, P. Radhakrishnan and Thomas Kurian, Materials Chemistry and Physics, 171, 2016, 367-373.	
17	“Sodium Carbonate Catalyzed Aminolytic Degradation of PET” Neena George and Thomas Kurian, Progress in Rubber, Plastics and Recycling Technology, Volume 32, No. 3, 2016, 153 – 168.	
18	The Effect of N-benzoyl-N', N'-pyrrolidinylthiourea-A Novel Secondary Accelerator in the Sulphur Vulcanization of NR/SBR Blend, Molice Thomas, K. Kurien Thomas and Thomas Kurian, IJSRD - International Journal for Scientific Research & Development, Vol. 3, Issue 11, 2016, ISSN : 2321-0613, pages 825 – 829.	
19	Effect of carbon black and silica on the cure characteristics and mechanical properties of nitrosamine – safe natural rubber vulcanisates, Abhitha K. and Thomas Kurian, International Conference on Science and Technology: Future Challenges and Solutions (STFCS-2016), University of Mysore, during August 8-9, 2016. (Page No.338).	
20	Electrical Characteristics of in-situ Reduced Graphene Oxide/Polymer Nanocomposites, M. N. Muralidharan, A. Seema, P. Radhakrishnan, Thomas Kurian, International Conference on Science and Technology: Future Challenges and Solutions (STFCS-2016), University of Mysore, during August 8-9, 2016. (Page No.293).	



21	Effect of Terephthalic Acid Hydrazone synthesized from PET Bottle Wastes on the Thermo-oxidative Aging of Natural Rubber, Neena George, Abhitha K. and Thomas Kurian, International Conference on Science and Technology: Future Challenges and Solutions (STFCS-2016), University of Mysore, during August 8-9, 2016. (Page No.57).	
22	N-(Pyrrolidine-1-carbithiyl) benzamide - a novel secondary accelerator in – the sulphur vulcanization of NR/SBR blends.Molice Thomas, K. Kurien Thomas and Thomas Kurian, International Conference on Science and Technology: Future Challenges and Solutions (STFCS-2016), University of Mysore, during August 8-9, 2016. (Page No.266).	
23	G.S. Sailaja*, P.Ramesh, S.Vellappally, S.Anil, H.K.Varma*, Biomimetic approaches with smart interfaces for Bone regeneration, <i>J Biomed Sci July 2016</i>	3.0
24	Industrial Crops and Products, Accepted	
25	Particulate Science and Technology In, Communicated	
26	Progress in Rubber Plastics and Recycling Technology, In Press	
27	KGK Kauschuk Gummi Kunststoffe (Germany), 2017, Page 34-39	
28	International Journal of Engineering and Information Systems (IJEAIS), 2017, Volume 1, Page 19-36	
29	International Journal of Engineering and Information Systems, 2017, Volume 1, Page 101 -110	
30	Plastics and Recycling Technology 2016, Volume 32, Page 153-168	
31	International Journal for Scientific Research & Development, 2016, Volume 3, Page no. 825 – 829	
32	Int J Plast Technol, 2017	
33	Polymer Testing, 2017, Volume 59, Page 168-176	
34	Journal of polymer materials, 2016, Volume 33, Page No. 723-736	

**b. Books**

Sl.No.	Name of Book
1	Epoxy/Thermoplastic (ER/TP) Nanodomain Blends-Modifications and Thermal Properties, Handbook of Epoxy Blend (2016) Springer-Verlag GmbH, London, UK, Accepted, under process of publication
2	Dynamical Mechanical Thermal Analysis of Epoxy-/Block-Copolymer Blends, Handbook of Epoxy Blends (2016) Springer-Verlag GmbH, London, UK, ISBN: 978-3-319-18158-5



#### 14. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Prof. Thomas Kurian	International Conference on Science and Technology: Future Challenges and Solutions (STFCS-2016), University of Mysore, during August 8-9, 2016.	Author – research papers
Prof. Thomas Kurian	Faculty Development Programme on “Excellence in Teaching and Transforming Classrooms”, November 4- 6, 2016 at the School of Legal Studies, CUSAT, Kochi -682 022.	Participant
Prof. Thomas Kurian	Workshop on Approval Process 2017 -18, All India council for Technical Education held at the Dept. of PS & RT Auditorium, Kochi on February 05, 2017.	Participant
Dr. Jinu Jacob George	International symposium entitled “Progress in composite Technology for Industry Application”, during 2-3 June, 2016, at King Mongkut's University of Technology, North Bangkok, Thailand	Invited talk
Dr. Jinu Jacob George	National Seminar on “Recent trends in biomaterials”, 15-17 February, Bishop Moore college, Mavelikara, Kerala	Invited talk
Ms. Abhitha K.	<i>International conference on Science and Technology: Future Challenges and Solutions (STFCS- 2016)</i> , organized by University of Mysore, Karnataka, India, August 8-9, 2016.	Presented paper
Ms. Abhitha K.	<i>Prof. K.V. Thomas Endowment International Symposium- New Trends in Applied Chemistry (NTAC-2017)</i> , organized by Sacred Heart College, Kochi, Kerala, India, February 9-11, 2017.	Presented paper
Ms. Abhitha K.	National Level hands-on workshop on Nano materials and Nano composites organised by Amrita Vishwa Vidyapeetham University, Jan 30th to Feb 4th 2017, Coimbatore.	Attended
Ms. Abhitha K.	Faculty development program on Effective and Innovative Teaching organised by Deen Dayal Upadhyay Kaushal Kendra, CUSAT from March 7 to 11, 2017	Participated.



Ms. Abhitha K.	3 days Refresher Workshop (UGC sponsored) on "Building Conducive Environment for Academic Leadership of Women Faculty" held on 27-29 March-2017 at Women's studies centre, CUSAT.	Participated
Dr. Jayalatha Gopalakrishnan G.	National Level Hands-on Workshop on "Nanomaterials and Nanocomposites" organised by Amrita School of Engineering, Coimbatore, January 30 to February 4, 2017.	Participant
Dr. Jayalatha Gopalakrishnan G.	Regional Workshop on "Science Popularisation Project preparation" organised by KSCSTE & Directorate of Public Relations and Publications, CUSAT on April 26, 2017.	Participant
Ms. Anju V P	New Trends in Applied Chemistry (NTAC -2017)	Poster Presented
Ms. Anju V P	26th Swadeshi Science Congress	Paper Presented
Ms. Julie Chandra C S	KKTM Cognizance	Poster Presented
Ms. Julie Chandra C S	APT	Paper Presented
Mr. Muralidharan M N	International Conference on Science and Technology; Future Challenges and Solutions (STFCS -2016)	Poster Presented
Mr. Muralidharan M N	International Conference on Advances in Polymer Technology (APT'16)	Paper Presented
Ms. Nisha T P	MACRO 2017 (International Conference on Polymer Science and Technology)	Poster Presented
Ms. Nisha T P	APST 2017 (Advances in Polymer Science and Technology)	Poster Presented
Ms. Neena George	IC-AMMN-2K16	Paper Presented
Ms. Neena George	APT 2016	Paper Presented
Ms. Neena George	Advancements in Polymer Science and Technology	Paper Presented
Ms. Neena George	India Rubber Industry Forum-2016	Paper Presented
Ms. Neena George	191st Technical meeting, Rubber Division, American Chemical Society	Paper Presented
Ms. Gean A Varghese	India Rubber Industry Forum 2016	Paper Presented





Mr. Gean A Varghese	Advancements in Polymer Science and Technology	Paper Presented
Mr. Gean A Varghese	International Symposium On New Trends In Applied Chemistry	Poster Presented
Ms. Dhanya Vijayan	APT 2016	Poster Presented
Ms. Dhanya Vijayan	26 <sup>th</sup> Swadeshi Science Congress	Oral presentation
Ms. Dhanya Vijayan	SCICON-16	Poster Presented
Ms. Dhanya Vijayan	India Rubber Industry Forum 2016	Oral presentation
Ms. Dhanya Vijayan	NTAC-2017	Poster Presented
Mr. Venugopal B	SCICON-16	Poster Presented
Mr. Venugopal B	India Rubber Industry Forum 2016	Paper Presented
Mr. Venugopal B	Advancements in Polymer Science and Technology	Participated
Mr. Venugopal B	NTAC-2017	Poster Presented
Ms. Sona Stanly	Macro 2017	Poster Presented
Ms. Sona Stanly	NTAC 2017	Poster Presented
Ms. Sumitha N.S.	CUSBAN-2016	Poster Presented
Ms. Sumitha N.S.	MACRO 2017	Poster Presented
Ms. Remya Suresh	advances in polymer science and technology	Oral presentation (Best paper award).
Ms. Remya Suresh	26th swadeshi science congress	Oral presentation
Ms. Remya Suresh	The Green Chemical Strategies & Technologies	Oral presentation
Ms. Remya Suresh	International conference on science and technology: Future challenges and solutions	Poster presentation
Ms. Remya Suresh	APT	Poster presentation
Ms. Remya Suresh	international conference on Materials for the Millennium	Poster presentation
Ms. Remya Suresh	international conference on Advances in applied mathematics materials science and nanotechnology for engineering and industrial applications	Poster presentation



Ms. Sneha K. R	CUSAT-NUS Joint International conference on "Biotechnology and Neuroscience"	Poster Presented
Ms. Sirajunnisa P	CUSAT-NUS Joint International conference on "Biotechnology and Neuroscience"	Poster Presented
Dr. BipinBal P K	International Conference on Materials for the Millenium, MATCON - 2016	Poster Presented
Dr. BipinBal P K	International Conference on Advances in Polymer Technology	Poster Presented
Dr. BipinBal P K	India Rubber Industry Forum 2016	Paper Presented
Dr. BipinBal P K	Advancements in Polymer Science and Technology	Paper Presented
Dr. BipinBal P K	International Symposium On New Trends In Applied Chemistry (NTAC - 2017)	Poster Presented

### 15. Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
Prof. Thomas Kurian	American Chemical Society	Member
Prof. Thomas Kurian	IRI	Member – Executive Committee

### 16. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour / Award	Awarding Agency
Ms. Remya Suresh	Best Paper Award	St.Teresa's College
Dr. Jyothish Kumar P	Kerala State Award for the best young scientist	Kerala Government

### 17. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	Development of non-carcinogenic binary accelerator based vulcanization system for Natural Rubber	UGC SAP – DRS II	Rs. 1.24 Crores	Prof. Thomas Kurian and Mrs. Abhitha K.



2	Development of Magnetically Modulated Therapeutically Active Layered Double Hydroxide (LDH) as a Nanomedicine with Hyperthermia Potential For Cancer Theranostics	SERB, DST Govt. of India. May 2016	33 Lakhs	Dr. G. S. Sailaja, as the <i>Principal Investigator</i> and Dr. Manoj Raama Varma, Scientist F, Materials Science and Technology Division, CSIR-NIIST, Thiruvananthapuram as the Co-Investigator
3	Development of Antibacterial Catheters for Preventing Nosocomial Infections From Therapeutically Modulated Natural Rubber Latex Formulations	DBT, Govt. of India. December 2016	55 Lakhs	G. S. Sailaja as the <i>Principal Investigator</i> and Prof. Sarita G.Bhat and Dr. Ajith Vengallur, Department of Biotechnology, as Co- Investigators
4	Product design and development of coir fiber reinforced polymer composite for automotive and domestic applications	Coir Board	62.4 Lakhs	Prof. Sunil K. Narayanan Kutty
5	Development of Green polymer systems as adhesive and coating for space applications, 2016	ISRO - RESPOND	25.32 Lakhs	Dr. Honey John and Dr. C.P Raghunadhan Nair
6	Development of superhydrophilic graphene / semiconductor oxide nanohybrids for self-cleaning applications	SERB	30.39 Lakhs	Dr. Honey John
7	KSCSTE emeritus fellowship	KSCSTE	3 Lakhs	Dr. C.P Raghunadhan Nair
8	KSCSTE Women Scientist Scheme	KSCSTE	20 Lakhs	Dr. Sailaja G.S as Scientist Mentor

### 18. Research Programmes and Activities:

Sl. No.	Problem / Topic	Investigator (s)
1	Development of polymer nanocomposites for flame resistant applications	Dr.Honey John
2	Organic-Inorganic nano hybrids for electronic or optoelectronic applications	Dr.Honey John



3	Nano hybrids for Magnetic or electro-magnetic applications	Dr.Honey John
4	Organic Inorganic Hybrids for smart devices.	Dr.Honey John
5	Magnetic Nanoparticles with Hyperthermia Potential for Cancer Therapy	Dr. Sailaja G.S
6	Development of nanohybrids for Antibacterial Catheter formulations	Dr. Sailaja G.S
7	Biomimetic therapeutically active Bone graft materials	Dr. Sailaja G.S
8	Polymeric derivatives and fluorescent nanoparticles for Bio-imaging	Dr. Sailaja G.S
9	Biocompatible radiopaque materials	Dr. Sailaja G.S
10	Bioactive Metal-Organic Frameworks	Dr. Sailaja G.S



## DEPARTMENT OF SHIP TECHNOLOGY

### 1. Brief History of the Department

The Department of Ship Technology is one of the pioneers in the field of Naval Architecture education in this country. The Department was established with an aim to create a new and dynamic generation of Naval Architects to meet the requirements of Indian Shipbuilding Industry, Ship classification Societies, R&D organisations, Indian Navy, and related institutions. With this in view, a B.Tech course in Naval Architecture and Shipbuilding was started in 1975. This department maintains active collaboration and interaction with IITs, foreign universities, shipyards and other industries. These institutions have been generous in extending their facilities and expertise to impart training to our students. The fruitful collaboration of this department with Rostock University, Germany dates back to 1978 and remains as an important milestone in the growth of this department. Currently the Department has entered into collaboration with School of Aerospace and Naval Architecture, Chosun University, Korea, for exchange of students and research scholars and for cooperative research programmes. The B. Tech. course was accredited by the Royal Institution of Naval Architects, London, for five years from 1994. The Ministry of Surface Transport, Govt. of India approved this course for the M.O.T. Certificate Examination, thus enabling our graduates to venture into the field of Marine Engineering also. Indian Navy has recognised this department as a centre for the higher education of their officers.

The curriculum was drawn up and updated in consultation with experts from various walks of the field. This has brought the course curriculum in conformity with international standards. The department has a highly qualified and dedicated faculty, an excellent library, computer centre, laboratories and workshops. The quality of education imparted and the resulting professional competence of the graduates enabled the department to achieve a unique record of 100% placement to its graduates in India and abroad.

The intake of students, based on the Common Admission Test (CAT), is limited to 43 (of which 15 seats are reserved for cadets from Indian Navy) and one seat for sports quota. An M. Tech. Degree programme in Computer Aided Structural Analysis and Design, having a very promising employment potential, was started in 1995 with an intake of 10 students later increased to 18 students. This department also offers Ph.D. programmes in Naval Architecture, Ocean Engineering and related fields.



## 2. Programmes of Study/Research

1. Bachelor of Technology Naval Architecture and Ship Building
2. Master of Technology Computer Aided Structural Analysis & Design
3. Doctor of Philosophy Hydrodynamics, Structural Analysis, Strength of Materials, Ship design, Offshore Structures, Ship Motions, Ship & Submarine Controllability, Resistance and Propulsion, Stability, Ship Production, CAD/ CAM, Ship Recycling.

## 3. Faculty Members

Sl. No	Name	Designation	Qualification	Specialisation
1	Dr. Ing. S.K. Pyarilal	Associate Professor	B. Tech. (NA&SB), CUSAT Dr. Ing. (Rostock Univ. Germany)	Ship Design, Marine Hydrodynamics
2	Dr. C.G. Nandakumar	Professor	B. Tech. (Civil Engg) M. Tech (Ocean Engg, IIT Madras) Ph.D. (IIT Madras)	Strength of ships, Finite element method
3	Dr. K. Roby	Associate Professor	B. Tech. Naval Architecture (CUSAT), M.Tech.(Comp. Science IIT Madras), Ph.D. (Osaka Prefecture University, Japan)	Naval Architecture, Computer Science
4	Dr. Mariamma Chacko	Associate Professor	B. Tech. (Elect. Engg.) M. Tech. (Electronics) Ph.D	Digital Electronics Embedded System software Validation and Optimization
5	Dr. Mathiazhagan A.	Associate Professor	M.Sc.(Applied chemistry, Guindy) M.E. (Metallurgy, REC, Trichy. Ph.D (CUSAT)	Material Science and Corrosion Engineering
6	Dr. Sudheer C.B. (on deputation)	Lecturer	<b><u>B. Tech. Naval Architecture (CUSAT),</u></b> Dr. Ing. (Rostock University, Germany)	Production Engg., Ship Production, CAD/ CAM
7	Dr. Sivaprasad K.	Associate Professor	B. Tech. Naval Architecture (CUSAT) M.Sc.(Ship Production Technology, Strathclyde University, Glasgow), Ph.D. (CUSAT)	Ship Building Technology



8	Dr Rajesh P Nair	Assistant professor	B. Tech Mechanical Engineering (Kannur University), M-Tech Ship Technology Department, CUSAT, Ph.D, Applied Mechanics Department, IIT Madras	Discrete Element Method Ballistic Impact Analysis
9	Dr Manoj T Issac	Assistant professor	B.Tech Civil Engineering, Kerala University, M.Tech Ocean Engineering, IIT Madras, Ph.D Ocean and Naval Architecture engineering, Memorial University of Newfoundland Canada	Hydrodynamics of unmanned underwater vehicles

#### 4. Research Scholars

Sl. No	Name	Funding agency	Guide	Area of Work
1	Baiju Sasidharan		Dr.K.P.Narayanan	Numerical Investigation on Strategy and performance of welded joints
2	Jayaram S		Dr.K.Sivaprasad	Design of Ship and offshore structures
3	Satheesh Babu P.K		Dr.A.Mathiazhagan	Corrosion Assessment for Marine Structures
4	Prasanth K		Dr.K.Sivaprasad	Analysis for Fluid Structure Interaction Effects on Ship Hull
5	Baiju M V		Dr.K.Sivaprasad	Optimisation of Hull of a fuel efficient deep sea multipurpose fishing vessels using CFD
6	Ajith Nair		Dr.K.Sivaprasad	forensic Investigation on Damages in Ship Structures
7	Elias George K		Dr.A.Mathiazhagan	Marine Corrosion Protection using Nano Materials
8	K Vinida	University JRF	Dr.Mariamamma Chacko	Robust control of sensorless BLDC motors



9	Vijith V		Dr.C.G.Nandakumar	Strength Investigation of FRP Connections in Ship Structures
10	Lekshmi Babu		Dr.Mariamamma Chacko	Improved converter for renewable energy system
11	Shereena Gaffoor		Dr.Mariamamma Chacko	Hybrid Optimisation Technique for Electrical Power Transmission Systems
12	Krishna Prasad S		Dr.A.Mathiazhagan	Study on welding of duplex stainless steel for LNG carrier application
13	Pullot Jayasanker(Subject to Approval from University)		Dr.K.Sivaprasad	Comparative study of structural design rules of classification society for naval ships
14	Hareesh Y.S		Dr. Senthil Prakash M N	Development of a Marine Propeller by using Computational Fluid Dynamics Analysis
15	Rajesh R		Dr.K.Sivaprasad	Investigation of Optimum Parameters for Mechanical Properties of Coconut Fibre Reinforced Composite
16	Arun Kumar N D		Dr. Senthil Prakash M N	Motion Stability and Computer Simulation of Submarine Manoeuvres using Hydrodynamic Derivatives evaluated using CFD Methods
17	Radhakrishnan P V		Dr. Senthil Prakash M N	Numerical and Experimental investigation on the mechanics of cardiovascular tissue-device interface
18	Renjith R		Dr.C.G.Nandakumar	Analysis of Mechanical and Thermal Characteristics of Bio-composite as a Substitute for Traditional Shipbuilding Materials





19	Midhu Paulson		Dr.Mariamamma Chacko	Enhancement of Power Harvesting from Renewable Energy Sources
20	P B Manoj (Subject to Approval from University)		Dr.K.Sivaprasad	Recycling of Obsolete Naval Vessels
21	Remna Radhakrishnan		Dr.Mariamamma Chacko	Power quality in ships electrical systems
22	Mathesh B		Dr.K.Sivaprasad	Energy Consumption for Ship Recycling
23	Priya Rani Jose		Dr.Mariamamma Chacko	Controller for electric motors

### 5. Administrative Personnel

Sl. No.	Designation	No. of posts
1	Section Officer	1
2	Assistants	3
3	Typists	2, one post transferred to the Hostel office
4	Peon	2 (1 vacant)
5	Asst. Librarian	1
6	Store Keeper	1
7	Sweeper	2 (1 vacant)

### 6. Technical Personnel

Sl. No.	Designation	No. of posts
1	Technical Officer Gr. I	1
2	Technical Assistant Gr.II	1
3	Technician Gr.II	4 (3 Vacant)
4	Lab. Assistant	1

### 7. Student Enrollment

Sl. No.	Programme of Study	Men	Women	Total
1	B. Tech (NA&SB)	43	0	43
2	M. Tech (CASAD)	12	7	19



## 8. Research Facilities

### a. Laboratories & b. Major Equipments

Electro chemical workstation for corrosion studies, universal testing machine, Brinell & Rockwell hardness tester, Impact testing machine, ARC,GAS,TIG,MIG &submerged arc welding machines, Lathe, shaping &,milling machine and all major workshop equipments, computer lab with ship design soft wares

**b. Computational Hydrodynamics and Structural Engineering (CHASE) Lab** was set up for an amount of Rs. 50 lakhs sanctioned from the State Plan Grant for the year 2016-17 under the scheme for “*Improving infrastructural facilities for research- intensive departments*” under CUSAT 2020 – 5 year perspective plan for Academic Excellence.

### c. Library

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
Books: 9904 Journals: 8	Books – 92 Journals - Nil

## 9. Distinguished visitors

Sl. No.	Name	Affiliation	Topic
1	Dr. Frank Roland	Managing Director, Center of Maritime Technologies, Hamburg, Germany	Networking for innovation in the maritime industries and some latest developments in ship production and materials

## 10. Ph.Ds Awarded

Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Development of web based decision support system for port planning, design and green port rating.	Vikas V. Shenoy	Dr. C.G.Nandakumar
2	Investigation on the effect of randomness in thickness and young's modulus on strength and response variability of plates using finite element method.	Bindumol T.V	Dr. C.G.Nandakumar
3	Investigation on strength and sustainability of nonmetallic laminated composite ship structure.	Manju Dominic	Dr. C.G.Nandakumar



## 11. Publications

### a. Papers

#### Dr. C.G. Nandakumar

1. Ajith KP and **Nandakumar C.G**, “Performance of blast loaded fiber metal laminates under thermal circumstances”, Proceedings of International Conference on Emerging and Sustainable Technologies for Infrastructure Systems, Amrita University, Coimbatore, April 22-23, 2016. pp 302-307.
2. Lakshmi L and **Nandakumar C.G**, “Investigations on the performance of metallic and composite body armours”, Global colloquium on Recent Advancements and effectual Researches in Engineering Science and Technology, St. Joseph College of Engineering and Technology, Palai, April 22-23, 2016.
3. Gijo Kuriyan and **Nandakumar C.G**, “ Structural response of offshore wind turbine tower”, Proceedings of the International Conference on Structural Engineering and Construction Management, Mar Athanasius College of Engineering Kothamanagalam, Kerala, March 28-29, 2016, pp 47-50.
4. Jijina. V and **Nandakumar C.G**, “Analytical investigations on the pullout capacity of vertically loaded plate anchor”, Proceedings of the International Conference on Structural Engineering and Construction Management, Mar Athanasius College of Engineering Kothamanagalam, Kerala, March 28-29, 2016, pp 51-56.
5. Jijina. V and **Nandakumar C.G**, “Analytical investigations on the pullout capacity of marine anchors”, Proceedings of the International Conference on Recent Advances in civil Engineering (ICRACE’16) January 14-16, CUSAT, Kochi, 2016, pp 323-328.
6. Chitra N and **Nandakumar C.G**, “ Finite element analysis of structural components of sandwich ship”, International Conference on Emerging Trends in Engineering and Management, IOSR Journal of Mechanical and Civil Engineering, e-ISSN: 2278-1684, p-ISSN: 2320-334X, January 2016, pp 27-31.
7. Gijo Kuriyan and **Nandakumar C.G**, “Wind induced torsion in chimney structures”, International Conference on Emerging Trends in Engineering and Management, IOSR Journal of Mechanical and Civil Engineering, e-ISSN: 2278-1684, p-ISSN: 2320-334X, January 2016, pp 24-29.
8. Lakshmi L and **Nandakumar C.G**, “Analytical Investigations on the Damage of Composite Body Armor”, International Conference on Emerging Trends in Engineering and Management, IOSR Journal of Mechanical and Civil



Engineering, e-ISSN: 2278- 1684, p-ISSN: 2320-334X, January 2016, pp 64-71.

### Dr Mariamma Chacko

1. K Vinida and **Dr.Mariamma Chacko**” Sensorless control of Brushless DC motors and H $\infty$  Control Theory Applications-A literature view”*IOSR Journal of Electrical and Electronics Engineering, Vol III Issue 1 Ver IV, pp.19-25, (Jan-Feb 2016)*
2. K Vinida and **Dr. Mariamma Chacko**,”A novel Strategy using H infinity theory with optimum weight selection for the robust control of sensorless brushless DC motor”,*IEEE 7<sup>th</sup> International Symposium on Sensorless Control for Electrical Drives(SLED 2016), June 5<sup>th</sup> -6<sup>th</sup>, 2016-Accepted for publication*
3. Sandhya N, Philip Samuel and Mariamma Chacko, “Data Triggered Programming Model for Text Processing in Big Data”, *Journal of Network and Innovative Computing*, ISSN 2160-2174, year 2016, Volume 4, page no. (220-228)

### Dr Mathiazhagan

1. Segregated network formation of multiwalled carbon nanotubes in natural rubber through surfactant assisted latex compounding: A novel technique for multifunctional properties- *Journal of Polymer. Impact Factor is 3.68.*
2. Natural rubber nanocomposites based on multiwalled carbon nanotube/ nanosilica hybrid- *Plastics and Rubber Srilanka*

### Dr Rajesh P Nair

1. Finite Element Simulation of Ballistic Impact on thin steel plate, *International Journal of Innovative Research in science, Engineering and Technology*

### Dr. Manoj T. Issac

- 1) **Madan, A. D.**, and **Manoj. T. Isaac**, ‘Hydrodynamic analysis of AUV hulls using semi-empirical and CFD approach’, 2<sup>nd</sup> International Conference on Computing in Mechanical Engineering (ICCME ’17), Advances in Technology, Engineering and Computing – A Multinational Colloquium – 2017 (ATECMC ’17), SCMS School of Engineering and Technology, Karukutty, Kerala, June 22 – 23, 2017.
- 2) **Nimmy, T, Manoj. T. Isaac**, ‘Analysis of Tow Cables’, 2<sup>nd</sup> International Conference on Computing in Mechanical Engineering (ICCME ’17), Advances in Technology, Engineering and Computing – A Multinational Colloquium – 2017 (ATECMC ’17), SCMS School of Engineering and Technology, Karukutty, Kerala, June 22 – 23, 2017.



## 12. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar	Role
Dr. C.B. Sudheer	<b>"Inland Waterways Systems in India (IWSI): Its Perspectives and Problems"</b> , conducted by the Department of Ship Technology, CUSAT on March 4, 2017	Convenor
Dr. C.B. Sudheer	<b>"Google Scholar and Research Tools"</b> , conducted by the Department of Ship Technology, CUSAT on Feb 4, 2017.	<b>Faculty Co-ordinator</b>
Dr.Rajesh P Nair	Session on "Finite Element Analysis" as a part of the one week course in "Rubber Technology" conducted at Indian Rubber Institute-Kerala Branch on November 2016	Oral Presentation
Dr.Rajesh P Nair	Session on "Constitutive Models for elastic and visco elastic materials and impact analysis using FEM" conducted at Chemiecorp Polymer Solutions Pvt. Ltd. On December 2016	Oral Presentation
Dr.Rajesh P Nair	International conference on structural engineering and construction management, MA college, Kothamangalam (March 28-29,2016)	Oral Presentation
Dr.Rajesh P Nair	One Week Workshop on "Mechanics and Modeling of Soft Materials", IIT Madras (June 13-19,2016)	Participant
Dr.Rajesh P Nair	"Mechanics and Modeling of Soft Materials" course conducted by Global Initiative of Academic Networks (June 13- 19,2016)	Participant
Dr.Rajesh P Nair	"Mechanics of Nano-Electronics Packaging" course conducted by Global Initiative of Academic Networks (December 5- 9,2016)	Participant
Dr.Rajesh P Nair	<b>"Inland Waterways Systems in India (IWSI): Its Perspectives and Problems"</b> , conducted by the Department of Ship Technology, CUSAT on March 4, 2017	Participant
Dr Manoj T Issac	Induction Program for Newly Recruited Teachers, February 15 &16,2016,CUSAT	Participant
Dr Manoj T Issac	"One Day Workshop on Advances in Technologies for Sustainable Development" organized by Department of Electronics, CUSAT	Participant
Dr Manoj T Issac	<b>"Google Scholar and Research Tools"</b> , conducted by the Department of Ship Technology, CUSAT on Feb 4, 2017.	<b>Participant</b>



Dr Manoj T Issac	<b>“Inland Waterways Systems in India (IWSI): Its Perspectives and Problems”</b> , conducted by the Department of Ship Technology, CUSAT on March 4, 2017.	<b>Co-Convener</b>
Dr Manoj T Issac	<b>International Conference in Shipbuilding &amp; Offshore Engineering (ICSOE 2K17)</b> conducted by AMET University, Chennai, on March 10, 2017	<b>Peer Review Committee member &amp; Invited Guest</b>
Dr Manoj T Issac	GIAN short-term course on <b>“Offshore Renewable Energy (Wave, Wind and Tidal Energy)”</b> organized by the Department of Applied Mechanics and Hydraulics, NITK (Refresher Course)	<b>Participant</b>
Dr Manoj T Issac	“Workshop on LaTeX-Report and Article Writing (LaTeX-RAW-2016)”, organized by Division of Electronics Engineering, SOE, CUSAT	Participant
Dr. K. Sivaprasad	Panel Member, Panel Discussion Session, National Seminar on Make In India, Challenges and opportunities with Special reference to Kerala at ChinmayaVidyapeeth, Ernakulam (Feb 2016)	Panel Member
Dr. K. Sivaprasad	MASTECH 2016, International Seminar on Marine Technology, Department of Ship Technology, Kochi-22, August 2016	Convener
Dr. C.B. Sudheer	MASTECH 2016, International Seminar on Marine Technology, Department of Ship Technology, Kochi-22, August 2016	Participant
Dr. A. Mathiazhagan	Sustainable Materials Technology in the International Conference on Current Innovations in Engineering and Technology, National college of Engg, IAETSD, Tirunelveli, 31 January, 2016.	Oral Presentation
Dr. A. Mathiazhagan	Corrosion Protection for Marine Structures in the International Maritime Seminar on Marine Pollution and Environment (IMS’16), KM School of Marine Engineering, CUSAT, Kochi-22, Kerala, 4, August, 2016.	Oral Presentation
Dr. A. Mathiazhagan	Corrosion Health Monitoring of Concrete Structure in the short Term Training Programme on Health Monitoring of RCC/Concrete Structure, College of Engg, Trivandrum, Kerala, 26, November, 2016.	Oral Presentation



Dr. A. Mathiazhagan	Corrosion Health Monitoring of Concrete Structure in the short Term Training Programme on Health Monitoring of RCC/Concrete Structure, TKM College of Engg, Kollam, Kerala, 25, February, 2017.	Oral Presentation
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### 13. Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
Dr. Dileep Krishnan	Department of Ports, Government of Kerala	Panel of Experts, Department of Ports, Government of Kerala
Dr. Ing. K.P. Narayanan	Department of Ports, Government of Kerala	Panel of Experts, Department of Ports, Government of Kerala
Dr. K. Roby	Department of Ports, Government of Kerala	Panel of Experts, Department of Ports, Government of Kerala
Dr. Ing. S.K. Pyarilal	Department of Ports, Government of Kerala	Panel of Experts, Department of Ports, Government of Kerala
Dr. C.B. Sudheer	State Water Transport Department, Govt. of Kerala	Technical Committee member For the following Projects: 1. 100 Pax Solar Cruise Boat 2. 90 Pax "See-Ashtamudi" Passenger Boat 3. 10 Pax Water Taxi 4. Dive and Rescue Boat 5. Purchase of 14 Nos Vessels (Single & Catamaran type)
Dr. C.B. Sudheer	Steel Industrials Kerala Ltd., Govt. of Kerala	Consultant for design and construction of various vessels
Dr. C.B. Sudheer	Cochin Shipyard Ltd.	Coordinated the activities for signing the MoU between CUSAT and Cochin Shipyard Ltd. and duties of liaison between them.
Dr. A. Mathiazhagan	Emerald Group Publishing	Reviewer
Dr. K. Sivaprasad	Member, Executive Council, Indian Maritime University, Chennai(Nominated by the Visitor, Honourable. President of India)	Member



Dr. K. Sivaprasad	The Member, Court, Indian Maritime University, Chennai(Nominated by the Visitor, Honourable. President of India)	Member
Dr. K. Sivaprasad	Department of Ports, Government of Kerala	Panel of Experts, Department of Ports, Government of Kerala

#### 14. Sponsored Research Projects :Dr. Manoj T. Issac

Title: **Analysis of Attitude of Towed Vertical Body (AATVB)**

Sponsoring Agency: **NPOL, DRDO**

Amount: **Rs. 9.6 lakhs**

Investigators: **Dr. Senthil Prakash M. N and Dr. Manoj T. Issac**

**Dr. K. Sivaprasad**

Title: **CADFUMS**

Sponsoring Agency: **Cochin Shipyard**

Amount: **Rs. 25 lakhs**

Investigators: **Dr. K. Sivaprasad and Mr. Shiju S**

#### 15. Research Programmes and Activities:

Sl. No.	Problem / Topic	Investigator (s)
1	Feasibility Study and Inspection and Survey of Construction of Solar Powered Ferry for State Water Transport Department, Government of Kerala.	Dr. K. Sivaprasad Dr. Dileep Krishnan
2	Concept Design, Inspection and Survey of Inland Ammonia Barge Fertilisers and Chemicals Travancore Ltd. (FACT)	Dr. K. Sivaprasad Dr. Dileep Krishnan
3	Study of Hydrodynamic Performance and Structural Analysis of Underwater Towed System (NPOL, Kochi, DRDO) (Government of India)	Dr. Dileep Krishnan
4	Strength Assessment and Renovation of the Pier at Valiyathura, Department of Ports, Kerala State	Dr. C.G. Nandakumar
6.	Assessment of Stability of Dredger for IRE, Ministry of Atomic Energy, Govt. of India	Dr. K Sivaprasad
7.	Assessment of stability of Inland Vessels under Kerala Inland Vessels Act, Department of Ports, Govt. of Kerala	Dr. K Sivaprasad





8.	Member of Technical Expert Committee of Construction of Passenger Ferry between Ernakulam and Vaikom for State Water Transport department, Govt. of Kerala	Dr. K Sivaprasad
9	Member of Technical Expert Committee of Construction of Passenger Ferry between Kumarakom and Alappuzha for State Water Transport department, Govt. of Kerala	Dr. K Sivaprasad
10	Technical Inspection and Assessment of stability of Research Vessel for Cochin University of Science and Technology under UGC- PURSE	Dr. K Sivaprasad
11	Member of Inspection of Construction of Inland Liquid Ammonia Carrier Ship for FACT Engineering Works, Govt. of Kerala	Dr. K Sivaprasad
12	Assessment of Stability of Tourist Vessel owned by District Tourism Promotion Council, Kollam District, Govt. of Kerala	Dr. K Sivaprasad

**16. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department :**

Sl. No.	Topic	Month&Year	Presented by
1	MASTECH – 16 Middle East Alumni Ship Technology Technical Conference (International Conference on Marine Technology)	August 2016	<ol style="list-style-type: none"> <li>1. Dr. Abdul Rahim (Director, ClassNK)</li> <li>2. Mr. Alias George, IAS Chairman, Kochi Metro</li> <li>3. Mr. Madhu S. Nair Chief General Manager, Cochin Shipyard</li> <li>4. Mr. Ashik Subhani Director, Great Waters, UAE</li> </ol>
2	One day Seminar on INLAND WATERWAYS SYSTEM IN INDIA – ITS PERSPECTIVES AND PROBLEMS (IWSI)	4 <sup>th</sup> MARCH 2017	<ol style="list-style-type: none"> <li>1. Sri. K. Mohandas, IAS Retd. (Former Secretary, Ministry of Shipping, Govt. of India)</li> <li>2. Mr. Alias George, IAS Chairman, Kochi Metro</li> <li>3. Dr. Dileep K.K, Naval Architect and Retd. Professor, Dept. of Ship Technology, CUSAT</li> <li>4. Sri N. Unni, Director, IWAI, Cochin</li> </ol>



			<p>5.Sri. Suresh Kumar, Director, Inland Navigation, Govt. of Kerala</p> <p>6.Sri.Shaji Nair, Director, State Water Transport Department, Govt. of Kerala</p> <p>Dr. C. B. Sudheer, Convenor</p>
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### 17. Consultancy Work

Sl. No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
1	Design of Ammonia Barge for Fertilizers and Chemicals, Travancore, Kochi, (FACT), Govt. Of India.	Dr. K. Sivaprasad Dr. Dileep Krishnan	FACT
2	Design of Coastal Bulk Carrier for Inland water authority of India, Government of India	Dr. K. Sivaprasad	Cochin Shipyard Limited
3	Government Consultancy for implementation of Kerala Inland Vessel Act 2010, Kerala Ports Department, Govt. of Kerala.	Dr. K. Sivaprasad Dr. Dileep Krishnan Dr. Ing. S.K. Pyarilal	Various Kerala Government offices and Departments, Central Govt. Offices and Departments, Private agencies and Companies.
4	Design of Solar Powered Ferry for Kerala State Water Transport Department, Govt. of Kerala	Dr. K. Sivaprasad Dr. Dileep Krishnan	Kerala Government
5.	Inspection of Construction of Tourism Cruiser (FRP Boat) for Kerala Forest Dept., Government of Kerala	Dr. K. Sivaprasad	Forest Dept., Kerala Government
6.	Design Fisheries Research Boat for School of Industrial Fisheries, Cochin University of Science and Technology, Kochi	Dr. K. Sivaprasad	Cochin University of Science and Technology
7	“Study of Hydrodynamic Performance and Structural Analysis of Underwater Towed System”, (NPOL, KOCHI, DRDO)	Dr. C.G. Nandakumar Dr. Dileep Krishnan	NPOL, KOCHI, DRDO



8	“Strength Assessment and Renovation of the Pier at Valiyathura” , Department of Ports, Kerala State	Dr. C.G. Nandakumar Dr. Dileep Krishnan	Department of Ports, Kerala State
9	Technical Specification for Cruise Boat, Passenger Boat and Water Taxi	Dr. C.B. Sudheer	State Water Transport Department, Govt. of Kerala
10	Design, Technical Specification, Cost Estimation of 50 Pax double decker Boat	Dr. C.B. Sudheer	Steel Industrials Kerala Ltd.
11	Design, Technical Specification, Cost Estimation of 90 Pax double decker Boat	Dr. C.B. Sudheer	Steel Industrials Kerala Ltd.
12	Design, Technical Specification, Cost Estimation of 9 Pax Survey boat	Dr. C.B. Sudheer	Steel Industrials Kerala Ltd.
13	Construction Supervision and Stability assessment of Steel Pontoon	Dr. C.B. Sudheer	Steel Industrials Kerala Ltd.



## DEPARTMENT OF STATISTICS

### 1. Brief History of the Department

The Department of Statistics was established in 1996 by the bifurcation of the School of Mathematical Sciences. The Department offers a four semester M.Sc. Programme in Statistics and an M.Tech Programme in Engineering Statistics besides research programmes leading to Ph.D degree. The thrust areas of research in the department include Distribution Theory, Reliability Modeling, Statistical Inference, Time Series Analysis, Survival Analysis, Inference on Stochastic Processes, and Information Theory.

The M.Sc. course is intended to provide a platform for talented students to undergo higher studies in the subject as well as to train them to suit for the needs of society.

The M.Tech course is intended to provide a vehicle for interaction between the modern approaches to quality and reliability engineering, statistical methodology and industrial engineering aspects, thereby facilitating integration of appropriate techniques.

The Department has been identified as a Centre for organizing refresher courses for College/ University teachers since 1993. The departmental library has more than 3000 books and is presently subscribing to 14 journals. The Department has two well-equipped computer labs with internet facility. The department has acquired the latest computer software such as SPSS, MATLAB, MATHEMATICA, SYSTAT, and SAS so as to meet the needs of the students. In addition, a well-equipped engineering laboratory with metrological instruments is set up for the use of the M.Tech students.

To enhance academic pursuits in socially relevant and scientifically interesting fields a Centre for Population Studies has been established in the Department.

The UGC has recognized the Department under the Special Assistance Programme at DRS level. An amount of Rs.32.00 lakhs was sanctioned at the first phase to develop research facilities. In the second phase of the SAP-UGC-DRS II programme has granted financial support of Rs 44 lakhs for the period 2010-2015. The Department has been identified by the DST for the FIST programme. Under this programme DST has sanctioned an amount of Rs.19.5 lakhs for infrastructural development at the first phase. In the second phase, DST had given an amount of Rs. 30 lakhs. Presently, the third phase of the SAP- UGC-DRS III has started with



a financial support of Rs 37 lakhs for the next five years.

Recently, DST has sanctioned Rs 52.5 lakhs under the FIST programme.

Four UGC sponsored minor research projects have already been completed and four major research project sponsored by DST are completed and another one is ongoing. The department has conducted many national and international conferences/seminars/ workshops on emerging areas of Statistics.

## 2. Programmes of Study/Research:

### 1. M.Sc Statistics

### 2. M.Tech Engineering Statistics

### 3. Ph.D Programme

### 3. Faculty Members

Sl. No.	Name	Designation	Qualification	Specilisation
1	Dr. P.G.Sankaran	Professor & Head	M.Sc, Ph.D	Distribution Theory, Reliability Theory, Data Analysis
2	Dr. N.Balakrishna	Professor	M.Sc., M.Phil, Ph.D.	Stochastic Processes & Inference, Time Series Models, Chaos & Nonlinear Time Series
3	Dr. K.C.James	Professor	M.Tech, Ph.D	Industrial Engineering, TQM, Reliability Simulation Modelling.
4	Dr. Asha Gopalakrishnan	Professor	M.Sc, M.Phil Ph.D.	Distribution theory, Discrete Reliability theory
5	Dr. S.M.Sunoj	Professor	M.Sc, Ph.D.	Distribution Theory, Reliability Theory, Data Analysis
6	Dr. K.G. Geetha	Lecturer on deputation	M.Sc, Ph.D	Probability Distributions
7	Dr. Rajesh. G	Assistant Professor	M.Sc, M.Phil Ph.D.	Information measures

### 4. Visiting Faculty: Dr. Asokan Mulayathu Variyathu

(From 1<sup>st</sup> September 2016 to 20<sup>th</sup> December 2016)

**5. Research/Project Staff:**

Sl. No.	Name	Designation	Qualification	Specialisation
1	Himanshu Pokhriyal	Project Fellow (UGC-SAP-DRS-III)	M.Sc	Time Series Analysis
2	Vinitha Xavier K	Project Fellow DST-WOS(A)	M.Sc	Quality Control

**6. Research Scholars**

Sl. No.	Name	Funding Agency	Guide	Area of Work
1.	Sri Ranganath C.G	KSCSTE	Dr. N.Balakrishna	Time Series Analysis
2.	Muhammed Anvar		Dr. N.Balakrishna	Time Series Analysis
3.	Nimitha John	KSCSTE	Dr. N.Balakrishna	Time Series Analysis
4.	Rakhi Chandran		Dr. N.Balakrishna	Time Series Analysis
5.	Rahul T.		Dr. N.Balakrishna	Time Series Analysis
6.	Joshi C.G		Dr. N.Balakrishna	Time Series Analysis
7.	Dileep Kumar M.	KSCSTE	Dr.P.G.Sankaran	Reliability Theory
8.	Nidhi P. Ramesh	KSCSTE	Dr.P.G.Sankaran	Reliability Theory
9.	Prasad S.		Dr.P.G.Sankaran	Distribution Theory
10.	Rejani P.P.		Dr.P.G.Sankaran	Survival Analysis
11.	Preethakumari P.V.		Dr.P.G.Sankaran	Distribution Theory
12.	Preethi John	INSPIRE-DST	Dr.P.G.Sankaran	Distribution Theory
13.	Aswathy S. Krishnan	KSCSTE	Dr.S.M.Sunoj	Distribution Theory
14.	Vipin N.	UJRF	Dr.S.M.Sunoj	System Reliability
15.	Sreejith T.B.		Dr.S.M.Sunoj	Distribution Theory
16.	Rasin R.S.		Dr.S.M.Sunoj	Weighted Distributions
17.	A.Vincent Raja	USRF	Dr.Asha Gopalakrishnan	Reliability Modelling
18.	B.Umadevi		Dr.Asha Gopalakrishnan	Reliability Modelling
19.	Baby A.K	CSIR	Dr.G.Rajesh	Distribution Theory
20.	Soorya C.S.	UJRF	Dr.Asha Gopalakrishnan	Reliability Analysis
21.	Sisuma M.S.	UJRF	Dr.P.G.Sankaran	Survival Analysis



## 7. Administrative Personnel

Sl. No.	Designation	No. of Posts
1	Section Officer	1
2	Professional Assistant Gr.I	1
3	Assistant Section Officer	2
4	Computer Assistant Gr.II	1
5	Peon	1(Vacant)
6	Sweeper cum Cleaner	1(Vacant)

## 8. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1	M.Sc Statistics	13	28	41
2	M.Tech Engineering Statistics	2	4	6
3	Ph.D	11	10	21

## 10. Research Facilities

### a. Laboratories :

- i. Computer Lab(New) with 25 Computers
- ii. Computer Lab(Old) with 23 Computers
- iii. Internet facility
- iv. Metrology Laboratory

### b. Library:

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
Books: 3287	Books: 242
<u>Journals:</u> Indian: 7 Foreign:7 Govt. Pub: 0	<u>Journals:</u> Indian: 0 Foreign: 0 Govt. Pub: 0

## 11. Distinguished visitors

Sl.No.	Name	Affiliation	Remarks
1	Prof.A.M.Mathai	Department of Mathematics and Statistics, McGill University, Canada	UGC -SAP
2	Prof.Asokan Mulayath Variyath	Department of Statistics, Memorial University of Newfoundland, Canada	UGC -SAP



3	Prof.Naik Numbalkar, Department of Mathematics, IISER, Pune, India	Department of Mathematics, IISER, Pune, India	UGC -SAP
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### 13. Ph.D Awarded

Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Characterizations of Probability Models Using Some Dynamic Information Measures	Linu M.N.	Dr.S.M.Sunoj

### 14. Publications

#### a. Papers

Sl No.	Author	Title	Journal name
1	Božidar V. Popović, Miroslav M. Ristić and N. Balakrishna	A mixed stationary autoregressive model with exponential marginals	Statistical papers
2	N. Balakrishna and Gijo. E.V	SARIMA models for forecasting call volume in emergency services	International Journal of Business Excellence
3	N. Balakrishna and Muhammed Anvar	Estimating function method for product autoregressive models	Communications in Statistics – Simulation and Computation
4	Manik Awale, T.V.Ramanathan and N.Balakrishna	Testing the constancy of the thinning parameter in random coefficient integer autoregressive model	Statistical papers
5	N.Balakrishna and Joshy C.G.	Blocking first order response surface designs with interaction under correlated error	Model Assisted Statistics and Applications
6	N.Balakrishna and Hira L. Koul	Varying Kernel Marginal Density Estimator for a Positive Time Series	Journal of Nonparametric Statistics
7	K.C.James and Nicer David K.R.	A review of different segmentation techniques used in brain tumor detection	International Journal of Scientific & Engineering Research
8	K.C.James and Arjun Veliath	Crap reduction using six sigma methodologies in a manufacturing industry	International Journal for Quality Research





9	P.G.Sankaran and N.N.Midhu	Testing exponentiality using mean residual quantile function	Statistical papers
10	P.G.Sankaran, Bijamma Thomas and N.N.Midhu	A software reliability model using mean residual quantile function	Journal of Applied Statistics
11	P.G.Sankaran and S.M.Sunoj	Quantile based cumulative entropies	Communications in Statistics-Theory and Methods
12	N.Unnikrishnan Nair and P.G.Sankaran	Multivariate discrete scalar hazard rate	Statistical Methodology
13	P.G.Sankaran, Anup Dewanji, Debasis Sengupta and Bappa Karmakar	Regression analysis of competing risks data with general missing pattern in failure types	Statistical Methodology
14	P.G.Sankaran and Anjana S.	Proportional cause of specific reversed hazards model	Journal of Nonparametric Statistics
15	P.G.Sankaran, N.Unnikrishnan Nair and Preethi John	Characterizations of bivariate Pareto distributions	Statistica
16	P.G.Sankaran and Anjana S.	Parametric analysis of failure time data with multiple causes using cause specific reversed hazard rates	Bulletin of Calcutta Statistical Association
17	P.G.Sankaran, S.M.Sunoj and N.Unnikrishnan Nair	Kullback-Leibler divergence: a quantile approach	Statistics and Probability letters
18	P.G.Sankaran and Anjana S.	Nonparametric estimation of cumulative cause Specific reversed hazard rates under masked causes of failure	Journal of Biostatistics and Biometric applications
19	P.G.Sankaran, Nidhi P.Ramesh and Unnikrishnan Nair N.	Ageing classes in discrete time based on hazard rate: a review and new results	Research & Reviews: Journal of Statistics
20	P.G.Sankaran, N.Unnikrishnan Nair and Nidhi P.Ramesh	Some properties of discrete distributions with bathtub-shaped distributions	Communications in Statistics- Theory and Methods
21	P.G.Sankaran, S.R.Jammalamadaka and Prasad S.	Semiparametric regression model for analysis of middle censored lifetime data	Statistics



22	P.G.Sankaran, N.Unnikrishnan Nair and Nidhi P.Ramesh	Determination of hazard rate shape for discrete lives	International Journal of Reliability, Quality and Safety Engineering
23	P.G.Sankaran, N.Unnikrishnan Nair and Nidhi P.Ramesh	Discrete distributions with bathtub-shaped hazard rates	South African Journal of Statistics
24	P.G.Sankaran, N.Unnikrishnan Nair and Nidhi P.Ramesh	Multivariate reversed hazard rates	Communications in Statistics – Theory and Methods
25	P.G.Sankaran, N.Unnikrishnan Nair and Nidhi P.Ramesh	Quantification of relative ageing in discrete time	Metron
26	P.G.Sankaran and N.N.Midhu	Nonparametric estimation of mean residual quantile function under right censoring	Journal of Applied Statistics
27	P.G.Sankaran, Isha Dewan and Sreedevi E.P.	A martingale based test for independence of time to failure and cause of failure for competing risks models	Communications in Statistics-Theory and Methods
28	P.G.Sankaran and Preethi John	A positive dependent Archimedean copula	Journal of Applied Mathematics and Statistics
29	P.G.Sankaran, S.M.Sunoj and Aswathy Krishnan	Quantile-based entropy of order statistics	Journal of Indian Society for Probability and Statistics
30	P.G.Sankaran, Sreedevi E.P. and Isha Dewan	A semi parametric regression model for current status competing risks data	Journal of Indian Statistical Association
31	P.G.Sankaran, S.M.Sunoj and N.Unnikrishnan Nair	Quantile –based cumulative Kullback-Leibler divergence	Statistics
32	P.G.Sankaran and Preethi John	A bivariate Weibull family with applications	American Journal of Mathematical and Management Sciences
33	P.G.Sankaran and Prasad S.	Additive risks regression model for middle censored exponentiated-exponential lifetime data	Communications in Statistics – Simulation and Computation



34	G.Asha, I.Elatal and C.J.Rajeesh	Further results on discrete mean past life time	Communications in Statistics – Theory and Methods
35	G.Asha, Jagathnath Krishna K.M. and D.Kundu	An extension of the Freund's bivariate distribution to model load sharing systems	American Journal of Mathematical and Management Sciences
36	G.Asha and Vincent Raja A.	An extension to the Freund's bivariate distribution to model cascading failures	Communication in Statistics-Simulation and Computation
37	Sunoj S.M. and Rajesh G.	Some properties of cumulative Tsallis entropy of order	Statistical Papers
38	Sunoj S.M. and Sreejith T.B.	Some properties of reciprocal coordinate sub tangent in the context of stochastic modeling	Journal of the Indian Statistical Association
39	Sunoj S.M. and Vipin N.	Some properties of conditional partial moments in the context of stochastic modeling	Statistical Papers
40	Sunoj S.M. and Kayal S.	On some generalized time dependent measures of inaccuracy	Statistica
41	G.Rajesh, E.I.Abdul Sathar, E.S.Jeevanand and K.R.Renjini	Bayesian study of Lorenz curve and Gini index for power model	IAPQR Transactions
42	Rajesh G. mand S.M.Sunoj	Some properties of cumulative Tsallis entropy of order alpha	Statistical papers
43	G.Rajesh, E.I.Abdul Sathar and Rohini S.Nair	A study on dynamic weighted failure entropy of alpha order	American Journal of Mathematical and Management Sciences
44	G.Rajesh, E.I.Abdul Sathar and Viswakala K.V.	Estimation of inaccuracy measure for censored dependent data	Accepted in Communications in Statistics
45	Rajesh G., S.M.Sunoj and S.Kayal	On generalized measures of inaccuracy	Accepted in Statistica
46	G.Rajesh, E.I.Abdul Sathar and Rohini S.Nair	Bivariate weighted residual and past entropies	Accepted in Journal of Japan Statistical Society



**15. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.**

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. N Balakrishna	Tequip Workshop on Linear and non-linear signals in Biomedical Engineering at NIT, Raipur during 9-11, September 2016.	Invited for Lecture and hands on training
	Workshop on Random Processes and Applications held at MES College of Engineering, Kuttipuram during 26-27, October 2016.	Invited to engaged two lectures of 90 minutes
	MHRD sponsored Workshop on Flexible Statistical Modelling by Prof. Adrian Bowman, University of Glasgow at under the GIAN (Global Initiative for Academic Network) at Mangalore University, 10-14, October 2016.	Participation
	A training program on Time Series at College of Engineering Trivandrum, 16 November 2016.	Delivered two lectures on introduction to ARCH/GARCH models for training
	National Seminar on Applied Statistics and Quantitative Finance, Government Victoria College, Palakkad, 8-9, December 2016.	Invited talk
	International Conference on Statistical Methods in Finance, Chennai Mathematical Institute, 19-22, December 2016.	Invited talk
	Workshop on Applied Statistical Techniques held at Cochin University of Science and Technology, 19-21, January 2017.	Invited talk
	National Conference on Recent Advances in Statistics and Their Applications to Society at Savitribai Phule University, Pune during 23-25, March 2017.	Invited talk
Dr.K.C.James	International Conference on Traffic and Transportation Engineering (ICTTE- 2016), University of Lucerne, Switzerland, July 6-10, 2016.	Paper Presentation
	International Conference on Tarrific and Transportation Engineering (ICTTE-2016), University of Lucerne, Switzerland, July 6-10, 2016	Chaired Session 3: Vehicle operation and management & logistics
	Workshop on Applied Statistical Techniques, Department of Statistics, January 19-21, 2017	Participation



Dr. P. G. Sankaran	Workshop On Applied Statistical Techniques Organized by Department of Statistics, Cochin University of Science and Technology during January 19-21, 2017.	Resource person
	International Workshop on Reliability Theory and Survival Analysis, University of Pune, November 3-5, 2016.	Resource Person
	International Symposium on Statistics and Optimization in conjunction with XXXVI Annual Convention of ISPS and Seminar on Statistical Inference, Sampling and Optimization Techniques and Related Areas, Aligarh Muslim University, 17-19, December 2016.	Invited talk
	Second International Conference on Statistics for Twenty First Century -2016, University of Kerala 21-23, December 2016.	Invited talk
	Annual Conference of Kerala Statistical Association, University of Kannur, 17-18, February 2017.	Invited talk
	National Conference on "Recent Advancement in Statistics and their Applications to Society", University of Pune, 23-25, March 2017	Invited talk
Dr.Asha Gopalakrishnan	International Society for Business and Industrial Statistics(ISBIS) 2016 conference, 8-10, June 2016, UPC Barcelona, Spain	Invited talk
	ISBIS Virtual conference on Bayesian Modeling: Computations and Applications, February 28 to August 17, 2017	Organized and Participated
Dr.S.M.Sunoj	VIII International Symposium on Statistics and Optimization in conjunction with XXXVI Annual Convention of Indian Society for Probability and Statistics and Seminar on Inference, Sampling and Optimization Techniques and Related Areas, Aligarh Muslim University, Aligarh, Utter Pradesh during December 17-19, 2016.	Invited talk
	Workshop On Applied Statistical Techniques Organized by Department of Statistics, Cochin University of Science and Technology during January 19-21, 2017.	Resource person
	National Seminar on Statistical Techniques in Applied Areas, Department of Statistics, St.Thomas College, Thrissur, 27-28 February 2017.	Invited talk



Dr. G. Rajesh	Workshop on 'Applied Statistical Techniques' during January 19-21, 2017 sponsored by UGC and KSCSTE in the Department of Statistics, Cochin University of Science and Technology	Organizer
	International Symposium on Statistics and Optimization in conjunction with XXXVI Annual Convention of ISPS and Seminar on Statistical Inference, Sampling and Optimization Techniques and Related Area, December 17-19, 2016	Participated and presented a paper
	National Workshop on Statistical Computing organized by Department of Statistics, University of Kerala, Thiruvananthapuram, 14-19, November 2016	Participation

**16. Role of Faculty in International/National organizations/Institutions/ Editorial Boards**

Name of Faculty	Name of Organization	Role
Dr.P.G.Sankaran	International Statistical Institute, The Netherlands	Elected Member
	American Mathematical Society, U.S.A	Member
	Institute of Mathematical Statistics, U.S.A	Member
	International Indian Statistical Association, U.S.A	Life Member
	International Society for Business and Industrial Statistics, U.S.A	Life Member
	Indian Society for Probability and Statistics, India	Life Member
	Kerala Statistical Association	Life Member
	American Mathematical Review, U.S.A	Reviewer
Dr.N.Balakrishna	International Statistics journals such as Multivariate Analysis, Computational Statistics and Data Analysis, Statistics and Probability Letters, Statistics, Communications in Statistics – Theory and Methods, Statistical Papers, Journal of Japan Statistical Association, Journal of Applied Statistics, Journal of Indian Statistical Association, Bulletin of Calcutta Statistical Association	Reviewer
	Board of Studies in Statistics meeting at University of Mysore, Mangalore University, Pondicherry University	External Member
	Board of Examiners for M.Sc (Statistics) at Mangalore University, Bangalore University and for Ph.D in Mysore University	Member



	Board of Examiners in Statistics (PG) for Calicut University	Chairman
	Communications in Statistics – Theory and Methods	Associate Editor
	Communications in Statistics –Simulation and Computations	Associate Editor
	Communications in Statistics – Data Analysis	Associate Editor
	Journal of Indian Society for Probability and Statistics	Associate Editor
Dr.K.C.James	ISTE	Life Member
	Society of Operations Management	Life Member
	International Association of Engineers (IAENG)	Member
Dr.Asha Gopalakrishnan	International Statistical Institute, Netherlands	Elected Member
	American Mathematical Society	Life Member
	International Indian Statistical Association	Life Member
	Indian Society for Probability and Statistics	Life Member
	Indian Statistical Association	Life Member
	Kerala Statistical Association	Life Member
Dr.S.M.Sunoj	International Indian Statistical Association	Life Member
	Indian Society of Probability and Statistics (ISPS)	Life Member
	Kerala Statistical Association (KSA)	Life Member
Dr.Rajesh G.	Kerala Statistical Association	Life Member
	Indian Society of Probability and Statistics	Life Member

### 17. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour / Award	Awarding Agency
Twinkle Muthedan	Second place at national level project competition for postgraduate students in Statistics	Ministry of Statistics and Programme Implementation (MOSPI), 2016
Durga Vasudevan	Consolations prize at National level Project competition for post graduate students in Statistics	Ministry of Statistics and Programme Implementation (MOSPI), 2016
Dr.Anjana S.	Professor A.R.Kammath award for best doctoral thesis of Indian Society for Probability and Statistics	Indian Society for Probability and Statistics, 2016



Abina Mariam George, Chilanka Anil and Mahesh D.	First place at National level Project competition for post graduate students in Statistics	Indian Society for Probability and Statistics, 2016, held at Aligarh Muslim University, Aligarh
Sri Ranganath C.G.	Best Poster Presentation Award	International conference and workshop on Statistical Methods in Finance held at Chennai Mathematical Institute
Vipin N.	Prof. R.N.Pillai Young Statistician award for the best research paper	Kerala Statistical Association in association with the National Conference on Advances in Statistical Sciences organized by the Department of Statistical Sciences, Kannur University
Vipin N.	Best Paper Presentation Award	International conference on Statistics for Twenty-First Century -2016
Merin Ann Shaji	Second prize in spot essay writing competition - 2017	Ministry of Statistics and Programme Implementation, 2017

### 18. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount (In Lakhs)	Investigator(s)
1	FIST (II Phase)	DST	52.5	Head of the Department
2	Non Linear Time Series	SERB	13.2	Dr.N.Balakrishna
3	SAP (III Phase)	UGC	37.0	Dr.N.Balakrishna (Co-ordinator)

### 17. Research Programmes and Activities:

Sl.No.	Problem / Topic	Investigator (s)
1	Stochastic Modeling of Time Series – with a focus on non-linear models	Dr.N.Balakrishna
2.	Study of stochastic elements in logistics and supply chain	Dr.K.C.James
3.	Stochastic models for the analysis of survival data	Dr.P.G.Sankaran
4.	Accelerated lifetime models	Dr. Asha Gopalakrishnan





5.	Stochastic modeling using different reliability measures	Dr. S.M.Sunoj
6.	Information inequality in bivariate set up	Dr. Rajesh.G

**18. Seminars/ Conferences/ Workshops/ Refresher Courses conducted by the Department**

Sl. No.	Title	Duration	Coordinator	Funding Agency
1	Workshop on Applied Statistical Techniques	19-21, January 2017	Dr. Rajesh G.	UGC and KSCSTE
2	Virtual workshop on Bayesian Modeling-Computation and Application	18 February – 17 August 2017 (Ongoing)	Dr. Asha Gopalakrishnan	ISBIS



## SCHOOL OF ENGINEERING

### 1. Brief History of the Department:

School of Engineering was established in 1979 as School of Technology for offering Part-time M.Tech. Programmes in Civil, Mechanical, Electrical and Chemical Engineering for enabling practicing Engineers in and around Kochi to acquire Master Degree in Engineering. Research activities were started from 1981 with Ph.D. Programme in Civil Engineering. This School introduced B.Tech Programme in the 5 major disciplines viz Civil, Mechanical, Electronics, Computer Science and Information Technology on cost sharing basis in 1995 which played a significant role in the development of this School. Considering the increased demand of student community, this School introduced B.Tech in Safety & Fire Engineering in 1996, Marine Engineering in 2001 and Electrical & Electronics Engineering in 2003. The Division of Marine Engineering has become an independent Department in June 2007. The School started M.Tech. (Full-time) Courses in Civil and Mechanical Engineering in 2012.

At present Doctoral Programme is offered under Civil Engineering, Computer Science and Engineering, Mechanical Engineering, Safety & Fire Engineering, Electrical and Electronics Engineering, Electronics and Communication Engineering, Information Technology and Chemical Engineering. This School has strength of 317 Research Students, 330 M.Tech. students and nearly 2400 B.Tech students making it the largest academic unit of the University which forms 75% of the student community of campus.

The School functions through 9 Divisions Civil, Mechanical, Electrical, Electronics, Computer Science, Safety & Fire, Information Technology, Applied Sciences & Humanities and Chemical Engineering.

School of Engineering has been well accepted as a research centre and major consultancy centre. A number of research projects have been sanctioned to School by agencies like DST, ISRO, AICTE, UGC, Coir Board etc.

### 2. Programmes of Study/Research: B.Tech M.Tech. (Full-Time and Part-Time)

**Ph.D**



### 3. Faculty Members Branch: Civil Engineering

Sl. No	Name of the Teaching Faculty Member	Designation	Highest Degree (Ph.D., M.Tech./M.Sc. & B.Tech.)	Discipline of Specialization at B.Tech.,M.Tech./M.Sc. & Ph.D.
1	Dr.Benny Mathews Abraham	Professor	Ph.D	Geotechnical Engineering
2	Dr. K.S.Beena	Professor	Ph.D	Geotechnical Engineering
3	Dr. Sobha Cyrus	Professor	Ph.D	Geotechnical Engineering
4	Dr. Renu Pawels	Associate Professor	PhD	Environmental Engineering
5	Dr.Bindu C.S.	Associate Professor	Ph.D.	Transportation Engg
6	Dr. Abdurahiman K.U.	Professor	Ph.D	Water Resources Engineering
7	Dr. Deepa Balakrishnan	Associate Professor	Ph.D	Structural Engineering
8	Dr. Glory Joseph	Associate Professor & Head	Ph.D	Structural Engineering
9	Dr. Narasimha D.S.	Associate Professor	Ph.D.	Structural Engineering
10	Mr. Ramadass S.	Associate Professor	M.E.	Structural Engineering
11	Dr. Job Thomas	Associate Professor	PhD	Structural Engineering
12	Dr. Subha V	Associate Professor	PhD	Habitat Technology
13	Dr. Deepa G Nair	Associate Professor	PhD	Costal Effective building materials and housing
14	Mr. Arun Kumar T	Associate Professor	M.E	Environmental Engineering
15	Dr. Roy M Thomas	Associate Professor	Ph.D	Environmental Engineering

**Branch: Computer Science and Engineering**

Sl. No	Name of the Teaching Faculty Member	Designation	Highest Degree (Ph.D, M.Tech/M. Sc & B.Tech)	Discipline of Specialization at B.Tech,M.Tech/ M.Sc & Ph.D
1	Dr. Sheena Mathew	Professor	Ph.D	ME Computer Science
2	Dr.Latha R Nair	Assistant Professor	Ph.D.	Computer Science
3	Ms.Ancy Zachariah	Associate Professor & Head	M.Tech	Computer Science
4	Ms.Sheena.S	Assistant Professor	M.Tech	Software Engineering
5	Mr. Pramod Pavithran	Associate Professor	M.Tech	Computer Science
6	Mr. Damodaran V.	Associate Professor	M.Tech	Computer Science
7	Mr. Vinod Kumar P P	Associate Professor	M.Tech	Computer Science
8	Dr.Sudheep Elayidom	Associate Professor	Ph.D.	Computer Science
9	Ms. Preetha.S	Assistant Professor	M.Tech	Computer Science

**Branch : Electrical & Electronics Engineering**

Sl. No	Name of the Teaching Faculty member	Designation	Highest Degree (Ph.D, M.Tech/M. Sc & B.Tech)	Discipline of Specialization at B.Tech,M.Tech/ M.Sc & Ph.D
1	Dr. C.A. BABU	Professor & Head	B.Sc.Engg. M.Tech, Ph.D	Power & Energy Systems
2	Dr. ASHA ELIZEBETH DANIEL	Associate Professor	B.Tech, M.Tech, Ph.D	Communication Engineering
3	Dr. USHA NAIR	Associate Professor	B.Sc. Engg., M.E., Ph.D	Control Systems
4	Smt. P.G. LATHA	Associate Professor	B.Tech, M.Tech	Power & Energy Systems
5	Smt. SHEENA K.M.	Associate Professor	B.Tech, M.Tech	Electrical Machines



### Branch : Electronics & Communication Engineering

Sl. No	Name of the Teaching Faculty Member	Designation	Highest Degree (Ph.D, M.Tech/M. Sc & B.Tech)	Discipline of Specialization at B.Tech,M.Tech/ M.Sc & Ph.D
1	Dr. R. Gopikakumari	Professor	Ph.D	Neural Network & Image Processing, Signal processing
2	Dr.Rekha K. James	Professor	Ph.D	Micro Electronics
3	Dr. S. Mridula	Professor	Ph.D	Microwave, Metamaterials
4	Dr. Abdulla P.	Professor & Head	Ph.D	Microwave Electronics
5	Dr. P. Mythili	Associate Professor	Ph.D	Microwave, Genetic Algorithm & Signal processing
6	Dr. Binu Paul	Associate Professor	Ph.D	Microwave, CEM
7	Mr. Unni A.M.	Associate Professor	M.Tech	Electronics Design
8	Dr. Jibukumar M.G.	Associate Professor	Ph.D	Wireless Technology
9	Mr. Premkumar C.V.	Assistant Professor	M.Tech	Electronics and Communication
10	Dr. Anju Pradeep	Associate Professor	Ph.D.	Electronics and Communication
11	Dr. Shahana T.K.	Associate Professor	Ph.D	Micro Electronics
12	Dr.Deepa Sankar	Associate Professor	Ph.D.	Image Processing
13	Dr.Babitha Roslind Jose	Assistant Professor	Ph.D	Micro Electronics

### Branch : Information Technology

Sl. No	Name of the Teaching Faculty member	Designation	Highest Degree (Ph.D, M.Tech/M. Sc & BTech)	Discipline of Specialization at B.Tech,M.Tech/ M.Sc & Ph.D
1	Dr.Philip Samuel	Associate Professor	M.Tech, PhD	Software Engineering, Distributed Computing
2	Mr.Santhosh Kumar M B	Assistant Professor	M.Tech	Software Engineering



3	Dr.Shelbi Joseph	Assistant Professor	Ph.D.	Computer Science
4	Dr.Renumol V G	Associate Professor	Ph.D.	Computer Science
5	Dr.Binsu C Kovoov	Assistant Professor	Ph.D.	Computer Science
6	Ms.Sariga Raj	Assistant Professor	M.Tech	Software Engineering
7	Dr.Daleesha M V	Assistant Professor	Ph.D.	Computer Science

### Branch: Mechanical Engineering

Sl. No	Name of the Teaching Faculty member	Designation	Highest Degree (Ph.D, M.Tech/M.Sc & BTech)	Discipline of Specialization at B.Tech,M.Tech/ M.Sc & Ph.D
1	Dr. Sreejith P.S.	Professor	Ph.D	Manufacturing
2	Dr. G. Ajith Kumar	Associate Professor	Ph.D.	Mechanical Engg(Industrial Engg.)
3	Dr. A B Bhasi	Associate Professor	Ph.D.	Production Engg/ Management
4	Dr. Biju N	Associate Professor & Head	Ph.D.	Production Engg,NDE
5	Dr. Franklin R John	Associate Professor	Ph.D.	Mechanical Engg
6	Dr. Gireesh Kumaran Thampi	Associate Professor	Ph.D.	Propulsion Engg(Thermal Stream)
7	Dr. Jayadas N H	Professor	Ph.D	Thermal Sciences
8	Dr. James Varghese	Assistant Professor	Ph.D	Thermal Sciences
9	Mr.P J Joshy	Associate Professor	M.S.	Fluid Mechanics
10	Dr.V N Narayanan Namboothiri	Associate Professor	Ph.D.	Manufacturing
11	Dr. M R Radhakrishna Panicker	Professor & Principal	Ph.D.	Machine Design
12	Dr. Saju K.K	Professor	Ph.D.	Material Science and Technology



13	Dr. Tide P S	Professor	Ph.D.	Propulsion Engg (Thermal & Fluid Engineering)
14	Dr.Jacob Elias	Associate Professor	Ph.D.	Refrigeration and Cryogenics Engg
15	Mr.Roy.V.Paul (Work arrangement)	Associate Professor	M.Tech	Mechanical Engg

### Branch: Safety & Fire Engineering

Sl. No	Name of the Teaching Faculty member	Designation	Highest Degree (Ph.D, M.Tech/M.Sc & B.Tech)	Discipline of Specialization at B.Tech, M.Tech/ M.Sc & Ph.D
1	Dr. G. Madhu	Professor	Ph.D	Process Safety Engineering, Environmental Engineering
2	Dr. M.N. Vinodkumar	Professor	Ph.D	Safety Management, Engineering Design
3	Dr. Dipakkumar Sahoo	Professor	Ph.D	Structural Engineering, Fire Engineering, Construction Management & Safety
4	Dr. George Mathew	Professor	Ph.D	Fire Engineering, Structural Safety
5	Sri. A. Nirmal Job	Associate Professor	M.Tech	Engineering Safety, Manufacturing Engg.
6	Dr.V.R. Renjith	Associate Professor	M.Tech.	Industrial Safety Engg.

### Branch: Applied Sciences & Humanities

Sl. No	Name of the Teaching Faculty member	Designation	Highest Degree (Ph.D, M.Tech/M.Sc & B.Tech)	Discipline of Specialization at B.Tech,M.Tech/ M.Sc & Ph.D
1	Dr. Johnson T.P.	Associate Professor	Ph.D	Mathematics
2	Dr.Sasi Gopalan	Associate Professor	Ph.D	Mathematics
3	Dr. Dhannia T	Associate Professor	Ph.D.	Chemistry

**4. Visiting Faculty (If any)**

Sl. No.	Name	Designation	Qualification	Specialisation
1.	Prof. Sridharan. A.	Former Deputy Director, IISc Bangalore	Ph.D	Geotechnical Engineering
2.	Prof. K. S. Jagadish,	Retd. Professor, IISc Bangalore	Ph.D	Earthquake Engineering/Alternate Building Techniques
3.	Prof. PK Aravindan, Retd. Professor, IIT Madras	Retd. Professor, IIT Madras	Ph.D	Structural Engineering
4.	Mr. Biju K G	M.Com	Visiting Faculty	Mr. Biju K G
5.	Ms. Smitha S	M.Tech	Visiting Faculty	Ms. Smitha S
6.	Ms. Rakhi G R	M.Sc	Visiting Faculty	Ms. Rakhi G R
7.	Mr. John Berchmans	M.Tech	Visiting Faculty	Mr. John Berchmans
8.	Prof. Thankam	M.Sc, M.Phil	Visiting Faculty	Prof. Thankam
9.	Ms. Manjusha V	M. Tech	Visiting Faculty	Ms. Manjusha V
10	Prof. John Tharakan (as Fulbright – Nehru Senior Scholar)	Professor, Department of Chemical Engineering Howard University Washington DC USA	Ph.D	Environmental Engineering

**5. Research Scholars**

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Fazna Nazim		Dr. Renu Pawels	Waste water treatment using Enzymee
2	Margret Sherin Joseph		Dr. Bindu C.S	Warm mix Asphalt Technology





3	Athira M		Dr. Deepa Balakrishnan S	Fibre Concrete
4	Mini		Dr. Bindu C.S	Sustainable constructions
5	Vijina V.V		Dr. Sobha Cyrus	Settlement Analysis
6	Jeena Mathew		Dr. Subha V	Self sensing Engineering cementitious concrete
7	Nishida A		Dr. Sobha Cyrus	Environmental Geotechnics
8	Rekha Raveendran		Dr. Benny Mathews Abraham	Improvement of soft clays
9	Sindhu A.R		Dr. Benny Mathews Abraham	Lime stabilization of sulphate bearing clays
10	Emey Varkey		Dr. Benny Mathews Abraham	Performance of permeable pavements
11	Dileep Kumar P.G		Dr. Sobha Cyrus	Environmental Geotechnics
12	Ashitha M		Dr. Abdu Rahiman K.U	hydraulics
13	Meera C.M		Dr. Subha V	Self healing concrete
14	Rahamathulla Noufal E		Dr. Job Thomas	Sustainable Building Materials
15	Sandeep T.N.		Dr. Job Thomas	Infilled steel tubes structures
16	Jeeson Jose		Dr. Job Thomas	Construction project management
17	Preetha Prabhakaran		Dr. Glory Joseph	Earthquake Engineering
18	Divya		Dr.Beena K.S	Geotechnical Engineering
19	Anil K.R.		Dr. Beena K.S.	Coir Geotextiles
20	Unni Kartha G		Dr. Beena K.S.	Geotechnical Earthquake Engg.



21	Santhosh G.		Dr. Beena K.S.	Ground Improvements
22	Kavitha P.E.		Dr. Beena K.S. (Co- guide)	Laterally loaded piles
23	Rani Tenison		Dr.Abdu Rahiman K.U.	Water Resources
24	Sindhu H		Dr.Abdu Rahiman K.U.	Water Resources
25	Asha P.Tom	KSCSTE	Dr. Renu Pawels	Sustainable Technology for solid waste management
26	Anna Joseph		Dr. Renu Pawels	Biological nutrient removal for wastewater
27	Sanju Sreedharan		Dr. Renu Pawels	Membrane bioprocess for wastewater treatment
28	Athira Ravi		Dr. Subha V.	Environmental Management
29	Rani Tenison		Dr. Subha V.(Co- guide)	Water Resources
30	Sindhu		Dr. Subha V.(Co- guide)	Water Resources
31	Ramadass S.		Dr.Job Thomas	Structural Engineering
32	Harilal B.		Dr.Job Thomas	Sustainable Construction Materials
33	Krishnakumar S		Dr.Job Thomas	Structural Engineering
34	Asha Joseph		Dr.Glory Joseph	Effect of Earthquake acceleration on structures
35	Simi Sebastian		Dr.Glory Joseph	Study on shell structures
36	Biju P N		Dr.Glory Joseph	Effect of earthquake on dams
37	Rani V		Dr.Sobha Cyrus	Specilisation Geotechnical Engg.
38	Robert V.Thomas		Dr.Deepa G.Nair	Building Materials



39	Jiji Antony		Dr.Deepa G.Nair	Building Materials
40	Santhosh John		Dr.Deepa G.Nair	Sustainable Housing
41	Joseph John		Dr.Deepa G.Nair	Sustainable Housing
42	Lekshmi M.S.		Dr. Subha, Dr. Deepa G.Nair	Building Materials
43	Usha S.		Dr. Subha, Dr. Deepa G.Nair	Building Materials
44	Geeja K.George		Dr. Subha, Dr. Abdu Rahiman	Water Resources
45	Neena Sunny		Dr. Roy M.Thomas	Environmental
46	K.O. Varghese		Dr. Deepa G. Nair, Dr. Job Thomas	Building Materials
47	Veena V		Dr. Sobha Cyrus	Geotechnical Engg.
48	Able Alias		Dr.Glory Joseph	Structural Engineering
49	Aneesh P.C.		Dr. Roy M.Thomas	Environmental Engineering
50	Bindu Sebastian		Dr. Sobha Cyrus	Soil Stabilization
51	Binu P.		Dr. Deepa Balakrishnan S.	Concrete Technology
52	Gadha Venugopal		Dr. Job Thomas	Structural Dynamics
53	Jayanthi M.U.		Dr. Abdu Rahiman	Water Resources
54	Muhammed Koya N.K.		Dr. Deepa G. Nair	Sustainable Construction
55	Sekhar A.C.		Dr. Benny Mathews Abraham	Permeability Of Grouted Soils
56	Soumyan K.		Dr. Deepa Balakrishnan S..	Structural Dynamics
57	Sreekumar M.G.		Dr. Deepa G. Nair	Sustainable Construction



58	Thomas John V.		Dr. Roy M,Thomas	Geo-Polymer Concrete
59	Sandeep M.N		Dr. Beena K.S	Special Foundation & Ground Improvement
60	Viji A.J		Dr.Beena K.S	Study on improvement of soft soil
61	Noufia Mol K.A		Dr. Bindu C.S	Study on road paving tiles
62	Joice Mary Philip		Dr. Glory Joseph	Special Concrete
63	Rinu Tenison		Dr. Roy M Thomas	Impact of urban temperature rise and pollution on biodiversity of water body in cochin area
64	Annie Joy		Dr. Benny Mathews Abraham	Influence Of Organic Matter On The Strength And Compressibility Characteristics Of Clays
65	Mary Lissy P.N		Dr. G. Madhu & Dr. Roy M Thomas	Adsorption of heavy metal ions from aqueous solutions using magnetic nanoparticles
66	Shahas S		Dr. Job Thomas	Special Concrete
67	Ancy Sherin Jose		Dr. Latha R. Nair	Network Security
68	Ancy Zachariah		Dr. Latha R. Nair	Data Mining & Big Data Analysis
69	Preetha S.		Dr. Latha R. Nair	Data Mining & Big Data Analysis
70	Ramesh K.M.		Dr. Latha R. Nair	Rough Set Theory & Big Data Analysis
71	Rahooof P.P.		Dr. Latha R. Nair	Network Security
72	Prabha Elizabeth Varghese		Dr. Latha R. Nair	Cryptography
73	Dhanya K. Sudheesh		Dr. Latha R. Nair	Image Processing
74	Divya Mohan		Dr. Latha R. Nair	Natural Language Processing



75	Abdul Nazar		Dr. Latha R. Nair	Machine Learning
76	Lija Mohan		Dr. Sudheep Elayidom M.	Big Data Analysis
77	Vini Vijayan		Dr. Sudheep Elayidom M.	Big Data Analysis
78	Neethu Mohandas		Dr. Sudheep Elayidom M.	Big Data Analysis
79	Sarith Diwakar		Dr. Sudheep Elayidom M.	Big Data Analysis
80	Suja C. Nair		Dr. Sudheep Elayidom M.	Big Data Analysis
81	Hema Krishnan		Dr. Sudheep Elayidom M.	Big Data Analysis
82	Sowmya George		Dr. Sudheep Elayidom M.	Big Data Analysis
83	Shankara Nayaki		Dr. Sudheep Elayidom M.	Big Data Analysis
84	Cerene Mariam Abraham		Dr. Sudheep Elayidom M.	Data Mining
85	Nikhila T. B.		Dr. Sudheep Elayidom M.	Information Retrieval
86	Sheikha Chenthara		Dr. Sudheep Elayidom M.	Cryptography
87	Femina T. B.		Dr. Sudheep Elayidom M.	Data Mining
88	Girija O. K.		Dr. Sudheep Elayidom M.	Image Processing
89	Siyamol Chrakkavottu		Dr. Sheena Mathew	Bio informatics in Cryptography
90	Tomsy Paul		Dr. Sheena Mathew	Parallel Processing
91	Sheena S.		Dr. Sheena Mathew	Image Processing
92	Sheena Kurian K.		Dr. Sheena Mathew	Data Mining (Text Summarization)



93	Ami Iqbal		Dr. Abdulla P. Professor	Planar Band pass filters
94	Rekha T.K		Dr. Abdulla P. Professor	Planar filters
95	Ajimsha Moideen		Dr. Abdulla P. Professor	Aperture coupled DRAs
96	Jesna Anwar		Dr. Abdulla P. Professor	Image enhancement
97	Sheeba Baby		Dr. Abdulla P. Professor	Waveguide fed DRA
98	Anu A.R	UGC(RGNF)	Dr. Abdulla P. Professor	Slot coupled DRAs
99	Sam K.		Dr. Abdulla P. Professor	UWB antennas
100	Rajeena		Dr. Abdulla P. Professor	RF ID
101	Ansha K.K		Dr. Abdulla P. Professor	EMI/EMC
102	Manju.B		Dr. R. Gopikakumari Professor	Medical Image Processing
103	PreethaBasu		Dr. R. Gopikakumari Professor	Transform based signal analysis
104	Mini P P		Dr. R. Gopikakumari Professor	Speech Processing
105	Dhanya Narayanan		Dr. R. Gopikakumari Professor	Speech Production Analysis and Synthesis
106	Febinalkbal		Dr. R. Gopikakumari Professor	Image processing for Secure communication
107	Arun C		Dr. R. Gopikakumari Professor	Medical Image Processing
108	Mrs. Mini P R		Dr. S. Mridula Professor	Digital Beamforming



109	Reshma Lakshmanan		Dr. S. Mridula Professor	Microwaves
110	Tushara AH		Dr. S. Mridula Professor	Microwaves
111	Mr.Rajesh Mohan		Dr. S. Mridula Professor	Microwave Imaging
112	Mr.HariKrishnan		Dr. S. Mridula Professor	Re Configurable Circuits
113	Mr. Basil J Paul		Dr. S. Mridula Professor	Metamaterials in Microwave
114	Mrs. Sheeja Vincent		Dr. S. Mridula Professor	RF Sensors
115	Anil Kumar C V		Dr. Binu Paul	Printed microwave components for wide band
116	Saira Joseph		Dr. Binu Paul	Planar UWB
117	Neethu Mohan M C		Dr. Binu Paul	Microwaves
118	Shiney Thankachan		Dr. Binu Paul	Performance enhancement and numerical analysis of metamaterials structures
119	Philip Cherian		Dr. P.Mythili,	Ultra wide band Antennas
120	Anjit TA		Dr. P.Mythili,	Microwave Imaging
121	Athira A R		Dr. P.Mythili,	Microwave antennas
122	Rema N R		Dr. P.Mythili,	Transformation techniques for Image Processing
123	Riya Benny		Dr. P.Mythili,	Image processing
124	Biju K S		Dr. Jibukumar M.G	Bio-medical Signal Processing
125	Unni A M		Dr. Jibukumar M.G	Fiber Optic Sensors



126	Bindhu P		Dr. Jibukumar M.G	MIMO
127	Shamla B		Dr. Jibukumar M.G	Cooperative Communication
128	Tripti C		Dr. Jibukumar M.G	Vehicular Networking
129	Sethulekshmi P		Dr. Jibukumar M.G	Communications
130	Premkumar		Dr. Jibukumar M.G	Cooperative Communication
131	Shemi P M		Dr. Jibukumar M.G	MultimediaCommunication
132	Rose George		Dr. Rekha James	Reconfigurable Intrusion Detection System
133	Jayakrishnan K.R		Dr. Shahana T.K	Delta Sigma Modulator for Wide Band Applications
134	Jithendra K.B.		Dr. Shahana T.K	Hardware Efficient Secure Embedded Communication Systems
135	Mahesh V.V.		Dr. Shahana T.K	VLSI Signal Processing Systems
136	Roshna B Raj	UGC JRF	Dr. Shahana T.K	Microelectronics
137	Pramod P		Dr. Shahana T.K	VLSI
138	Basil K Jeemon		Dr. Shahana T.K	VLSI
139	Rijo Sebastian		Dr. Shahana T.K, Dr. Babita R Jose	Design and Optimization of Sigma Delta Modulator Architectures
140	Jaison Jacob		Dr. Babita R Jose	Non-Linearity Analysis of Programmable Oversampled Sigma Delta Modulator for 4G Wireless Receivers
141	Chikku Abraham		Dr. Babita R Jose	Intelligent Medical Image Processing Techniques and Analysis





142	Paul Ansel V.		Dr. Babita R Jose	Medical image registration for the diagnosis of tumors
143	Sabarinath G		Dr. Babita R Jose	Power converter applications in Solar Photovoltaics
144	Kala S		Dr. Babita R Jose	Image processing
145	Michael George		Dr. Babita R Jose	Image processing
146	Jos Prakash A V	Project Fellow in KSSTE	Dr. Babita R Jose	Intelligent Medical Image Processing Techniques and
147	Aiswarya Raj		Dr. DeepaSankar	Digital Image Forensics
148	Chandni Ramachandran		Dr. DeepaSankar	Biometrics
149	Pearsly P V		Dr. DeepaSankar	Compressive Sensing
150	Bindumol.E.K		Dr. C.A.Babu	Power System
151	Suresh Kumar.M.G		Dr. C.A.Babu	Power System
152	Deepa Sankar		Dr. C.A.Babu	Power System
153	Bindu.S.J		Dr. C.A.Babu	Power System
154	Surya Susan Alex		Dr. Asha Elizebeth Daniel	Communication Engineering
155	Parvathy.R		Dr. Asha Elizebeth Daniel	Communication Engineering
156	Shija P.J.		Dr. Asha Elizebeth Daniel	Control Systems
157	Joseph K.D.		Dr. Asha Elizebeth Daniel	Power Electronics
158	Athira M.		Dr. Asha Elizebeth Daniel	Power Electronics
159	Prameela B.		Dr. Asha Elizebeth Daniel	Low Noise Amplifier Design
160	Mangala Devi K. T.		Dr. Asha Elizebeth Daniel	Renewable Energy



161	Rajani S.H.		Dr. Usha Nair	Control Systems
162	Arun Prasad K.M.		Dr. Usha Nair	Control Systems
163	Rajeevan A.K.		Dr. Usha Nair	Renewable Energy
164	Leena T. Timothy		Dr. Usha Nair	Signal Processing
165	Shanu N.		Dr. Usha Nair	Signal Processing
166	Preethi Sebastian		Dr. Usha Nair	Renewable Energy
167	Sindhura Rose Thomas		Dr. Usha Nair	Non Linear Dynamical Analysis of Coupled Oscillators for Electrical Network and Biological Systems
168	Saritha K. S.		Dr. Usha Nair	Optimum Energy Management of Integrated Microgrid System with Storage.
169	Vinod V. Nair		Dr. Usha Nair	Integrating Solar Photovoltaic Generation in Distribution Grids: Models, Strategies and Solutions for Network Integration with reference to Kerala
170	Swathi M.		Dr.C.A.Babu	Optimal Power
171	Beena Puthilath		Dr.C.A.Babu	Electrical Safety
172	Vipin A.M		Dr. Usha Nair & Dr. Asha Elizebeth Daniel	Wireless Power Transfer
173	Sanjna Salim		Dr.C.A.Babu	Renewable Energy
174	Nisha Rani G.S		Dr.C.A.Babu	Industrial Drives
175	Gireesh Kumar A.		Dr.C.A.Babu	Hybrid Renewable Energy Systems
176	Anupama Surendran	UJRF	Dr. Philip Samuel	Program Slicing (completed)
177	Lidiya Thambi	TEQIP	Dr. Varghese Paul	Data compression
178	Liya	UJRF	Dr. Varghese Paul	Data Security



179	Uma Narayanan	-	Dr. Varghese Paul	Data Security
180	Ancy Sherin	UJRF	Dr. Varghese Paul	Data Security
181	Nisha S Raj	UJRF	Dr. Renumol V G	Computer Science & IT
182	Sreeja M. U		Dr. Binsu C Kovoor	Semantic Web
183	Sunitha E V		Dr. Philip Samuel	Object Modeling
184	Renu George		Dr. Philip Samuel	Object Modeling
185	Murali Mohan		Dr. Philip Samuel	Requirements Engineering
186	Manoj Ray		Dr. Philip Samuel	Project Management
187	Janardhanan P S		Dr. Philip Samuel	Big Data Analytics
188	Ramesh Babu		Dr. Philip Samuel	Big Data Analytics
189	Saju John		Dr. Philip Samuel	Adhoc Networks (Completed)
190	Remyamol K M		Dr. Philip Samuel	Big Data Computing
191	Shibu Kumar K B,		Dr. Philip Samuel	Big Data Computing
192	Diana Priscilla Gerterude Percy		Dr. Philip Samuel	Big Data Computing
193	Sandhya N		Dr. Philip Samuel	Big Data Analytics
194	Sreekala S		Dr. Varghese Paul	Data Security
195	George Mathew		Dr. Varghese Paul	Data Security
196	Ratheesh T K		Dr. Varghese Paul	Data Security
197	VigiGopal		Dr. Varghese Paul	Data Security
198	Deepu Job		Dr. Varghese Paul	Data Security
199	Smitha M Jasmine		Dr. Shelbi Joseph	Language Processing
200	Sheena N		Dr. Shelbi Joseph	MLP
201	Jiby J Puthiyidam		Dr. Shelbi Joseph	IoT



202	Anuraj C K		Dr. Shelbi Joseph	Cryptography
203	Divya John		Dr. Shelbi Joseph	Data mining
204	Soniya Jose		Dr. Renumol V G	Computer science & IT
205	Smitha John		Dr. Renumol V G	Computer science & IT
206	Manoj Kumar P		Dr. Renumol V G	Computer science & IT
207	Jaseena K U		Dr. Binsu C. Kovoor	Bigdata
208	Diya Thomas		Dr. Binsu C. Kovoor	Adhoc Network Security
209	Greeshma N Gopal		Dr. Binsu C. Kovoor	Mining in Social networking
210	Oommen Thomas		Dr.V.N.Narayanan Namboothiri	
211	Prameela Kumari K		Dr.Jagathy Raj V.P.	
212	Mahipal D.		Dr.Jayadas N.H.	
213	Manoj George		Dr.Jayadas N.H.	
214	Salaji S.		Dr.Jayadas N.H.	
215	Tom Zacharia		Dr.Jayadas N.H.	
216	James K.J.		Dr.M.Bhasi (sms)	
217	V. Vijayachandran Nair		Dr.V.N.Narayanan Namboothiri	
218	Rabiya Rasheed		Dr.K.K.Saju	
219	Bindu M.D.		Dr.Tide P.S.	
220	Mubarak A.K.		Dr.Tide P.S.	
221	SANDHYA M		Dr.Tide P.S.	
222	Jyothi Sankar P.R.		Dr.Tide P.S.	
223	Jayadeep Kumar J.		Dr.James Varghese	
224	Santhosh Kumar S.		Dr.James Varghese	



225	Sreenivas P.		Dr.P.S.Sreejith	
226	Sunil A.S.		Dr.Tide P.S.	
227	Arun C.		Dr.Biju N.	
228	Jibi Job		Dr.Biju N.	
229	Sanchu S.		Dr.Biju N.	
230	Sushil Cherian		Dr.James Varghese	
231	Jayasree K.S.		Dr.K.C.James	
232	D.Prekasan		Dr.K.K.Saju	
233	Reghuraj A.R.		Dr.K.K.Saju	
234	Rejeesh C.R.		Dr.K.K.Saju	
235	Gopalakrishna Pillai M.		Dr.P.S.Sreejith	
236	Thilakan T.B.		Dr.Sreejith P.S.	
237	Askkar Ali P.		Dr.Ajithkumar G.	
238	Harish T.V.		Dr.Ajithkumar G.	
239	S. Krishnanunni		Dr.Ajithkumar G.	
240	Sanju J.Thomas		Dr.Ajithkumar G.	
241	Eldho Jacob Joy		Dr.Biju N.	
242	Srijith Rajeev		Dr.Biju N.	
243	Roy V.Paul		Dr.Biju N.	
244	E.Sivakumar		Dr.K.K.Saju	
245	Leena N.		Dr.K.K.Saju	
246	Ritwik A.		Dr.K.K.Saju	
247	Vinod Kumar E.		Dr.M. R.Radhakrishna Panicker	
248	Kiran Christopher		Dr.M.R. Radhakrishna Panicker	



249	Raghu R.		Dr.P.S.Sreejith	
250	Sabu Kurian		Dr.Tide P.S.,	
251	Joshy Joseph		Dr.Ajith Kumar G.	
252	Surya Natarajan		Dr.Ajithkumar G.	
253	Dileep G.		Dr.Biju N.	
254	Nikhil Asok N.		Dr.Biju N.	
255	Biju Prasad B.		Dr.Biju N.	
256	Bony John		Dr.James Varghese	
257	Devi Parvathy S.		Dr.James Varghese	
258	Linto P.Anto		Dr.James Varghese	
259	Swaraj Kumar B		Dr.James Varghese	
260	Rajeev V.S.		Dr.James Varghese	
261	Pramod Ramakrishnan		Dr. M.R. Radhakrishna Panicker	
262	Murugesan V.		Dr.P.S.Sreejith	
263	Jayesh S.		Dr.Jacob Elias	
264	Jinu Mathew		Dr.Jacob Elias	
265	Rajesh Kocheril		Dr.Jacob Elias	
266	Sanjeevy.C		Dr.Jacob Elias	
267	Nimmu Mary Ivan		Dr.Jayadas N H	
268	Antonio Joseph V.K.		Dr.Jayadas N.H.	
269	Neethu George		Dr.K.K.Saju	
270	Saranya L.S		Dr.K.K.Saju	



271	Mathew Prins Korah Philip		Dr.M.R. Radhakrishna Panicker	
272	Chinmaya Krishnan G.		Dr.Narayanan Namboothiri M.N.	
273	Revikumarthampi V.R		Dr.Sreejith P.S.	
274	Anu N.Vincent		DR. GIREESH KUMARAN THAMPI	
275	Eldho Varghese		DR. GIREESH KUMARAN THAMPI	
276	Vishnu Sankar		DR. GIREESH KUMARAN THAMPI	
277	Nithin M.Joy		Dr.Gireesh Kumaran Thampi	
278	Praveen Vijayan		Dr.Gireesh Kumaran Thampi	
279	Aby S.		Dr.Jacob Elias	
280	Govind S.Menon		Dr.Jacob Elias	
281	Jimmy John		Dr.Jacob Elias	
282	Roshith K.		Dr.James Varghese	
283	Syamlal T.		Dr.Jayadas N.H.	
284	Toms Philip		Dr.Jayadas N.H.	
285	Sai Govind V.S.		Dr.M.R.R.Panicker	
286	Sri. Nirmal Job A	Nil	Prof. K.E. George Prof. G. Madhu (co-guide)	Safety Engineering
287	Smt. Padmavathi K.S	Nil	Prof. G. Madhu, Prof. D.K. Sahoo (co-guide)	Waste water treatment
288	Smt. Haseena P.V	Nil	Prof. G. Madhu, Prof. D.K. Sahoo (co-guide)	Waste water treatment
289	Smt. Jayasree V.K	Nil	Prof. G. Madhu, Prof. D.K. Sahoo (co-guide)	Waste water treatment



290	Smt. Indulakshmi B	Nil	Prof. G. Madhu	Proce control
291	Smt. Lila Bhai	Nil	Prof. G. Madhu	Waste water treatment
292	Sri. Joone Joy	Nil	Prof. G. Madhu, Dr. Roy M. Thomas (co-guide)	Waste water treatment
293	Sri. Sananth H. Menon	Nil	Prof. G. Madhu	Electrochemical Engineering
294	Sri. Mohammed Irshad E	Nil	Prof. G. Madhu, Dr. V.R. Renjith (co-guide)	Disaster Management
295	Sri. Krishnalal G	Nil	Prof. Jagathy Raj V.P, Prof. G. Madhu (co-guide)	Design Engineering
296	Sri. Uday Sankar K	Nil	Prof. M. Bhasi, Prof. G. Madhu (co-guide)	Supply chain management
297	Sri. Kishore Ravindran	Nil	Prof. G. Madhu, Dr. V.R. Renjith (co-guide)	Catalysis
298	Sri. Tiju Baby	Nil	Prof. G. Madhu, Dr. V.R. Renjith (co-guide)	Electrical safety
299	Praveen Mathew	KSCSTE	Dr. D.K. Sahoo	Recycled Aggregate Concrete
300	Thomas Paul		Dr. D.K. Sahoo	
301	Biju P. Varghese	KSCSTE	Dr. D.K. Sahoo	
302	James C.J.		Dr. D.K. Sahoo	Structural Engineering
303	Athira M.		Dr. D.K. Sahoo &	Fibre reinforced concrete
304	Manoj Jose Kalathil		Dr. V R Renjith	Fuzzy FMECA
305	Binu M Issac		Dr.George Mathew	Geopolymer Concrete
306	Suresh Babu N		Dr.George Mathew	Bauld in Concrete
307	Biju C V		Dr.George Mathew	Corrosion
308	Anish Job Kurian		Dr.George Mathew	Fire Engineering





## 6. Administrative Personnel

Sl.No.	Designation	No.of posts
1	Deputy Registrar	1
2	Section Officers	3
3	Assistants	10
4	Peons	7
5	Pool Officer	1
6	Computer Assistant	4
7	Duplicator operator	1
8	Librarian	-
9	Professional Assistant	1
10	Library Assistant	2
11	Sweeper Cum Cleaner	2
12	Assistant Librarian	1
13	Junior Librarian	1
14	Clerical Assistant	1

## 7. Technical Personnel

Sl.No.	Designation	No. of posts
1	Technical Assistant – Grade III	5
2	Technical Assistant – Grade II	11
3	-do- Grade I	3
4	Technician Grade I	8
5	Technician Grade-II	13
6	Lab Attendant	5
7	Store Keeper	1

## 8. Student Enrollment 2016-17

Sl.No.	Programme of study	Men	Women	Total
1	Ph.D	31	43	74
2	M.Tech (PT)			
i. Civil Engineering		13	7	20
ii. Chemical Engineering		19	2	21
iii. Electrical Engineering		17	3	20
iv. Mechanical Engineering		19	1	20



3	M.Tech (FT)			
	• Civil Engineering	3	15	18
	• Mechanical Engineering	15	2	17
	• Electronics & Communication Engineering	1	11	12
	• Information Technology	2	7	9
	• Computer & Engineering	1	7	8
	• Industrial Safety	14	4	18
4	B.Tech (Civil)	72	18	90
5	B.Tech (CS)	76	13	89
6	B.Tech (EC)	72	14	86
7	B.Tech (EEE)	53	6	59
8	B.Tech (IT)	69	17	86
9	B.Tech (ME)	86	1	87
10	B.Tech (SE)	61	0	61
	Total (B.Tech)	489	69	558

## 9. Research Facilities

### a. Laboratories (List out Major equipments available)

#### Details of Major Equipments

Name of the laboratory/workshop	Major equipment
<b>Civil Engineering</b>	
Strength of materials lab	UTM, Fatigue testing Machine, Machines for Hardness testing, Shake Table for vibration analysis
Construction Engineering Lab	Compression testing machine, Bending Testing Machines
Geotechnical Engineering lab	Unconfined compression testing m/c, Direct shear Testing m/c, Consolidation Testing m/c and Triaxial Testing Machine
Survey lab & Building Technology Lab	Total station, Theodolites, Levels
Highway Engineering lab	Marshall Equipment, Centrifuge Extractor for bituminous Mixes, Losangeles Abrasion Testing Machine.



Computer Lab	PC, Laptop, LCD Projector, Laser Printer, Software's – Plaxis 3D, Software for GIS, STAAD, AutoCAD etc.
Environmental Engg. Lab	Gas Chromatograph, Spectrophotometers, Flame Photometer, BOD Incubator, COD Analyser, Electronics Analytical Balances, Muffle Furnace, Oven.
<b>Mechanical Engineering</b>	
CAD lab	CNC trainer lathe Robotic arm
Computer programming lab	ANSYS AutoCAD
Fluid Mechnics lab	Hydraulic ram
Machine shop	Lathes, Milling machine
Metrology measure met lab	Profito meters
Thermal lab	Computerised 4s 4 Cylinder Petrol Engine, 3 Cylinder 4s Petrol Engine, 4s Single Cylinder Diesel Engine (2 Nos), Single Stage Single Cyliner Air Compressor, Multi Stage Single Cylinder Air Compressor
Heat and mass transfer lab	R&A /c Equipments
<b>Electronics &amp; Communication Engineering</b>	
Microprocessor lab	Microprocessor kit Micro controller kit
Circuit lab	CRO, Function generator, signal generator
Communication lab	Digital storage oscilloscope, RF signal generator
Advanced digital lab	Logic Analyzer, Spectrum analyzer
Advanced Computer lab	Computer server, Printer
VLSI Lab & Advanced Communication Lab	<ul style="list-style-type: none"> <li>i. Cadence - VLSI tools</li> <li>ii. LABView and USB DAQ unit</li> <li>iii. i7 computers</li> <li>iv. Network Analysor - ZVL 13 -13GHz, RS ZVB8 – 8GHz</li> <li>v. Antenna Pattern measurement – turn table setup</li> <li>vi. Altium Designer Tools and FPGA Boards</li> </ul>



<b>Information Technology</b>	
OOPS Lab	Equipped with HCL PC, Intel core 2 Duo - 3GHz processor, 320 GB HDD,1 GB PSU(0.5 mps), 17” monitor LED and Ubuntu Operating System. (20 Nos.)
DBMS Lab	Equipped with HCL Core i5 PCs with 3.1 GHz processor, 4GB DDR3 RAM, 2 DIMM slots, 500GB SATA Hard disk, 17” monitor LED and Ubuntu OS. (20 Nos.)
Multimedia Lab	The lab is equipped with DELL PC’s, Intel Core i3-4150 processor Dual core 3.5 GHz, 4GB DDR3 RAM , 2 DIMM slots 500GB SATA Hard Disk, 18.5 “ monitor and Ubuntu OS.(30 Nos.)The lab also has a Interactive white board with Business Projector Epson IN -11 2i.
Internet Lab	The lab is equipped with Intel core 2 DUO PC, 1.3GHz Processor, 500 GB HDD,1 GB RAM, 16” monitor LED, Wireless cards-DLINK 2GHz. 10 / 100/ 1000 mbps and Ubuntu Operating System.(25 Nos.) The Lab is also provided with Business Projector Epson EB 421i, HP P3005dn Laser jet printer and Dot matrix printer Epson LQ 2090.
Microprocessor /PC Hardware Lab	Equipped with 8086 Microprocessor Trainer kit, Digital IC trainer Kit,(15 Nos.) All in one – card / interface cards, CRO, Analog and Function Generator 1MHz.
Advanced Project Lab	This lab is equipped with DELL PC’s, Intel Core i3-4150 processor Dual core 3.5 GHz, 4GB DDR3 RAM, 2 DIMM slots 500GB SATA Hard Disk, 18.5 “ monitor and Ubuntu OS. (15 Nos.)
<b>Computer Science &amp; Engineering</b>	
Networks lab	50nodes, Intel core duo processor, Laser Printer one, Line Printer one, Server 2nos
Project lab	36 nodes Pentium II 1GHz 64MB Ram creative multimedia kits digital camera + Scanner + Server 2 HP net servers L3640
Data structure lab	50nodes, Intel core duo processor, Laser Printer one, Line Printer one
Microprocessor lab	Microprocessor kit Micro controller kit



<b>Safety &amp; Fire Engineering</b>	
1. Industrial Hygiene lab 2. Industrial Hydiene Lab 3. Fire Engineering Lab 4. Computational Lab	Furnace, Automatic Compression Testing Machine, Concrete Mixer, Concrete Vibrator, Data Logger, Loading Frame.
<b>Electrical &amp; Electronics Engineering</b>	
Electrical Machine Lab	3 phase transformers, Single Phase transformers, Auto phase transformers, Motor Generator set, Synchronous motor, Alternator, DC Motor, DC Generator, Rectifiers, Induction Motors
Measurements Lab	Wheatstones bridge, Kelvins double Bridge, Potentiometer, Maxwell's bridge, Function Generator, CRO, Rheostatic loader, Inductiver loads, Measuring Equipments
Power Electronics lab	Microcontroller based systems, SCR controlled drives, Measuring Equipments
Advanced Electrical Engineering Lab	Computers
Microprocessor Lab	Microprocessor Kits, CRO, Power supply.

### b) Library

No. of Books/Journals on 31 <sup>st</sup> March of previous year		Additions during the year
Books : 35798	Magazine: 50	Till March 2016 – 452

c) Others : Nil

### 10. Distinguished Visitors

Sl. No.	Name	Affiliation	Remarks
1.	Prof.Dr.ir William F. VAN IMPE	Faculty of Engineering and Arcitecture – Laboratory of Geotechnics, Technopark 905,B – 9052 Ghent, Zwijnaarde, Belgium – Europe	
2.	Prof. Dr.K.S.Jagadish	Retd. Professor, IISC, Bangalore	



3.	Dr.Chem Nayar	Emeritus Professor Curtin University of Technology, Astralia	Scholar of Seminar Series Under ERUDITE Programme
4	N.Krishnan Moothathu	Former director, Joint Cipher Bureau (JCB), New Delhi.	Workshop on Information Security and Knowledge Management with Special Emphasis on Tools and Techniques
5	Padma Shri Dr. S.K. Pal	Former Director of Indian Statistical Institute, Kolkata	Seminar on Granular Mining and Rough- fuzzy Computing: Data to Knowledge and Bigdata

### 11. Ph.Ds Awarded

Sl. No.	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Analysis and design of a single stage single switch power factor	Bindu.S.J	Dr. C.A.Babu
2	Design and Development of Planar Lowpass Filters with Sharp Roll- off and Wide Stopband for RF and Wireless Communication Systems”	Raphika P M	Dr. Abdulla P.
3	”Analysis and Experiments on Coupling Enhancement of Rectangular Waveguide Fed Dielectric Resonator Antennas”	Jasmine PM	Dr. Abdulla P.
4	“ <i>Design and Development of Compact Planar Filters for Ultra Wide Band Applications</i> ”	Bindu CJ	Dr.S.Mridula
5	Neural network Based modeling, characterization and identification of chaotic systems in Nature.	Archana R.	Dr.R Gopika kum ari
6	Stochastic Demand Forecast of Novel and Short Life Products by Using Markov Based Algorithm”	Bijesh Paul	Dr Jayadas N H
7	Trust Based Key Management Framework for MANET	Saju P John (Reg No:3804)	Dr. Philip Samuel
8	Program Slicing Techniques for Software Testing	Anupama Surendran (Reg No:3807)	Dr. Philip Samuel



## 12. Publications:

### b. Papers

#### Civil Engineering

Sl. No.		Name of Paper	Impact Factor, if any
1.	Dr.BENNY MATHEWS ABRAHAM	Role of Bentonite in Improving the Efficiency of Cement Grouting in Coarse Sand, Journal of Geotechnical Engineering, South East Asian Geotechnical Society, Vol. 47, No. 3, September 2016.	
		Water Content Ratio: An Effective Substitute for Liquidity Index for Prediction of Shear Strength of Clays, Journal of Geotechnical and Geological Engineering, Springer, DOI: 10.1007/s10706-017-0193-0, March 2017	
2	Dr. BEENA K.S	Santhosh G and Beena K. S. (2016) "Studies on strength characteristics of soil mixed with Jarofix" Indian Geotechnical Conference, IGC 2016, IIT Madras, Dec 15-17, 2016	
		Unni Kartha G., Beena K. S., and Mohammed Thahir C. P.(2016) "Shake table studies on embankments on liquefiable soil", Indian Geotechnical Conference, IGC 2016, IIT Madras, Dec 15-17, 2016	
		Kavitha P.E., Beena K. S. and Narayanan K. P. (2016)" A review on soil-structure interaction analysis of laterally loaded piles", Innovative Infrastructure Solutions (Springer Publication) 2016, 1:14 June 2016.	
		Kavitha P.E., Beena K. S. and Narayanan K.P.(2016)" Numerical Investigations on the Influence of Soil Structure Interaction in the Dynamic Response of SDOF System" Elsevier Publication, Procedia Technology 25 (2016) 178 – 185.	
3	Dr.DEEPA BALAKRISHNAN S	Study on the behavior of self compacting concrete with fly ash and glass powder as partial replacement for cement. International journal of Innovative and Emerging Research in Engineering, January 2017	



4	Dr. DEEPA G NAIR	<p>1. Antony, J., Nair, D.G., 2016. Potential of Construction and Demolished Wastes as Pozzolana, Procedia Technology (2016) 194 – 200, August 2016</p> <p>2. Usha,S., Nair,D.G., Vishnudas, S., 2016. Feasibility Study of Geopolymer Binder from Terracotta Roof TileWaste, Procedia Technology 25 (2016) 194 – 200,August 2016.</p> <p>3. Lekshmi, M.S., Vishnudas, S.,Nair,D.G., 2017. An investigation on the potential of mud as sustainable building material in the context of Kerala, Int. J. Energy Technology and Policy, Vol. 13, Nos. 1/2, 2017, 107-121</p> <p>4. Antony, J., Nair, D.G., 2016. Roof Tile Powder as a Partial Replacement to Cement in Masonry Mortar, Civil Engineering and Urban Planning: An International Journal (CiVEJ) Vol.3</p> <p>5. Lekshmi, M.S., Vishnudas, S.,Nair,D.G., 2014. Experimental Study on the Physical Properties of Mud Mortar in Comparison with the Conventional Mortars, Civil Engineering and Urban Planning: An International Journal (CiVEJ) Vol.3</p>	<p>0.73</p> <p>0.73</p> <p>0.32</p>
5	Dr. GLORY JOSEPH	Asha Joseph and Glory Joseph (2016) Response of ground supported cylindrical Tanks to harmonic loading, Civil Engineering and Urban Planning: An International Journal (CiVEJ) Vol.3, No.2, June 2016.	
6	Dr. JOB THOMAS	Ramadass S and Job Thomas (2016), Parametric Study of Shear Strength of Concrete Beams Reinforced with FRP Bars, Journal of The Institution of Engineers (India): Series A, <b>September 2016, Volume 97, Issue 3</b> , pp 273–284	
7	Mr. RAMADASS S	<p>1. Ramadass S and Job Thomas (2016), Parametric Study of Shear Strength of Concrete Beams Reinforced with FRP Bars, Journal of The Institution of Engineers (India): Series A, <b>September 2016, Volume 97, Issue 3</b>, pp 273–284</p> <p>2. Ramadass S. Kavya K.Kumar, and Vivek Philip, Parametric study on concrete deep beams reinforced with steel bars,International conference on recent Advances in Civil Engineering, ICSPACE, January 14-16,2016, School of Engineering, CUSAT, pp 361-370</p>	





8	Dr. RENU PAWELS	<p>Asha P. Tom, Renu Pawels &amp; Ajit Haridas, Biodrying Process: A sustainable Technology for treatment of Municipal solid waste with high moisture content Waste Management 49(2016)64-72 (</p> <p>Asha P. Tom, Ajit Haridas &amp; Renu Pawels Biodrying Process Efficiency: Significance of Reactor matrix Height, Proceedia Technology 25(2016)130-137</p>	I.F: 3.332
9	Dr. SUBHA V	<ol style="list-style-type: none"> <li>1. Athira Ravi, Subha Vishnudas (2017). Policies and Strategies for Sustainable Solid Waste Management in Urban Residential Areas – A Case Study of Kochi City, Kerala, India, International Journal of Engineering and Technology (IJET), Vol 9 Issue 3, ISSN (Print) : 2319-8613, ISSN (Online) : 0975-4024, DOI: 10.21817/ijet/2017/v9i3/170903204, pp 1917-1924.</li> <li>2. Athira Ravi, Subha Vishnudas(2017). Waste Footprint Model for Calculating the Waste Footprint of Urban Residential Areas, International Journal of Civil Engineering and Technology (IJCIET) Volume 8, Issue 5, ISSN Print: 0976-6308 pp. 14–21.</li> <li>3. Athira Ravi, Subha Vishnudas, C E Ajith Kumar (2017). Waste Footprint of Kochi City, Kerala, India – A Statistical Analysis, Global journal for research analysis, Volume : 3 Issue : 11, ISSN No 2277 - 8179, pp 644-647</li> <li>4. Lekshmi M S, Subha Vishnudas, Deepa G. Nair (2017). An investigation on the potential of mud as sustainable building material in the context of Kerala, Int. J. Energy Technology and Policy, Vol. 13, Nos. 1/2, pp 107-122.</li> <li>5. Subha V, Anil K R &amp; Balan K (2017). Coir Geotextiles – a sustainable solution for soil and water conservation in Kerala, Compendim of research articles- Uses and established environmental friendly applications of coir geotextiles, National Coir Research Management Institute, Thiruvanthapuram, pp-119-1</li> </ol>	4.547



	<p>6. Athira Ravi, Subha Vishnudas Sustainable Options for Reducing the Waste footprint in Residential Areas – A Case Study of Kochi City. International Journal of Scientific and Research Publications, Volume 7, Issue 7, July 2017 ISSN 2250-3153</p> <p>7. Athira Ravi, Subha Vishnudas Conceptual Framework for Evaluating the Sustainability of Domestic Organic Waste Management Techniques. International Journal of Civil Engineering and Technology (IJCET) Volume 8, Issue 6, June 2017</p> <p>8. Athira Ravi, Subha Vishnudas Evaluation of Biotechnology Program as a Sustainable Domestic Organic Waste Management Technique – A Case Study in Kochi City. Civil Engineering and Urban Planning: An International Journal (CiVEJ) Vol.4, No.2, June 2017</p>	
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**Books**

Sl. No.	Name of Book
1	<p>Concrete Technology, 1/e Thomas Job ISBN : 9788131526682</p> <p>Pages : 476 Binding:Paperback</p> <p>Trim Size: 241 x 181 mm Imprint:CL India</p> <p>© Year:2015</p> <p>Price:INR 495.00</p>
2	<p>Dr. Job Thomas</p> <p>Asst. Prof in Civil Engineering School of Engineering Cochin University of Science &amp; Technology Cochin, Kerala</p>

**Computer Science:**

**a. Papers**

Sl.No.	Name of Paper	Impact Factor if any
1	<p>Cerene Mariam Abraham, M. Sudheep Elayidom, T. Santhanakrishnan</p> <p>“Design And Implementation Of Efficient Regression Analysis Techniques In Derivative Market”,</p>	



2	Cerene Mariam Abraham, M. Sudheep Elayidom, T. Santhanakrishnan "Implementation Of Correlation And Regression Techniques For Efficient Analysis Of Indian Stock Market "	
3	Suja C Nair, Sudeep Elayidom M, Sasi gopalan "Impact of CDR Data Analysis Using Big Data Technologies for Public :An Analysis	
4	Suja C Nair, Sudeep Elayidom M, Sasi gopalan "DESIGN & IMPLEMENTATION OF TRAFFIC ANALYSIS AND PREDICTION SYSTEM USING CDR DATA	
5	Hema Krishnan, M.Sudheep Elayidom, T. Santhanakrishnan MongoDB: A Comparison with noSQL databases	
6	Hema Krishnan, M.Sudheep Elayidom, T. Santhanakrishnan Sentiment Analysis of Tweets for inferring popularity of mobile phones	
7	Femina T Bahari, M. Sudeep Elayidom "A fuzzy possibilistic frame work for segmentation of customer data for behavioural analysis in banking sector"	
8	Femina T Bahari, M. Sudeep Elayidom "Segmentation Approach in Predicting Credit Worthness of Customers in Banking	
9	Girija O K, M.Sudeep Elayidom "Recent Trends in Image Retrieval Image retrieval Techniques for the Big data platform"	
10	Girija O K, M. Sudeep Elayidom "Improved Technique for Image Clustering Using BTC and Fuzzy C Means Clustering Algorithm"	
11	Sankara nayaka, M.Sudeep Elayidom "An Extensive Study on Data Anonymization Algorithms Based on K-Anonymity"	
12	Sheena S. and Sheena Mathew, "Multimodal Biometric Authentication: Secured Encryption of Iris Using Fingerprint ID"	
13	1.Ancy sherin, Latha R Nair, Data mining in software defined networks, IEEE 2017 International conference on computing methodologies & communication (ICCMC), pp-668-672	
14	Rahooof p.p., Latha R Nair, Trust structure in public key infrastructure, 2nd international Conference on Anti-Cyber Crimes (ICACC), March 2017, Saudi Arabia Page No. 223-227	



15	3.Dhanya K Sudheesh, Latha R Nair, Content based image retrieval on 3D models, National conference on energy trends in engineering and technology, Dec. 2016, pp-89-92.	
16	<p><u>Journal Papers</u></p> <p>1. Prabha Elizabeth Varghese, Latha R Nair, Security enhancement of English text using prathala table of alphanumerals, 7<sup>th</sup> international conference on advances in computing and communication (ICACC-2017), Published in Elsevier Procedia Computer Science 00 (2017) 000–000.</p> <p>2. Rahoof P.P., Latha R Nair, Incorporating Trust in public key infrastructure certificates, Advances in Computational Science and Technology, ISSN 0973-6107, volume 10, number 5(2017), pp-671-686</p>	

## Electrical & Electronics Engineering

### Papers

Sl. No.	Name of Paper	Impact Factor, if any
1	Vinod V Nair, C A Babu, Usha Nair, "Adaptive And Modified Adaptive Control For Pressure Regulation In A Hypersonic Wind Tunnel", Safety and fire engineering (SAFE17) 27 and 28 April 2017	
2	Rajani S.H, Bindu M. Krishna, Usha Nair, 'Residential PV systems – Safety Hazards and Risk Mitigation', IEEE-International Conference on Innovative Mechanisms for Industry (ICIMIA 2017) Bangalore 21-23 Feb 2017	
3	Arun Prasad K.K., Usha Nair, "Chattering Free Sliding Mode Controller For A Hypersonic Wind Tunnel", IEEE-International Conference on Innovative Mechanisms for Industry (ICIMIA 2017) Bangalore 21-23 Feb 2017	
4	Vinod V Nair, Usha Nair, "An Intelligent Fuzzy Sliding Mode Controller for a BLDC Motor", 2016 IEEE International Symposium on Technology and Society (ISTAS)   20-22 October 2016   Trivandrum	
5	Preethi Sebastian, Usha Nair, "Distributed Energy Integration and Transactive Energy Framework for a Developing Economy", Elsevier Conference (RAEREST 2016) 21-22 March 2016	
6	Preethi Sebastian, Usha Nair, "Improved Low Voltage Ride through Capability of a Fixed Speed Wind Generator using Dynamic Voltage Restorer", Elsevier Conference (RAEREST 2016) 21-22 March 2016	



7	Vineetha, C.P and C. A. Babu, "Optimization of Hybrid Power System Connected to Single Directional Grid", International Journal of Energy Technology and Policy, Inderscience Publications, Vol. 13, Nos.1/2, pp 53-72, 2017	
8	Bindumol E K and C. A. Babu, "A Novel Analytical Approach for Sizing and Placement of DG Radial Distribution System", International Journal of Energy Technology and Policy, Inderscience Publications, Vol. 13, Nos.1/2, pp 90-106, 2017	
9	Bindu S J and C.A. Babu, "Implementation of a Low Cost, Compact Single Stage Power Quality Converter with Reduced Bus Voltage Stress", International Journal of Energy Technology and Policy, Inderscience Publications, Vol. 13, Nos.1/2, pp 73-89, 2017	
10	S.R. Anand, C.A. Babu and V.P. Jagathyraj, "A practical Approach to Assessment of the Base Power Contracts and Peak Power Contracts for a Distribution Utility", International Journal of Electrical Power & Energy Systems, Volume 78, pp 385-389, 2016	
11	Vineetha C P and C. A. Babu, "Optimal Unidirectional Grid Tied Hybrid Power System for Peak Demand Management", Advances in Energy Research, An International Journal, Techno-press Publications, Volume 4, No. 4, 2016	
12	Arun Prasad K M, Usha Nair and Unnikrishnan A "Fuzzy Sliding Mode Control of a Switched Reluctance Motor ". 1st Global Colloquium on Recent Advancements and Effectual Researches in Engineering, Science and Technology RAEREST 2016. Procedia Technology (peer reviewed), ELSEVIER	
13	Preethi Sebastian, Usha Nair, "Improved Low Voltage Ride through Capability of a Fixed Speed Wind Generator using Dynamic Voltage Restorer", 1st Global Colloquium on Recent Advancements and Effectual Researches in Engineering, Science and Technology RAEREST 2016. Procedia Technology (peer reviewed), ELSEVIER	
14	Rajeevan.A.K., P.V Shouri, Usha Nair "ARIMA Based Wind Speed Modeling for Wind Farm Reliability Analysis and Cost Estimation", J Electr Eng Technol.2016; 11, 1921-718 JEET.2016.11.1.1921(peer reviewed,(Imp.Factor 0.528)	
15	"Design and Analysis of Different Low Noise Amplifiers in 2-3GHz " Prameela B Research Scholar, Division of Electrical Engg. School Of Engineering, CUSAT Kerala, India prameela.ec@adishankara.ac.in Asha Elizabeth Daniel Associate Professor, Division of Electrical Engg. School Of Engineering, CUSAT Kerala, India <a href="mailto:ashapalal@gmail.com">ashapalal@gmail.com</a>	

**Electronics and Communication Engg.****a. Papers**

SI No	Name of Papers
1	Sumi M, Anju Pradeep, Binu Paul, <b>S. Mridula</b> , "High security chipless RFID tags using Frequency shift coding technique," Radio Engineering Journal(accepted)
2	R.Rajesh Mohan, Anju Pradeep, <b>Mridula Shanta</b> and Mohanan Pezholil, "Microwave Imaging for Soil Moisture Content Estimation", 2016 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting in Fajardo, Puerto Rico, June 26 - July 1, 2016. 978-1-5090-2886-3/16/\$31.00 ©2016 IEEE, pp.865- 866.
3	Sumi M, Dinesh R, Nijas C M, <b>S. Mridula</b> and P.Mohanan, "U slot multi-resonator RFID tag with enhanced bit encoding capacity," Proc., 2016 IEEE Region 10 Conference (TENCON), Singapore, November 2016, pp.116-119.
4	R.Rajesh Mohan, Anju Pradeep, <b>Mridula Shanta</b> and Mohanan Pezholil, Speckle Noise Reduction in Images using Wiener Filtering and Adaptive Wavelet Thresholding, Proc., 2016 IEEE Region 10 Conference (TENCON), Singapore, November 2016, pp.2862-2865
5	Jos Prakash A.V, <b>Babita R Jose</b> , Jimson Mathew, "A Differential Quantizer based Error Feedback Modulator for Analog to Digital Converters" IEEE Transactions on Circuits and Systems II: Express Briefs, Feb 2017, DOI:10.1109/TCSII.2017.2666822.
6	Jos Prakash A.V, <b>Babita R Jose</b> , Jimson Mathew, "A Triple-mode Hexa-standard Reconfigurable TI Cross-Coupled Modulator" International Journal of Electronics (Taylor & Francis), Oct 2016, DOI: 1080/00207217.2017.1285441
7	Jaison Jacob, <b>Babita R Jose</b> , Jimson Mathew, "An Antenna Selection Scheme with MRE and AWC for Decision Fusion in Cognitive Radio" Transactions on Emerging Telecommunications Technologies, March 2017, DOI:10.1002/ett.3161, ISSN 2161-3915
8	Chikku Abraham, <b>Babita R Jose</b> , Jimson Mathew, Michael Evzelman, "Modelling, Simulation and Experimental investigation of a New Two Input Series Parallel Switched Capacitor Converter", IET Power Electronics, DOI: 10.1049/iet-pel.2015.1000, ISSN 1755-4543.
9	Jaison Jacob, <b>Babita R Jose</b> , Jimson Mathew "Bayesian Analysis of spectrum occupancy prediction in Cognitive Radio " Int. Journal, Smart Science,(2016) Taylor & Francis publication. DOI: 10.1080/23080477.2016.1182360, Indexed in the Emerging Sources Citation Index
10	Jaison Jacob, <b>Babita R Jose</b> , Jimson Mathew "Fusion Rule for Cooperative Spectrum Sensing in Cognitive Radio" Journal of Circuits, Systems & Signal Processing (CSSP), Springer, <u>CSSP 35(9): 3418-3430(2016).</u>



11	Chikku Abraham, <b>Babita R Jose</b> and Jimson Mathew, "A dual source switched-capacitor converter with solar energy integration capability", International Journal of Energy Technology and Policy (IJETP), Inderscience publishers, Vol. 13, Nos. 1/2, 2017, DOI 10.1504/IJETP.2017.10000610
12	Jos Prakash A.V, <b>Babita R Jose</b> , Jimson Mathew,"A Novel Excess Sturdy-MASH-Loop-Delay Compensated Cross-Coupled Modulator", Proceedings of 29th International Conference on VLSI Design and 15th International Conference on Embedded Systems,Kolkata,Jan 2016.DOI:10.1109/VLSID.2016.59, Pages 246 – 251.
13	Rijo Sebastian, <b>Babita R Jose</b> , Shahana T.K.,"Low Distortion MASH Modulator for Digital Audio Applications"published in the Extended Abstracts, 28 <sup>th</sup> Kerala Science Congress held at University of Calicut,28-30 Jan 2016, pageno.1066-1071
14	Rijo Sebastian, Jos Prakash A.V., Babita Roslind Jose, <b>Shahana T.K.</b> , "A multi-mode MASH Modulator for low power wideband applications", 6 <sup>th</sup> International Symposium on Embedded Computing and System Design (ISED 2016) held at IIT Patna, 15-17 Dec 2016 (Conference proceedings at IEEE digital Xplor
15	Mahesh V.V., <b>Shahana.T.K.</b> , "Delay and Area Efficient Sound Wave Decomposition by Nonuniform Filter Bank for Digital Hearing Aids", SAI Intelligent Systems Conference 2016 (IntelliSys 2016), London, UK, pp. 57-61, 21-22 September 2016. ISBN: 978-1-5090-1121-6 (IEEE)
16	Jithendra.K.B, <b>Shahana.T.K.</b> , "Elastic Serial Substitution Box for Block Ciphers with Integrated Hash Function Generation", SAI Intelligent Systems Conference 2016 (IntelliSys 2016), London, UK, pp. 1016-1022, 21-22 September 2016. ISBN: 978-1-5090-1121-6 (IEEE)
17	Sarin V P, <b>Anju Pradeep</b> , M P Jayakrishnan, Aanandan Chandroth, P Mohanan, K Vasudevan, "Tailoring the spectral response of a dogbone doublet metamaterial", Microwave and Optical Technology Letters, vol.58,no:6, June 2016, pp 1347-1353
18	<b>Anju Pradeep</b> , S Mridula and P Mohanan, " High Security Identity Tags Using Spiral Resonators, " Special Issue of CMC Journal on Metamaterials. (Accepted).3. Sumi
19	M, Anju Pradeep, Binu Paul, <b>S. Mridula</b> , "High security chipless RFID tags using Frequency shift coding technique," Radio Engineering Journal(accepted)
20	<b>A4. R.Rajesh Mohan</b> , Anju Pradeep, <b>Mridula Shanta</b> and Mohanan Pezholil, "Microwave Imaging for Soil Moisture Content Estimation", 2016 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting in Fajardo, Puerto Rico, June 26 - July 1, 2016. 978-1-5090-2886-3/16/\$31.00 ©2016 IEEE, pp.865- 866
21	5. Pranav U.S., Sudheesh.S., Paul Stanly, Sonima Sankar, R.Devika, <b>Anju Pradeep</b> ,"Metamaterial based Energy Harvester" ICACC 2016, RSET, Sept 2016, pp 74-80



22	2. 6. Remsha M, Manoj M, M P Jayakrishnan, <b>Anju Pradeep</b> , P Mohanan," Spiral Resonator Based Biosensor for Blood Glucose Monitoring,"ICMARS-2017, Jodhpur, India, Feb.15-17, 2017
23	7. Bindu C J, Anishamol Asokan, <b>Anju Pradeep</b> , BinuPaul, S Mridula," Study of Rectangular Spiral Resonators and their applications in MICS Band Notch Filters," National Conference on Advanced Computing, Communication and Electrical Systems (NCACCES'17), 24-25 March 2017
24	V.L.Jaya, <b>R.Gopikakumari</b> , "Sequency-based mapped real transform: properties and applications" Signal, Image and Video Processing Journal, Springer, 30 May 2017, pp 1-8. Citation index: Jaya, V.L. & Gopikakumari, R. SIViP(2017).doi:10.1007/s11760-017-1119-2
25	Manju B, <b>R. Gopikakumari</b> , "Comparison of SMRT and Wavelet texture features", International journal of Engineering and Future Technology, issue No.3, Volume 14, pp:14-22, 2017, ISSN 2455-6432
26	Anjit T A, Philip Cherian, <b>Mythili P</b> , "A Sparse View Approach for Microwave Diffraction Tomography", International Symposium on Antennas and Propagation (APSURSI), 2016 IEEE
27	Philip Cherian, <b>Palayyan Mythili</b> , "A Stopband Control Technique for Conversion of CPW-Fed Wideband Antenna to UWB", Progress In Electromagnetics Research Letters, Vol. 67, 131–137, 2017
28	K.T.Shanavaz, <b>P. Mythili</b> , "A fingerprint-based hybrid gender classification system using genetic algorithm", Vol. 6, No. 4, pp. 399–413, 2016.
29	C. K. Vijayakumari, <b>Rekha K. James, P. Mythili</b> , "A GA Based Simple and Efficient Technique to Design Combinational Logic Circuits Using Universal Logic Modules", Journal of Circuits, Systems and Computers, Volume 25, Issue 07, July 2016
30	JesnaAnver, <b>Abdulla P</b> , " Single Image Super Resolution Using Fixed Budget-Kernel Recursive Least Square", International Interdisciplinary Research Journal, pp 367-370, Volume-07, May 2017 Special Issue
31	Anu AR, <b>Abdulla P.</b> , Jasmine P.M, Raphika P.M, "Semicircular Aperture Coupled Hemispherical Dielectric Resonator Antenna", accepted in International Journal of Advances in Microwave Technology Vol.1, No.2, pp. 053-057, August 2016
32	.P.M. Jasmine, <b>Abdulla P.</b> , P.M. Raphika "Analysis and Experiments of Stair- Shaped Waveguide fed Dielectric Resonator Antenna" <i>IET Microwaves Antennas and Propagation</i> , Volume 10, Issue 4, p. 453 –458, 2016.
33	.Raphika P.M, <b>Abdulla P.</b> , Jasmine P.M, "compact wide stopbandlowpass filter with high suppression using corrugated transmission line," <i>IOP Conference Series Material Science and Engineering</i> , Volume 120, 2016, pp. 01-04.
34	.Raphika P.M, <b>Abdulla P.</b> , Jasmine P.M" Planar Elliptic Function Lowpass Filter with Sharp Roll-off and Wide Stopband" <i>Microwave and Optical Technology Letters. Microwave and Optical Technology Letters</i> . Vol. 58, No. 1, pp. 133-136 January, 2016.





35	V. S. Hari, V. P. Jagathy Raj, R. Gopikakumari, " Quadratic filter for the enhancement of edges in retinal images for the efficient detection and localization of diabetic retinopathy", Springer <u>Pattern Analysis and Applications</u> , February 2017, Volume 20, <u>Issue 1</u> , pp 145–165
36	Saira Joseph, Sunil Jacob, <b>Binu Paul</b> , Shanta Mridula and P. Mohanan, "Time Domain Characterization of Dual Band Spiral Antenna with WMTS/UWB Application", Vol. 2017, Article ID 2301751, 6
37	Jasmine PM, Abdulla P, Raphika PM, Anu AR, Rekha TK, Ami Iqbal "Coupling Enhancement of Rectangular Waveguide fed Hemispherical DRA", International Journal of Scientific Progress and Research, Vol. 25, No. 02, pp. 78-80, 2016

#### 1.1.0.0.1. Books

SI No	Name of Books
1	1. Microwave Dielectric Materials and Applications, Wiley, ISBN: 978-1- 119-20852-5 <b>Prof.P Mohanan &amp; Dr.S Mridula</b> (Book Chapter)

### Information Technology

#### a. Papers

Sl. No.	Name of Paper	Impact Factor, if any
1	K.R. Remesh Babu, Sheba Jiju George, <b>Philip Samuel</b> , "Optimal sensor search from a pool of sensors; in IoT environment", International conference on advanced technological computation and communication tends (ICATCCT 2016), IEEE, Pages. 420-429, Bangalore, 21-23 July 2016. ISBN: 978-1-5090-2399-8	
2	Sunitha E V and <b>Philip Samuel</b> , Object Oriented Method to Implement the Hierarchical and Concurrent States in UML State Chart Diagrams Software Engineering Research, Management and Applications, Springer Volume 654 of the series Studies in Computational Intelligence 2016, Pages 133-149.	
3	G Jisha, <b>Philip Samuel</b> , V Paul, Role of Gateways in MANET Integration Scenarios, Indian Journal of Science and Technology, Vol. 9, Issue 3, (2016), Pages 1-19	
4	E V Sunitha, <b>Philip Samuel</b> , Automatic Code Generation Using UML Activity and Sequence Models, IET Software, Vol.10, Issue 6, July 2016	



5	G Jisha, <b>Philip Samuel</b> , V Paul, Integrated MANET Routing Scheme for Heterogeneous Networks, Middle-East Journal of Scientific Research, Vol 24 Issue 6, June 2016, Pages 2166-2172	
6	K R Remesh Babu, Anija V S, <b>Philip Samuel</b> , Virtual Machine Placement for Elastic Clouds with QoS, International Journal of Control Theory and Applications I J C T A, Vol. 9(19) 2016, Pages 9071-9081, International Science Press	
7	K R Remesh Babu, Saranya S, and <b>Philip Samuel</b> , "Advanced Cache Techniques for SLA-Driven Multi-Tenant Application on PaaS", International Journal of Computer Information Systems and Industrial Management Applications, vol. 8, 2016, pp.266-274.	
8	K R Remesh Babu, <b>Philip Samuel</b> , "Enhanced Bee Colony Algorithm for Efficient Load Balancing and Scheduling in Cloud", Journal of Network and Innovative Computing, vol. 4, 2016, pp. 135-142	
9	Sandhya N, <b>Philip Samuel</b> and Mariamma Chacko, Data Triggered Programming Model for Text Processing in Big Data, Journal of Network and Innovative Computing, ISSN 2160-2174, Volume 4 (2016) Pages. 220-228	
10	Renu George, <b>Philip Samuel</b> , Improving UML Class Attribute Definitions Using Particle Swarm Optimization, Journal of Network and Innovative Computing, Volume 4 (2016) Pages. 192-199	
11	Jesna A. A. and <b>Renamol V. G.</b> "An IDE for Java with Multilevel Hints to Develop Debugging Skills in Novices", The IAFOR International Conference on Education, Dubai Feb. 2016.	
12	<b>Renamol V. G.</b> and Krishna Kumar G, "Guidelines to Improve the Practices by Teachers and Students to Upgrade Engineering Education in India", Fourth International Conference on Transformations in Engineering Education (ICTIEE'17), Hyderabad, Jan, 2017.	
13	<b>Renamol V. G.</b> , Krishna Kumar G, Gopeekrishnan R. and Nisha S Raj, "Effective Teaching Learning Environment through Constructive Feedback: A Preliminary Study", Journal of Engineering Education Transformations (JEET), Volume 30, No.3, ISSN 2349-2473, eISSN 2394-1707, Jan 2017.	
14	Sidharth S. Prakash and <b>Binsu C. Kovoov</b> , "Performance optimisation of web application using in-memory caching and asynchronous job queues", International Conference on Inventive Computation technologies, IEEE, e-ISBN: 978-1-5090-1285-5,2017	
15	Remya Remesh and <b>Sariga Raj</b> , "End to End Data Transmission Through Visible Light Communication Using Steganography." Proceedings of the 11 <sup>th</sup> INDIACom;-2017; IEEE Conference ID: 40353, 2017. 4 <sup>th</sup> International Conference on "Computing for Sustainable Global Development", 1 <sup>st</sup> – 3 <sup>rd</sup> March, 2017.	



16	<b>Akhil P V, Seetha Parameswaran and Shelbi Joseph</b> , “Edge Analysis Based Data Hiding on Digital Images with PVD Technique” published in International Journal for Research in Applied Science and Engineering Technology(IJRASET), Volume 5, Issue II, 2017	
17	<b>Akhil P V, Seetha Parameswaran and Shelbi Joseph</b> , “Data Hiding on Digital Images by Diamond Encoding driven through JPW Masking” published in International Journal for Scientific Research and Development, Vol. 4, Issue 12, 2017, ISSN : 2321-0613	
18	<b>Akhil P V, Seetha Parameswaran and Shelbi Joseph</b> , “Reliability Estimation of Open Source Software based Computational Systems” published in International Journal of Innovative Research in Computer and Communication Engineering, Vol. 5, Issue 2, 2017	
19	Sreejadevi,, Swathi S, <b>Shelbi Joseph and Akhil P V</b> , “A Survey on Various Travel Recommender Systems” published in International Journal of Innovative Research in Science, Engineering and Technology, Vol. 6, Issue 2	
20	<b>Seetha Parameswaran and Shelbi Joseph</b> , “Various methods of using content-based filtering algorithm for recommender systems” published in International Journal of Innovative Research in Science, Engineering and Technology, Vol. 6, Issue 2	

## Mechanical Engineering

### a. Papers

Sl. No	Title of paper	Impact factor, if any
1	Manoj George, KE George, Jayadas N H Mechanical and thermal properties of modified kaolin clay/unsaturated polyester nano-composites	Journal of Applied polymer science, 2016
2	Arun, Tide P S, Biju N. Numerical investigation of heat transfer and pressure drop in shell and tube heat exchangers with segmental and helical baffles	Heat Transfer Research, (American Society of Thermal and Fluids Engineers) (Under review)
3	Julie Chandra C S, Bipinbal P K, Biju N, Sunil K.N.Kutty, Frequency- Dependent Dynamic Mechanical Properties of Natural Rubber/ Carbon Black Composites Measured by DMA and Correlated with RPA Test Data	Polymer Testing (under Review)
4	Antonio Joseph, Jinsha Rajeevan, Shihabuden H and Gireeshkumar Thampi B.S. Approximate analysis of S.I engine Knocking using Wavelet and it's control with cooled Exhaust gas recirculation	FME Transactions, 44, 2016, pp 22-28.



5	Jinsha Rajeevan, Hans M.H, Antonio Joseph, Kiran T.S and Gireeshkumaran Thampi B.S., Hybrid turbocharged S.I engine with cooled exhaust gas recirculation for improved performance,	Elsevier- Procedia Technology, 24, 2016,pp 444- 451.
6	Suni Mathai, Biju N, Krishnan Balasubramanian Estimation of Thermal and Electrical Conductivity Of CFRP From Eddy Current Thermography Data	British Institute of Non Destructive Testing- INSIGHT (under Review)

## Safety & Fire Engineering

### a. Papers

Sl. No.	Name of Paper	Impact Factor, if any
1.	Puthenkattil Abdulkunji Fasnabi, Gopal Madhu, Poopana Antony Soloman. Removal of Acetamiprid from Wastewater by Fenton and Photo-Fenton Processes –Optimization by Response Surface Methodology and Kinetics. Clean – Soil, Air, Water, 2016, 44 (9999), 1–10 (WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim). (Impact Factor:1.716) (DOI: 10.1002/clen.201400131)	
2.	B. K. Bindhu & G. Madhu. Application of grey system theory on the influencing parameters of aerobic granulation in SBR. Environmental Technology (Taylor & Francis).(Impact Factor: 1.760) Published on-line: 31 October 2016. <a href="http://dx.doi.org/10.1080/09593330.2016.1246617">http://dx.doi.org/10.1080/09593330.2016.1246617</a> .	
3	Manoj Jose Kalthil, V.R. Renjith, Fuzzy failure mode effect and criticality analysis in tyre manufacturing industries, International conference on safety and Fire Engineering, SAFE'1727-28 April, 2017, Kochi, pp 28-35.	
4	Samuel George, V.R. Renjith, Risk assessment of LNG re-gasification terminal using cascade fuzzy LOPA. International conference on safety and Fire Engineering, SAFE'1727-28 April, 2017, Kochi, pp 79-87.	
5	P.Haresh Kumar, V.R. Renjith, Fuzzy FMECA (failure mode effect and criticality analysis) in LNG terminal operations. International conference on safety and Fire Engineering, SAFE'1727-28 April, 2017, Kochi, pp 116-122.	
6	Joel John George, Saheen Ahmed, Priscilla Grace George, V.R. Renjith, Duel mode fire fighting Robot, International conference on safety and Fire Engineering, SAFE'1727-28 April, 2017, Kochi, pp 116-122.	



7	Minu P R and George Mathew (2016), "Effect of GGBFS on corrosion potential of steel in concrete", International Research Journal of Engineering and Technology (IRJET) (e-ISSN: 2395-0056), Vol. 03, Issue 09, pp 690-694	
8	Nithya P S and George Mathew (2016), "Effect of fly ash on corrosion potential of steel in concrete", International Research Journal of Engineering and Technology (IRJET) (e-ISSN: 2395-0056), Vol. 03, Issue 09, pp 860 – 864.	
9	Nismiya Ayoob and George Mathew (2016), "Influence of organic inhibitor on the corrosion potential of steel in concrete", International Research Journal of Engineering and Technology (IRJET) (e-ISSN: 2395-0056), Vol. 03, Issue 09, pp 974-978.	
10	George Mathew and Benny Joseph (2017). "Microstructural analysis of fly ash based geopolymers exposed to elevated temperatures", Bulletin of Engineering, ACTA Technica Corviniensis, University Politechnica Timisoara, Hunedoara, (ISSN: 2067-3809), Vol. 10, Issue 2 (April-June), pp 117-122	
11	Effect of nanoclay, Cloisite15A on the Mechanical Properties and Thermal behavior of Glass Fiber Reinforced Polyester. Binu P P, K.E. George, M.N. Vinodkumar. Procedia Technology 25 (2016) 846 – 853. (doi:10.1016/j.protcy.2016.08.191)	
12	Modeling the influence of individual and employment factors on musculoskeletal disorders in fabrication industry. Mahesa RR, MN Vinodkumar, V Neethu. Human Factors and Ergonomics in Manufacturing and Service Industries, January 2017, 116-125. Wiley Publications. (DOI: 10.1002/hfm.20696)	
13	Role of sensation seeking and attitudes as mediators between age of driver and risky driving of Powered Two Wheelers. Thajudeen Hassan, M.N. Vinodkumar, Neethu Vinod. Journal of Safety Research, 62(2017), 209-215. Elsevier Publications. ( <a href="http://dx.doi.org/10.1016/j.jsr.2017.06.019">http://dx.doi.org/10.1016/j.jsr.2017.06.019</a> )	
14	Influence of demographics on risky driving behaviour among powered two wheeler riders in Kerala, India. Thajudeen Hassan, M.N. Vinodkumar, Neethu Vinod. Transportation Research Part F, 46(2017), 24-33. Elsevier Publications. ( <a href="http://dx.doi.org/10.1016/j.trf.2016.11.008">http://dx.doi.org/10.1016/j.trf.2016.11.008</a> )	
15	Predictors of Risky driving of powered two wheeler riders of Kerala, India. Thajudeen Hassan, MN Vinodkumar, Neethu Vinod. Proceedings of the International Conference on Safety and Fire Engineering, 67-72, April 27-28, 2017. CUSAT, Kochi, Kerala. ISBN 978-93-80095-96-7	
16	A Study of Factors influencing Musculoskeletal disorder pain among Welders employed in Fabrication Industry. Proceedings of the International Conference on Safety and Fire Engineering, 161-167, April 27-28, 2017. CUSAT, Kochi, Kerala. ISBN 978-93-80095-96-7	



17	Sahoo, D.K. et al., Discussion of the paper 'Compressive Strength of Unreinforced Strut' by Laughery and Pujol, ACI Structural Journal, July-August 2016, pp. 876-877	
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**13. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.**

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. Benny Mathews Abraham	Indian Geotechnical Conference 2016, at IIT Madras on 15-12-16 and 16-12-16	Participant
Dr. Sobha Cyrus	Indian Geotechnical Conference 2016, at IIT Madras on 15-12-16 and 16-12-16	Participant
Dr.Beena K.S	<b>Use of Coir Geotextiles in Unpaved Roads</b> “ India International Coir Fair (IICF-2016) organized at the Codissia Trade Fair Complex, Coimbatore by Coir Board from 15th to 18th July 2016.	Invited Speaker
	<b>“Application of Coir Geotextiles in Roads”</b> National Seminar organized by Department of Coir Development, Govt. of Kerala, on <i>“Uses and Established Environmental friendly Application of Coir Geotextiles”</i> on 4th February 2017 at Alappuzha, Kerala, India.	Invited Speaker
	6 <sup>th</sup> Asian Regional Conference on Geosynthetics, GEOASIA 16, at New Delhi From 7-11-16 and 11-11- 16	Participant
	Indian Geotechnical Conference 2016, at IIT Madras on 15-12-16 and 16-12-16	Participant
Dr. Deepa Balakrishnan S	Faculty Development Programme organized by Teaching Learning Center, IIT Madras, 6 <sup>th</sup> -8 <sup>th</sup> march 2017	Participant
	International Conference on SAFETY AND FIRE ENGINEERING (SAFE ' 17) CUSAT, Kochi, India	
Dr. Renu Pawels	The thirty second international conference on solid waste Technology and management, Philadelphia, March 19-22, 2017, U.S.A	Speaker and Participant
	Short Term Training Programme on “Mathematical models in Data Mining Process: Division of Applied Sciences and Humanities, School of Engineering, CUSAT 04-04-2016 to 08-04-2016	Participant



Dr. Glory Joseph	International conference on Recent Trends in Engineering and Technology, CUSAT, Kochi, October 3-5, 2016.	Reviewer, Committee member and participant
Dr.Subha V	International Conference on SAFETY AND FIRE ENGINEERING (SAFE ' 17) CUSAT, Kochi, India	Participant
Neethu Vinod	International Conference on SAFETY AND FIRE ENGINEERING (SAFE ' 17) CUSAT, Kochi, India	Delegate

### Computer Science

Name of Participant	Name of Seminar /Conference/ Workshop	Role
Dr. Sheena Mathew,	Short Term Training Programme on "Machine learning Tools & Techniques" under TEQIP phase II 29 August to 2 September 2016	Participant
Dr. Sheena Mathew,	International Conference on Electronics, Communication and Aerospace Technology (ICECA 2017)	Participant
Dr. Sheena Mathew,	Dept. of Computer Science, Cochin University of Science and Technology. Data Science and Engineering, 23-25 August 2016	Session Chair
Dr. Sheena Mathew,	Faculty Development programme, Excellence in Teaching and Transforming Classrooms, 4-5 November 2016	Participant
Dr. Sheena Mathew,	Faculty Development programme, R-Programming and Block chain, TCS, Kochi, 15 May 2017	Participant
Ancy Zachariah	Faculty Development programme, R-Programming and Block chain, TCS, Kochi, 15 May 2017	Participant
Ancy Zachariah	Short Term Training Programme on "Machine learning Tools & Techniques" under TEQIP phase II 29 August to 2 September 2016	Participant
Dr. Sudheep Elayidom M.	Short Term Training Programme on "Machine learning Tools & Techniques" under TEQIP phase II 29 August to 2 September 2016	Participant
Sheena S.	Faculty Development programme, R-Programming and Block chain, TCS, Kochi, 15 May 2017	Participant
Sheena S.	Short Term Training Programme on "Machine learning Tools & Techniques" under TEQIP phase II 29 August to 2 September 2016	Coordinator



Sheena S.	Short Term Course on Introduction to Cryptography, Dept. of Mathematics Indian Institute of Technology Kharagpur, January 27-31 2017	Participant
Dr. Latha R. Nair	Faculty Development programme, R-Programming and Block chain, TCS, Kochi, 15 May 2017	Participant
Dr. Latha R. Nair	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Coordinator
Damodaran V.	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Participant
Pramod Pavithran	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Participant
Pramod Pavithran	FDP on Research Trends in Computing and Algorithms 25/07/2016 to 29/07/2016, Organized by IHRD	Participant
Pramod Pavithran	Research Colloquium on Intelligent Systems and Computing at College of Engg., Cherthala on 25/03/2017	
Preetha S.	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Participant
Deepa Paul E P	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Participant
Deepa Paul E P	Faculty Development Programme, Organized and conducted by Teaching Learning Centre, IIT Madras, 23 <sup>rd</sup> to 25 <sup>th</sup> February 2017	Participant
Neena Elsa Jose Prakash	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Participant
Neena Elsa Jose Prakash	Faculty Development Programme, Organized and conducted by Teaching Learning Centre, IIT Madras, 8 <sup>th</sup> to 10 <sup>th</sup> July 2017	
Neethu S. Kumar	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Participant





Neethu S. Kumar	Faculty Development Programme, Organized and conducted by Teaching Learning Centre, IIT Madras, 6 <sup>th</sup> to 8 <sup>th</sup> March 2017	Participant
Anu M.	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Participant
Suja C. Nair	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Participant
Suja C. Nair	Faculty Development Programme, Organized and conducted by Teaching Learning Centre, IIT Madras, 23 <sup>rd</sup> to 25 <sup>th</sup> February 2017	Participant
Abitha P.G	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Participant
Abitha P.G	Faculty Development Programme, Organized and conducted by Teaching Learning Centre, IIT Madras, 6 <sup>th</sup> to 8 <sup>th</sup> March 2017	Participant
Divya Prakash	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Participant
Asha Cherian	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Participant
Lino Murali	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Participant
Lino Murali	Faculty Development Programme, Organized and conducted by Teaching Learning Centre, IIT Madras, 9 <sup>th</sup> to 11 <sup>th</sup> March 2017	Participant
Girija O. K	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Participant
Girija O. K	Faculty Development Programme, Organized and conducted by Teaching Learning Centre, IIT Madras, 9 <sup>th</sup> to 11 <sup>th</sup> March 2017	Participant
Nitha C Pankajakshan	Short Term Training Programme on “Machine learning Tools & Techniques” under TEQIP phase II 29 August to 2 September 2016	Participant



Nitha C. Pankajakshan	Faculty Development Programme, Organized and conducted by Teaching Learning Centre, IIT Madras, 9 <sup>th</sup> to 11 <sup>th</sup> March 2017	Participant
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### Electrical Engineering

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. C A BABU	Cogeneration, Small Power Plants and District Energy, BITEC, Bang – Na, Thailand September 14-16, 2016	Chairing Technical Session
ROSAMMA THOMAS	“Faculty Development Programme”- Teaching Learning Center, IIT Madras September 29- October 1, 2016	Participant
JEENA JOHN	“Faculty Development Programme”- Teaching Learning Center, IIT Madras September 29- October 1, 2016	Participant
JISHA JOSEPH	“Faculty Development Programme”- Teaching Learning Center, IIT Madras March 23 – 25, 2017	Participant

### Electronics Engineering

Name of Participant	Name of seminar/Conference/Workshop	Role
Dr.S Mridula	1. Three days Refresher Workshop on Building conducive environment for academic leadership of women faculty, Women’s Studies Centre, CUSAT, 27-29 March 2017 2. IEEE-sponsored Workshop on Modern Trends in RF & Microwave Technologies, IEEE APS Kerala Chapter & Dept of Electronics, CUSAT, 24-25 May 2017.	Participant
Dr.S Mridula	1. CUSAT Knowledge Forum, 13.7.2016 2. International Conference on Communication Systems and Networks - ComNet 2016, Mar Baselious College of Engineering and Technology, Trivandrum, 22 <sup>nd</sup> July 2016. 3. International Conference on Next Generation Intelligent Systems ICNGIS2016, Rajiv Gandhi Institute of Technology, Kottayam, 3 <sup>rd</sup> September 2016 4. Invited talk, Government Engineering College, Idukki, 10.2.2017. 5. Project Evaluation – Adi Shankara Young Scientists Award, 18.2.2017.	Speaker Session chair  Session chair  Speaker Judge



<p>Dr. Babita Roslind Jose</p>	<ol style="list-style-type: none"> <li>1. STTP on “Recent Trends in Applied Physics”, organized by the Division of Applied Sciences and Humanities, School of Engineering, Cochin University of Science and Technology, under TEQIP Phase –II from 11<sup>th</sup> to 15<sup>th</sup> January 2016.</li> <li>2. National workshop on “Recent Trends in Nanotechnology for Age Old”, organized by Centre for Enabling Technology for the Aged, CUSAT on 10<sup>th</sup> march 2016 held at Department of Physics, CUSAT.</li> <li>3. Workshop on “Maestro Mechanika” Automobile Workshop for Women conducted by IEEE Women in Engineering Cochin University Affinity Chapter on March 9<sup>th</sup> 2016 in regard to International women’s Day 2016 at school of Engineering, CUSAT.</li> <li>4. STTP on “Intellectual Property Rights”, organized by National Institute of Technology, Patna, during April 12-16, 2016.</li> <li>5. STTP on “Advanced Wireless Networks: Joint Design of Technology and Business Models”, organized by Indian Institute of Technology, Patna, during 2-10 April, 2016</li> <li>6. Workshop on “PYTHON Programming”, organized by Division of Information Technology, School of Engineering, CUSAT, on 26<sup>th</sup> April 2016.</li> <li>7. <b>Session Chair</b> for Sixth International Conference on Advances in Computing and Communications held at Rajagiri School of Engineering and Technology, Kochi, 6-8 Sept, 2016.</li> </ol>	<p>Participant</p>
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<p>Dr Binu Paul</p>	<ol style="list-style-type: none"> <li>1. STTP under TEQIP Phase II on '<b>Recent Trends in Applied Physics</b>', Division of Applied Sciences &amp; Humanities, SOE,CUSAT, 11.01.2016 -15.01.2016.</li> <li>2. DST, Govt. of India sponsored National Training Programme on '<b>Entrepreneurship Development &amp; Management for Women Scientists and Technologists working in Government sector</b>', Entrepreneurship Development Institute of India (EDI) Campus, Ahmadabad, 2.02.2016-6.02.2016.</li> <li>3. STTP under TEQIP Phase II on '<b>Mathematical models in data mining process</b>', Division of Applied Sciences &amp; Humanities, SOE,CUSAT, 4.4.2016 -8.4.2016.</li> <li>4. \KIC-TEQIP Sponsored 5-day Short Term Course on '<b>Recent Advances in Computer Architecture</b>', Department of Computer Science &amp; Engineering, IIT Guwahatti, 30.5.2016-3.6.2016.</li> <li>5. One day at National workshop on '<b>Recent trends in Nanotechnology for age old, RTNO 2016</b>', organised by Centre for Enabling Technology for the aged, Dept of Physics, CUSAT, on 10.3.2016.</li> <li>6. First User Scientist Workshop on '<b>The Applications of Stratosphere Troposphere Wind Profiler Radar</b>', organized by Advanced Centre for Atmospheric Radar Research, CUSAT, on 9-10 February 2017</li> </ol>	<p>Participant</p>
<p>Dr Binu Paul</p>	<p>STTP under TEQIP Phase II on '<b>LaTeX- Report and Article Writing (RAW 2016)</b>', Division of Electronics Engineering, SOE,CUSAT, 27.6.2016 -28.6.2016</p>	<p>Organizer along with Unni A M</p>
<p>Dr Shahana TK</p>	<ol style="list-style-type: none"> <li>1. STTP on "Recent Trends in Applied Physics", organized by the Division of Applied Sciences and Humanities, School of Engineering, Cochin University of Science and Technology, under TEQIP Phase -II from 11<sup>th</sup> to 15<sup>th</sup> January 2016.</li> <li>2. National workshop on "Recent Trends in Nanotechnology for Age Old", organized by Centre for Enabling Technology for the Aged, CUSAT on 10<sup>th</sup> march 2016 held at Department of Physics, CUSAT.</li> </ol>	<p>Participant</p>



	<p>3. Workshop on “Maestro Mechanika” Automobile Workshop for Women conducted by IEEE Women in Engineering Cochin University Affinity Chapter on March 9<sup>th</sup> 2016 in regard to International women’s Day 2016 at school of Engineering, CUSAT.</p> <p>4. Workshop on Python Programming under TEQIP Phase II, organized by Division of Information Technology, SOE,CUSAT on 26-4-2016</p> <p>5. Short Term Training Program on Scratch to End Product under TEQIP (phase II), organized by Div of Electronics Engineering, School of Engineering, CUSAT from 26-9-2016 to 30-9- 2016.</p> <p>6. STTP under TEQIP Phase II on ‘Mathematical models in data mining process’, Division of Applied Sciences &amp; Humanities, SOE,CUSAT, 4.4.2016 -8.4.2016.</p>	
Dr.Anju Pradeep	<p>1. IEEE International Conference on next Generation Intelligent Systems (ICNGIS-2016), RIT, Kottayam, 2nd Sept 2016</p> <p>2. International Symposium on Antennas and Propagation, APSYM 2016, DOE, CUSAT, Dec 2016</p>	Session Chair
Dr.Anju Pradeep	IEEE-sponsored Workshop on Modern Trends in RF & Microwave Technologies, IEEE APS Kerala Chapter & Dept of Electronics, CUSAT, 24-25 May 2017.	speaker
	2016 International conference on Communication systems and networks (ComNet2016) organised by Dept. of Electronics & Communication Engineering, Mar Baselios College of Engineering & Technology, Thiruvananthapuram jointly with University of Dayton, USA, 21-23 July 2016	Technical reviewer
	<p>1. Workshop on “Maestro Mechanika” Automobile Workshop for Women conducted by IEEE Women in Engineering Cochin University Affinity Chapter on March 9<sup>th</sup> 2016 in regard to International women’s Day 2016 at school of Engineering, CUSAT.</p> <p>2. Short Term Training Program on Scratch to End Product under TEQIP (phase II), organized by Div of Electronics Engineering, School of Engineering, CUSAT from 26-9-2016 to 30-9- 2016.</p>	
Dr.R Gopikakumari	FDP at College of Engineering, Kottarakara “An Insight into Digital Signal processors	Resource Person



Dr.R Gopikakumari	Conduct of IETE Examination held at IETE house	Examination Observer
Dr.R Gopikakumari	FDP on “Transforms:techniques & Application”	Resource Person
Dr.R Gopikakumari	International conference on Communication Systems and networks.	Technical reviewer
Dr.Abdulla P	9th National Conference VLES'17 (VLSI, Signal Processing and Communications),Viswajyothi Engineering College,	Inaugural address
Dr.Abdulla P	Inauguration Electronics Association, MES College Marampally, Aluva	Inaugurator
Dr.Abdulla P	One day workshop on EMI & EMC, IEEE APS Kochi Chapter, Kerala Section	Invited Talk

### Information Technology

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. Philip Samuel	Short Term Training Programme on Mathematical Models in Data Mining Process at Division of Applied Sciences, SOE, CUSAT during 4- 8th April 2016.	Participant
	ISTE Short Term Training Workshop on Big Data Analytics Using R at Saintgits College of Engineering, Kottayam during 18 - 22 April 2016	Participant
	14th IEEE/ACIS International Conference on Software Engineering Research, Management and Applications (SERA 2016), 8-10 June 2016, Towson, Maryland, USA	Participant
	TEQIP Short Term Training Programme on Machine Learning Tools and Techniques at Computer Engineering Division, SOE, CUSAT during 29 Aug 2016 to 2 Sept 2016.	Participant
	Short Term Training Programme on Internet of Things at Cochin by MSME, Ministry of Micro, Small & Medium Enterprises, Govt. of India, during 1-2 Oct 2016	Participant



	Short Term Pedagogical Training Programme at Teaching Learning Center, IIT Madras, during 9-11 March 2017	Participant
Dr. Shelbi Joseph	Android Programming and Mobile Application Development, Division of IT, CUSAT	Coordinator
Dr. Renumol V. G.	Orientation Course for the NSS Programme Officers, Empanelled Training Institution for NSS, Rajagiri College of Social Sciences, Kalamassery during 04-02-2016 to 10-02-2016	Participant
	STTP on Mathematical Models in Data Mining Process at Div. of Applied Science, SOE during 04-04-2016 to 08-04-2016	Participant
	Drupal 8 Site Building Pilot Workshop at IIT Bombay on 30-07-2016	Participant
	TEQIP II Sponsored Research Colloquium on Intelligent Systems and Computing at College of Engineering (IHRD), Cherthala on 25-03-2017	Participant
Dr. Binsu C. Kooror	Research Skills and Methods, IIT Kanpur	Participant
	Maestro Mechanika, IEEE Women in Engineering, CUSAT	Participant
	Android Programming and Mobile Application Development, Division of IT, CUSAT	Coordinator
	Introduction to Cryptography, IIT Kharagpur	Participant
	International Conference on Inventive Computation Technologies(ICICT 2016), RVS Technical Campus at TamilNadu	Paper Presentation
	Machine Learning Tools & Techniques, Division of Computer Engineering,SOE,CUSAT	Participant
	FDP on High Performance Computing, Rajagiri School of Engineering College,Kakkanad	Participant
	Research Colloquium on Intelligent Systems and Computing, Dept of Computer Science and Engineering, Cherthala	Participant
Ms. Sariga Raj	Building Conductive Environment for Academic Leadership of Women Faculty,CUSAT	Participant
	National Conference on Indian Language Computing Organised by the Department of Computer Applications, CUSAT.	Organising Committee Member
	International Conference on "Recent Trends in Engineering and Technology", SOE, CUSAT	Participant



	“Workshop on LaTeX-Report and Article Writing(LaTeX-RAW-2016)”, Division of Electronics Engineering, SOE, CUSAT.	Participant
	Android Programming and Mobile Application Development, Division of IT, CUSAT	Participant
	Machine Learning Tools & Techniques, Division of Computer Engineering,SOE,CUSAT	Participant
Dr. Daleesha M. Viswanathan	Android Programming and Mobile Application Development	Participant
	Introduction to Cryptography, IIT Kharagpur	Participant
	FDP on High Performance Computing, Rajagiri School of Engineering College,Kakkanad	Participant
	Machine Learning Tools & Techniques, Division of Computer Engineering,SOE,CUSAT	Participant
	Research Colloquium on Intelligent Systems and Computing, Dept of Computer Science and Engineering, Cherthala	Participant
	Building Conductive Environment for Academic Leadership of Women Faculty,CUSAT	Participant
Akhil P V	International Conference On Recent Trends In Engineering & Technology, 2016	Participant
	Five Day Short Term Training Program on Android Programming and Mobile Application Development, 2016.	Participant
	Two Day Workshop on Information Security and Knowledge Management with Special Emphasis on Tools and Techniques, 2016	Participant
	One Day Workshop on Python Programming, 2016	Participant
	International Conference On Recent Trends In Engineering & Technology, 2016	Participant
	Three Day Faculty Development Programme (FDP) on Pedagogy Training at IIT Madras 2016	Participant
	Five Day Short Term Training Program on Android Programming and Mobile Application Development, 2016.	Participant
	Five Day Short Term Training Program on Machine Learning Tools and Techniques, 2016.	Participant
	Two Day Workshop on Information Security and Knowledge Management with Special Emphasis on Tools and Techniques, 2016	Participant





	One Day Workshop on Python Programming, 2016	Participant
	National Conference on "Indian Language Computing" 2016	Participant
Seetha Parameswaran	International Conference On Recent Trends In Engineering & Technology, 2016	Participant
	Five Day Short Term Training Program on Android Programming and Mobile Application Development, 2016.	Participant
	Two Day Workshop on Information Security and Knowledge Management with Special Emphasis on Tools and Techniques, 2016	Participant
	One Day Workshop on Python Programming, 2016	Participant
	International Conference On Recent Trends In Engineering & Technology, 2016	Participant
	Three Day Faculty Development Programme (FDP) on Pedagogy Training at IIT Madras 2016	Participant
	Five Day Short Term Training Program on Android Programming and Mobile Application Development, 2016.	Participant
	Five Day Short Term Training Program on Machine Learning Tools and Techniques, 2016.	Participant
	Two Day Workshop on Information Security and Knowledge Management with Special Emphasis on Tools and Techniques, 2016	Participant
	One Day Workshop on Python Programming, 2016	Participant
	Sixth National Conference on "Indian Language Computing" 2016	Participant
Jiby T C	2 day Workshop on Androis Programming at DDU Kaushal Kendra, CUSAT on 17 <sup>th</sup> and 18 <sup>th</sup> March, 2017	Participant
	FDP on R Programming and Block Chain at TCS, Kochi on 15 <sup>th</sup> May, 2017	Participant
	Pedagogical Training at IIT, Madras, 7 <sup>th</sup> to 9 <sup>th</sup> Feb, 2017	Participant
	FDP on R Programming and Block Chain at TCS, Kochi on 15 <sup>th</sup> May, 2017	Participant



Shani Sivadas	2 day Workshop on Androis Programming at DDU Kaushal Kendra, CUSAT on 17 <sup>th</sup> and 18 <sup>th</sup> March, 2017	Participant
	FDP on R Programming and Block Chain at TCS, Kochi on 15 <sup>th</sup> May, 2017	Participant
Nafsiya C A	Pedagogical Training at IIT, Madras, 7 <sup>th</sup> to 9 <sup>th</sup> Feb, 2017	Participant

### Mechanical Engineering

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Unnikrishnan M M	FDP on Advanced Modelling Environment for Performing simulation of Engineering Systems	conducted by SAEINDIA and SIEMENS at Adi Shankara Institute of Engineering and Technology, during January 18,19 2017.
Faizal K	International Conference on Safety and Fire Engineering (SAFE'17)	School of Engineering, CUSAT 27/04/17 to 28/04/17
Jayesh S.	FDP on Essentials of Energy' Management'	IHRD at Model Engg College, Thrikkakara, 01/08/2016 to 05/08/2016
Roshith K.	FDP on Pedagogy	IIT Madras, 06/03/2017 to 09/03/2017

### Safety & Fire Engineering

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. V. R.Renjith	International conference on safety ICS 2017 Safety centre, IIT Gandhinagar	Paper Presented
Dr. V. R.Renjith	International conference on Safety and fire Engineering SAFE'17 CUSAT, Kochi	Organising Secretary
Dr. D.K. Sahoo	Pedagogy training at IIT Madras from 10-12 Nov 2016	Participant
Dr. D.K. Sahoo	International Conference, SAFE-17	Member, Organising Committee, Technical Committee and Participant



Dr. M N Vinodkumar	Faculty Development Programme during 23 <sup>rd</sup> to 25 <sup>th</sup> March 2017 at IIT Madras. International Conference on Safety and Fire Engineering, April 27-28, 2017. CUSAT, Kochi, Kerala.	Participant
Dr. M N Vinodkumar	International Conference on Safety and Fire Engineering, April 27-28, 2017. CUSAT, Kochi, Kerala.	Participant

#### 14. Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
Civil Engineering		
Dr. Benny Mathews Abraham	NAAC	Member Coordinator/Member of NAAC Peer Team
	APJ Abdul Kalam Technological University	Examiner for M.Tech Evaluation
Dr. Beena K.S	Anna University	Ph.D Thesis examiner
Dr. Subha V	National Coir Research Management Institute, Trivandrum	Governing body member
Dr. Glory Joseph	APJ Abdul Kalam Technological University	Examiner for M.Tech Evaluation
Dr. Job Thomas	APJ Abdul Kalam Technological University	Examiner for M.Tech Evaluation
Dr. Deepa G Nair	APJ Abdul Kalam Technological University	Examiner for M.Tech Evaluation
Dr. Deepa Balakrishnan S	APJ Abdul Kalam Technological University	Examiner for M.Tech Evaluation

#### Electrical & Electronics Engg.

Name of Faculty	Name of Organization	Role
Dr. C.A. Babu	All India Council for Technical Education (AICTE)	Expert Member
	Accreditation Team of National Board of Accreditation (NBA)	Expert Member
	RUSA, Kerala State Project Directorate	Member



### Information Technology

Name of Faculty	Name of Organization	Role
Dr. Binsu C. Kovoovr.	Rajagiri School of Engineering and Technology, Kakkanad.	Department Advisory Committee.
Dr. Binsu C. Kovoovr	Muslim Association College of Engineering, Thiruvananthapuram	Advisory Member, National Symposium on ASPIRE 2017.

### 15. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour /Award	Awarding Agency
Dr. Benny Mathews Abraham	IGS – Dastidar best research paper award in the area of Ground Improvement in 2016	Indian Geotechnical Society, New Delhi
Dr.Beena K.S	Ambassador for Australian Research Fellowships and Endeavour, awards	Government of Australia
Renumol V.G.	Post Doctoral Fellowship	IIT Bombay

### 16. Sponsored Research Projects

SI No	Title	Sponsoring Agency	Amount	Investigator(s)
<b>Civil Engineering</b>				
1.	Biodrying Process – A Sustainable Technology for Solid Waste Management	KSCSTE	12.81 Lakhs	Dr. Renu Pawels, Ajith Haridas, Asha P Tom
2	Liquefaction studies on Sand deposits in Kerala	KSCSTE	26.74 Lakhs	Dr. K.S Beena
<b>Electronics &amp; Communication</b>				
3	Design and Development of Compact Planar Filters for RF/Microwave Applications	KSCSTE	Rs. 15,33,334	Dr.S Mridula(PI)Dr. Anju Pradeep(Co-PI) Dr.Binu Paul(Co-PI)
4	Implantable Sensor Antenna system for medical applications	DAE-BRNS	Rs. 20,86,000	Dr.PMohanana(PI) Dr. Anju Pradeep(Co- PI) Dr.S Mridula(Co-PI)



5	Design and Development of Compact Planar Lowpass Filters with Sharp Roll-off and high suppression level	Kerala State Council for Science Technology and Environment	16,00,000	Dr. Abdulla P 2017 onwards 3 years
6	To set up and run Technology Business Incubation (TBI) center at CUSAT Campus	Kerala Government	99,99,000	Dr. Abdulla P. 2016-2018 2 years
<b>Safety &amp; Fire Engineering</b>				
1	An Investigation of the suitability of coarse recycled concrete aggregate for structural concrete	KSCSTE	Rs. 13.70 lakh	Dr. D.K. Sahoo
2	Study on the Influence of Corrosion Inhibitors in Concrete Exposed to High Temperature	KSCSTE	Rs. 1480400/-	Dr. George Mathew

### 17. Research Programmes and Activities Information Technology

Sl. No.	Problem/Topic	Investigator(s)
1	Big Data Computing, UML Models	Dr. Philip Samuel
2	Reliability Estimation of Open Source Software Based Computational Systems	Dr. Shelbi Joseph
3	A Study On Cognitive Aspects Of Procedural Programming In Computing Education	Dr. Renumol V. G.
4	Improved Biometric Authentication System using Multimodal Cue Integration	Dr. Binsu C Koor
5	A Computational Framework for Indian Sign Language Recognition	Dr. Daleesha M. Viswanathan



### 18. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl. No.	Title	Duration	Coordinator	Funding Agency
<b>Civil Engineering</b>				
1	Seminar in Connection with Indian Concrete Institute, Student Chapter	1 day	Mr.Ramadass S	
2	Seminar on Deep Soil Mixing and Experiences	1 day	Dr.Beena K.S	Indian Geotechnical Socoety, Kochi chapter.
<b>Computer Science</b>				
1	Short Term Training Programme on "Machine learning Tools & Techniques"	29 August to 2 September 2016	Dr. Latha R. Nair & Sheena S.	TEQIP
<b>Electrical Engineering</b>				
1	Seminar series under ERUDITE Programme	6-10 <sup>th</sup> March 2017	Dr. C.A Babu	Kerala State Higher Educational Council
<b>Electronics and Communication</b>				
1	'LaTeX- Report and article writing, LaTeX RAW-2016 '	27.6.2016-28.6.2016	Dr Binu Paul/ Unni A M	STTP under TEQIP Phase II
2	'Role of network on chip NOC in multicore Processors'	25.7.2016	Dr Binu Paul	IEEE –CUSAT B.Tech Talk
<b>Information Technology</b>				
1	Android Programming and Mobile Application Development	5 days	Dr. Shelbi Joseph and Dr. Binsu. C. Kovoov	TEQIP II
2	Granular Mining and Rough-fuzzy Computing: Data to Knowledge and Bigdata by Padma Shri Dr. S.K. Pal.	1 day	Dr. Binsu C. Kovoov and Dr. Sudheep Elayidom	TEQIP II



3	Certification courses on Advanced Computers - Techno Valley	3 Hr	Dr. Binsu C. Koor and Dr. Sudheep Elayidom	CSI, CUSAT Chapter & IT association
4	Awareness about Internet Based Career Options-All India Digital Skilled Mission	3 Hr	Dr. Binsu C. Koor and Dr. Sudheep Elayidom	CSI, CUSAT Chapter & IT association
5	Workshop on Python Programming	1 day	Dr. Shelbi Joseph	TEQIP II
6	Workshop on Information Security and Knowledge Management with Special Emphasis on Tools and Techniques	2 days	Mr. Santosh Kumar M.B	TEQIP II
<b>Safety &amp; Fire Engineering</b>				
1	International conference on Safety and Fire Engineering, SAFE 17	3 days	Dr. V.R. Renjith	KSCSTE, etc.

### 19. Consultancy Work

SI No	Name of Consultancy	Name of Consultant	Sponsoring Agency
<b>Civil Engineering</b>			
1.	Soil Investigation of Kannur International Airport	Dr. Beena K.S.	Cochin International Airport Limited
2.	Testing of Soil	Dr. Beena K.S., Dr. Sobha Cyrus	Various Agencies
3.	Testing of Water Samples	Dr. RenuPawels, Mr. Arunkumar T. Dr. Roy M Thomas	Various Agencies
4.	Testing of Highway materials. Mix design of Bituminous mixes.	Bindu C.S	Delhi Metro Rail Corporation Ltd., Kitco Ltd. Hindustan Petroleum Company Ltd and other various agencies



5.	Testing of Various Building Materials & Concrete Mix design	Dr. Deepa Balakrishnan S., Dr.Glory Joseph, Dr.Job Thomas, Mr. Ramadass S.	Navel Base, PWD, CPWD and Various Private agencies
6	Vetting of the Structural Design of the proposed Kannur International Airport (2014-17)	Dr.Glory Joseph, Dr.Job Thomas & Dr.Deepa Balakrishnan.S	KITCO Ltd., Kochi

### Safety & Fire Engineering

1	One-Week Training Programme for Technical Skill Enhancement of Additional Inspectors of Factories from 25-29 April 2016	Dr. D.K. Sahoo and Shri Nirmal Job. A	Department of Factories & Boilers, Govt. of Kerala
2	3-day Training Programme on <i>Safety and Fire Protection</i> for the instructors of Govt. ITI's of Kerala, from 9-11 January 2017	Dr. D.K. Sahoo and Shri Nirmal Job. A	Skill Updating Institute for Industrial Training – Kerala





## SCHOOL OF ENVIRONMENTAL STUDIES

### 1. Brief History of the Department

The School of Environmental Studies was established in the year 1983 with an objective to serve as a center imparting high quality environmental education. It was functioning with the major objective of developing general awareness among the public alike on the requirement of environmental protection and environmental management for sustainable development on one hand, and to create groups of specialists in different areas of Environmental Studies as Environmental Science, Environmental Law, Environmental Management, Environmental Technology, Environmental Economics and on the other related areas. Having these as the objectives, the School has been undertaking research and extension activities in different disciplines along with the consultancy services. M.Sc. Degree course in Environmental Studies was started in 1986. This course was discontinued in 1999. Starting from 1999, the School offers M.Sc. Degree Course in Environmental Technology with two distinct streams: Stream 1: Environmental Engineering & Stream 2: Environmental Biotechnology. The School enjoyed academic collaboration with the Technical University of Delft, The Netherlands for five years from 1999 to 2004. The National Centre for Aquatic Animal Health (NCAAH) Co-ordinated by Dr. I.S. Bright Singh developed as a constituent organization of the School. The Centre is involved in active research and extension activities. It has been sanctioned with an M.Tech. Programme in Marine Biotechnology by Department of Biotechnology, Government of India. The School offers Ph.D. program in related areas of Environmental Studies. The School has also achieved grant of Rs. 75 lakhs under FIST Programme. The School also is assisted under the UGC SAP-DRS II Programme for Rs.135Lakhs(2015-2020).

### 2. Programmes of Study/Research

1. M.Sc. Environmental Technology:
  - Stream 1: Environmental Engineering
  - Stream 2: Environmental Biotechnology
2. Ph. D. Programme

**3. Faculty Members**

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. Rajathy Sivalingam	Professor & Director	M.Sc. M Phil, Ph.D.	Environmental Toxicology/ Ecotoxicology
2	Dr. V. Sivanandan Achari	Associate Professor	M.Sc, MPhil Ph.D	Environmental Chemistry/ Environmental Management/ Environmental Modeling
3	Mr. M. Anand	Assistant Professor	M.Sc., M.Phil	Environmental Biotechnology

**4. Emeritus Professor/Scientist (if any)**

Sl. No.	Name	Designation	Qualification	Specilisation
1	Dr. E.P. Yesodharan	Emeritus Professor	M.Sc., Ph.D.	Environmental Chemistry
2	Dr. Suguna Yesodharan	Emeritus Professor	M.Sc., Ph.D.	Environmental Chemistry

**5. Research Scholars**

Sl. No	Name	Supporting Agency	Guide	Area of Research
1	Vidhya Lekshmi K P	CSIR	Prof. Dr. Suguna Yesodharan	Environmental Chemistry
2	Gaythri P V	UGC	Prof. Dr. Suguna Yesodharan	Environmental Chemistry
3	Rajalakshmi A S	BSR	Dr. V. Sivanandan Achari	Environmental Chemistry
4	Jayasree S	USRF	Dr. V. Sivanandan Achari	Environmental Chemistry
5	Deepa P		Dr. V. Sivanandan Achari	Environmental Chemistry
6	Ambili M S	E-grantz	Dr. V. Sivanandan Achari	Environmental Chemistry
7	Balamuralikrishna	UJRF	Dr. V. Sivanandan Achari	Environmental Chemistry



8	Raichel Mary Lopez	UGC- SRF	Dr. V. Sivanandan Achari	Environmental Chemistry
9	Monisha Mohanadas		Dr. V. Sivanandan Achari	Environmental Chemistry
10	Samitha K A	UJRF	Prof. Dr. Rajathy Sivalingam	Environmental Toxicology
11	Chandini P K	E-grantz	Prof. Dr. Rajathy Sivalingam	Environmental Toxicology
12	Rakehs V B	BSR	Prof. Dr. Ammini Joseph	Environmental Biology
13	Lekshmi G	UGC-JRF	Prof. Dr. Ammini Joseph	Environmental Biology
14	Sooraj N P		Prof. Dr. Ammini Joseph	Environmental Biology
15	Amarnath A	UGC-BSR	Dr. M. V. Harindranathan Nair	Environmental Management
16	Sajith K S	UJRF	Dr. M. V. Harindranathan Nair	Environmental Management
17	Hari Prasad N	UGC-BSR	Dr. M.V. Harindranathan Nair	Environmental Management
18	Lekshmi N	E-grantz	Dr. T. P. Sajeevan	Marine Biotechnology
19	Deepa G D		Prof. Dr. A. Mohandas	Environmental Biology
20	Anjana N S	UGC-BSR	Dr. M. V. Harindranathan Nair	Environmental Management
21	Reji George T		Dr. V. Sivanandan Achari	Environmental Chemistry
22	Indu I	KSCST	Dr. M. V. Harindranathan Nair	Environmental Management
23	Haneesh K R		Dr. M. V. Harindranathan Nair	Environmental Management
24	Rajeev B		Dr. E. P. Yesodharan	Environmental Chemistry
25	Deepthi John		Dr. Suguna Yesodharan	Environmental Chemistry
26	Soumya Mohandas	UJRF	Prof. Dr. I.S. Bright Singh	Microbiology
27	Sivakumar K C		Dr. Sajeevan T P	Marine Biotechnology



28	Renjusha Nair		Dr. Rajathy Sivalingam	Environmental Toxicology
29	Linu Balan	UJRF	Dr. A. Mohandas	Environmental Biology
30	Anoop B S		Dr. Sajeevan T P	Marine Biotechnology
31	Devassy Christo	UGC-BSR	Dr. Valsamma Joseph	Marine Biotechnology
32	Sindu Joseph		Dr. E. P. Yesodharan and Dr. V Sivanandan Achari	Environmental Chemistry
33	Shibin O M		Dr. Suguna Yesodharan	Environmental Chemistry
34	Phoncy P D		Dr. Suguna Yesodharan	Environmental Chemistry
35	Joshy Mathew		Prof. Dr. Rajathy Sivalingam	Environmental Toxicology
36	Sreekala M S		Prof. Dr. Rajathy Sivalingam	Environmental Toxicology
37	Krishna Priya R S	KSCSTE	Dr. Sajeevan T P	Marine Biotechnology
38	Merlin T S	KSCSTE	Dr. Sajeevan T P	Marine Biotechnology
39	Remya R Nair	CSIR-JRF	Dr. Valsamma Joseph	Marine Biotechnology
40	Boobal R	UJRF	Prof. Dr. I. S. Bright Singh	Microbiology
41	Jisha Kumaran	UJRF	Dr. Valsamma Joseph	Marine Biotechnology
42	Deepa G	CSIR	Dr. T. P. Sajeevan	Marine Biotechnology
43	Ajitha V	UGC-BSR	Prof. Dr. Rajathy Sivalingam	Environmental Toxicology
44	Sanyo Sabu	UJRF	Dr. Valsamma Joseph	Marine Biotechnology
45	Jyothi K P		Dr. E. P. Yesodharan	Environmental Chemistry
46	Ammu Thomas		Dr. I. S Bright Singh	Microbiology
47	Ambili C B	E-grantz	Dr. A. Mohandas	Environmental Biology
48	Adem Shahin		Dr. Ammini Joseph	Environmental Biology



49	Veena Vijayan	UGC-BSR	Dr.Suguna Yesodharan	Environmental Chemistry
50	Kiran Surya K T		Prof. Dr. Rajathy Sivalingam	Environmental Toxicology
51	Vineesh V		Dr. Suguna Yesodharan	Environmental Chemistry
52	Dhaneesha M	KSCSTE	Dr. Sajeevan T P	Marine Biotechnology
53	Vishnu P S		Dr. A. Mohandas	Environmental Biology
54	Indira K	UGC-BSR	Dr. Valsamma Joseph	Marine Biotechnology

## 7. Administrative Personnel

Sl.No.	Designation	No. of posts
1	Section Officer	1
2	Assistant	2
3	Typist/Steno	1
4	Peon	1
5	Sweeper-cum-Cleaner	1

## 8. Technical Personnel

**Laboratory Assistant - 1**

**Technical Assistant - 2**

## 8. Student Enrollment

Sl. No.	Programme of Study	Men	Women	Total
1	M.Sc.	5	19	24
2	Ph.D.	13	28	41

## 9. Research Facilities

a) Laboratory:

- (1) Environmental Chemistry Research Laboratory – 1
- (2) Environmental Chemistry Research Laboratory – 2
- (3) Environmental Engineering Laboratory-1



- (4) Environmental Management(GIS) Laboratory -1
- (5) Environmental Microbiology Laboratory
- (6) Algal Biotechnology Laboratory-1
- (7) Environmental Toxicology Laboratory-1
- (8) Environmental Virology Laboratory-1
- (9) Environmental Biotechnology Laboratory-1
- (10)Molecular Biology Laboratory-1

b) Major Equipments

- (1) Gas Chromatograph with FID and ECD
- (2) Cooling Centrifuge
- (3) UV-Visible Spectrophotometer
- (4) Tissue Homogenizer
- (5) Research Microscope
- (6) Laminar Airflow
- (7) High volume Air Sampler
- (8) TOC Analyzer
- (9) Rotary Vacuum Evaporator
- (10)Spectrofluorimeter
- (11)Ultrasonic Cell Disruptor
- (12)KF Titrator
- (13)Electronic Balances

c) Library:

No. of Books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
1. Books - 2535 2. Journals - 10	3 Numbers Nil



## 10. Distinguished visitors :

Sl. No.	Name	Affiliation	Remarks
1.	Padma Bhushan Professor Dr. Madhav Gadgil	Indian Institute of Science, Bangalore & D.D.Kosambi Visiting Research Professor, Goa University	Presented a special talk on "Current Status and Management of Environmental Information in India".
2.	Prof.(Dr.) C. M. Narayanan	Professor (retired) of Chemical Engineering, NIT, Durgapur, West Bengal	Zero Discharge through Efficient Utilisation- Successful, Green and Low cost Technologies
3.	Mr. S. Jeyapaul	Scientist C Regional Directorate(South), Central Pollution Control Board, Bengaluru, Karnataka	Pollution Control –Present Scenario.

## 11. Ph.D Awarded (2016-2017)

Sl. No	Title of Thesis	Name of Research Scholar	Supervising Guide
1	Adsorption Isotherm Studies on Activated Carbon Prepared by Activation with Cerium Compounds" since 19-01-2009. Synopsis submitted in October, 2015. Ph D Thesis Submitted on 16 January, 2016; Ph D Awarded on 14 th October, 2015.	Ms. Bindia Ravindran	Dr. V. Sivanandan Achari
2.	Adsorption isotherm characterization of Porous Materials using John isotherm, Since 05-05- 2008. Synopsis submitted on 14 th April, 2016. P h D Thesis Submitted on 02 May, 2016. Ph D Awarded on 19 <sup>st</sup> June, 2017.	Smt. Mercy Thomas	Dr. V. Sivanandan Achari
3	Novel cellulases through culture dependent and metagenomics based approaches : Discovery and Characterization	Asha P	Dr. I S Bright Singh
4	Sono, Photo, and Sonophoto catalytic removal of chemical and bacterial pollutants from water wastes	S G Anju	Dr.Suguna Yesodharan
5	Production optimization of the marine micro algae pichochlorum maculatum MACC 3 as source	Arun Agustine	Dr.Valsamma Joseph

## 12. Publications

### a. Papers:

Sl. No.	Name of Paper	Impact factor, if any
1.	Adsorption of Methylene Blue using modified coconut shell based granular activated carbon impregnated with Zn <sup>2+</sup> /ZnO: Kinetics, isotherm and reactor optimization study V.Sivanandan Achari, S. Jayasree, A. S. Rajalakshmi, & Raichel Mary Lopez [ Manuscript No. IJER-D-17-00573]	International Journal of Environmental Research

### b. Books

Sl.No	Name of Books
1	Biotechnology for Bio fuel Production and Optimization
2	Characterization of Biomaterials
3	Climate Change Biology 2 <sup>nd</sup> edition
4	CSIR - NISCAIR Journals
5	Indian Academy of Science Journals

## 13. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Anand M	International Conference on Data Science and Engineering conducted by Department of computer Science on August 23-25, 2016	Participation
Anand M	International Conference on Solid Waste Management at Jadavpur University, Kolkata, West Bengal, India, November 24-26, 2016	Paper presentation
Anand M	International Seminar on Marine Pollution and Environment (IMS 16) organized by School of Marine Engineering, CUSAT on 4-5 August 2016	Paper presentation
Chandini P.K, Nisha.S Dr. Rajathy Sivalingam	International Carbon Credit Conference : Trading prospects from Indian Carbon market perspective at Bharat Matha College on 30 August 2016 "Isolation of pesticide resistant bacteria from the agriculture soils of Palakkadu District - Kerala"	Paper Presentation





Dr. V. Sivanandan Achari	Delivered an Invited Lecture on the topic entitled “Environmental Modeling- a Basic Concept” at Sree Narayana College, Kollam on 08-01-2016 organized by Department of Botany and Biotechnology.	invited lecture
Dr. V. Sivanandan Achari	Attended a workshop on Recent Trends in Nanotechnology for Aged Old (RTNO-2016) organized by Centre for Enabling Technologies for the Aged, Cochin University of Science and Technology, on 10 th March, 2016 held at Department of Physics, CUSAT.	attended workshop
Dr. V. Sivanandan Achari	Delivered a talk on the focal theme “ Go wild for Life” in connection with World Environment Day-2016 at Sacred Heart College (Autonomous), Thevara, Kochi on 06-06-2016	invited lecture
Dr. V. Sivanandan Achari	Participated 2016 International Conference of Data Science and Engineering (ICDSE), organized by the Department of Computer Science, Cochin University of Science and Technology and technically cosponsored by IEEE Kerala Section during August 23-25, 2016.	international conference attended
Dr. V. Sivanandan Achari	Delivered ‘Ozone Day Oration – Present Scenario of Ozone and Biosphere” organized in connection with world ozone day celebrations 2016 on ‘save ozone, save life’ by post graduate and research department of zoology on 23 <sup>rd</sup> , September, 2016.	invited lecture
Dr. V. Sivanandan Achari	Chaired a technical session on Chemical Sciences of 26 <sup>th</sup> Swadeshi Science Congress held at CMFRI, Kochi during 7 to 9 <sup>th</sup> November, 2016 organized by Swadeshi Science Movement.	chaired a session
Dr. V. Sivanandan Achari	Chaired a technical session in the UGC Sponsored Seminar on “Green Chemistry for Environmental Sustainability” held at Bharat Mata College, Thrikakkara, Kerala, on 7- 8 <sup>th</sup> February, 2017 organized by Post Graduate Department of Chemistry & Research Centre in Collaboration with School of Environmental Studies, Cochin University of Science and Technology.	chaired a session
Dr. V. Sivanandan Achari	Participated and attended 26 <sup>th</sup> Swadeshi Science Congress held at CMFRI, Kochi during 7 to 9 <sup>th</sup> November, 2016 organized by Swadeshi Science Movement.	Attended the conference
Dr. V. Sivanandan Achari	Attended a multi stake holder consultation meeting on Green Climate Funding proposal on Bharathapuzha Rejuvenation at the office of Joint Director, IWR Division (IDRB), Palakkad on 21-02-2017.	



#### 14. Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Name of faculty	Name of Organisation	Role
Dr. Anand M	Sri. Sankara University, Kalady, Kochi	Resource person, UGC sponsored refresher courses for NET aspirants, State Employment Bureau, CUSAT and at SriSankara University, Kalady, Kochi
Dr. V. Sivanandan Achari	Hon`ble National Green Tribunal (NGT), Circuit Bench, Kochi	Expert & Member, Committee to Study Bharathappuzha River (as a scientific person having speciality in Science and Technology of water pollution nominated by the Vice Chancellor of the Cochin University), by Order dated 23 <sup>rd</sup> May 2016, the Hon`ble National Green Tribunal (NGT), Circuit Bench, Kochi on Original Application No. 16 of 2016 (SZ) (Suo motu) in the matter of Suo Moto, the health hazards created in Kerala by pollution of water from Bharathappuzha River.

#### 15. Awards/ Honors/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honors /Award	Awarding Agency
Dr. Anand M	2016 Excellent Paper Award for the paper titled: In-vessel Composing of Food Waste: A Novel Approach	IsconSWM

#### 16. Sponsored Research Projects

Sl. No	Title	Sponsoring Agency	Amount	Investigator(s)
1	Development of zero waste technology	UGC-SAP (DRS-II)	135 lakhs	2015-2020
2	Zero effluent discharge technologies: Effluent and Drinking water Treatment Using [SMN – GAC] and Biologically Activated Granular Activated Carbon [BAGAC] Filters.	U G C	Rs. 135 lakh	Dr. I. S. Bright Sigh Coordinator of the Program. Dr. V. Sivanandan Achari Coordinator of the UGS- SAP-DRS-II-Program [2015-2020]



3	“Fireworks accident at Puttingal Devi Temple, Paravur, Kollam, Kerala on 10 <sup>th</sup> April, 2016 and Subsequent Ground Water Contamination: A Study of Groundwater Quality, Abatement and Mitigation submitted by Dr. V. Sivanandan Achari	Department of Environment & Climate Change	Rs. 25, 00, 000/	Dr. V. Sivanandan Achari
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### 17. Research Programmes and Activities:

Sl. No.	Problem / Topic	Investigator (s)
1	Assessment of Groundwater Quality along the Tsunami Affected Arattupuzha Coast of Kerala. since 19-08-2009.	T. Regi George [3662]
2	Evaluation of Adsorption Properties of Zinc Impregnated Granular Activated Carbon.	S. Jayasree [4085]
3	Ph D Synopsis (Environmental Engineering: Physical Chemistry). Title: Evaluation of Adsorption Properties of Zirconium Impregnated Granular Activated Carbon	A. S. Rajalakshmi [4085]
4	Assessment of Groundwater Quality along the Tsunami Affected Alappad Coast of Kerala. Since 29-07-2011.	Mrs. M. S. Ambili [4259]
5	Title: Determination of Surface Area of Porous Materials Using Adsorption Method from Liquid Phase, Since 25-11-2013.	Mrs. Raichel Mary Lopez [4665]
6	Title: Ground water Quality of Anthakaranazhi – Chellanam Coastal Belt. Since 20-04-2011	S. Deepa [4070]
7	Title: Groundwater Quality of Alappad Coast of Kerala : A Critical Evaluation of groundwater Chemistry. Since 05-10-2016.	Balamuralikrishna [5292]
8	Title: Advanced Treatment of Drinking water/waste water using Biological Activated Carbon Filters after Ozonation. Since 25-01-2017.	Mrs. Monisha Mohanadas [5438]
9	Title: Photo, Sono and Sonophotocatalytic transformation of plastics and polymers mediated by semiconductors, since 04-07-2011.	Mrs. Sindhu Joseph [4123]
10	Title: Photocatalytic Degradation of Chemical Pollutants in Water. Since 14-08-2012.	Mrs. Deepthi John [4411]



### 18. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl. No.	Title	Duration	Coordinator	Funding Agency
1	Environmental Degradation and Climate Change - A holistic Approach	1day	Prof. Dr. Rajathy Sivalingam	University
2	Zero Effluent Discharge Technologies	1 day	Dr. V. Sivanandan Achari	University

### 19. Consultancy Work

Sl. No	Name of Consultancy	Name of Consultant	Sponsoring Agency
1	Expertise	Dr. M. Anand	GJ Ecopower Ltd., Kochi, Kerala
2	This report is based on the study taken up by the School of Environmental Studies, Cochin University of Science and Technology, Cochin 682 022 as per the direction of the Honourable High Court of Kerala through (1) Judgement of Honourable High Court of Kerala WP(C) Nos 19746/ 2015-P, 36246/ 2016 Dated 17/12/2016 (2) Letter No. A2- 916/ 2016 Secretary, Kalady Grama Panchayat Dated 24/09/2016 (3) Letter No. A2- 916/ 2016 Secretary, Kalady Grama Panchayat Dated 22/12/2016 (4) Invitation Letter from The Secretary, Kalady Grama Panchayat Dated 30/12/2016	Dr. V. Sivanandan Achari	Honourable High Court of Kerala WP(C) Nos 19746/ 2015-P, 36246/ 2016 Dated 17/12/2016



## SCHOOL OF INDUSTRIAL FISHERIES

### 1. Brief History of the Department

The School of Industrial Fisheries was established in 1976 as the Department of Industrial Fisheries under the erstwhile University of Cochin for post-graduate teaching and research on all aspects of fishery science and technology. The Department started offering the M.Sc. course in Industrial Fisheries in 1976 and Ph. D programme in 1979.

The Department was elevated to the status of the School since 1995 by recognizing the progress and achievements in teaching, research and outreach activities in various fields of Fisheries.

The various activities of the School are now carried out under five well defined division of (1) Aquaculture and Capture Fisheries (2) Fishing Craft and Gear Technology (3) Fish Processing Technology (4) Fisheries Economics and (5) Fisheries Management.

The M.Sc. course in Industrial Fisheries is a multi-disciplinary programme spread over four semesters designed to offer the students the needed scientific, technical and managerial skills to take up responsible positions in industry, administration and management in the fisheries sector of the country and abroad. Restructuring of the present M.Sc. programme into three specialized divisions viz, Aquaculture, Fish Processing Technology and Fisheries Management has been undertaken and the official approval of the programme is underway.

The School is offering an Innovative PG programme of UGC viz., Master of Fisheries Science (MFSc) in Seafood Safety and Trade. The four semester course with an intake of 20 has been framed so as to provide manpower specialized in managerial skills and technical expertise in the field of seafood safety demanded by the trade and seafood safety standards, to provide training in areas related to seafood business at par with world class institutions. The course also aims at extending state of the art research opportunities in emerging vistas related to post harvest technology of fish, seafood trade, seafood quality assurance and international trade. In addition to School of Industrial Fisheries, National Institute for Fisheries Post Harvest Technology and Training (NIFPHATT) and Seafood Exporters Association of India are collaborating in the conduct of the programme.

In addition to the two PG programmes, the School is offering a M.Phil Programme



in Fisheries Science with an intake of 10 students per year. The syllabus of this MPhil Programme was revised and approved by the University in 2016, and will be offered from 2017 admission onwards.

The Ph.D. programmes of the School extends to frontier areas of fisheries science and technology, including aquaculture, capture fisheries, Fish Biochemistry, Post harvest technology of fish, seafood quality assurance, Fisheries Economics, Fisheries Management and International Marketing. The faculty of the School serves as experts/consultants in many national /international fisheries bodies and has organized/participated in many national/international symposia/workshops.

The School has, apart from bringing out several research reports and conference proceedings, produced a crop of outstanding research articles and books. The School is now recognized as a premier national institution for fishery science/technology education in the country attracting international student enrolment.

## 2. Programmes of Study/Research

1. M.Sc. Industrial Fisheries
2. M.F.Sc Seafood Safety & Trade
3. M.Phil Fishery Science
4. Ph.D. programmes in
  - (a) Fishery Biology and Aquaculture
  - (b) Fishing Craft and Gear Technology
  - (c) Fish Processing Technology
  - (d) Fisheries Economics
  - (e) Fisheries Management

## 3. Faculty Members

Sl.No.	Name	Designation	Qualification	Specilisation
1	Dr. K. T. Thomson	Professor	M.A, Ph.D.	Fisheries Economics
2	Dr. A. Ramachandran	Professor on deputation as Vice Chancellor, KUFOS	M.Sc. Ph.D	Fisheries Management
3	Dr. M. Harikrishnan	Associate Professor	M.Sc. Ph.D	Industrial Fisheries, Fishery Biology & Aquaculture



4	Dr. Mini Sekharan. N	Assistant Professor	MSc, PhD	Fisheries Management & Marketing
5	Dr. S. Sabu	Assistant Professor	M.Sc. Ph.D	Quality Assurance and Food Safety Fish Processing Technology
6	Dr. Shibu. A. V.	Assistant Professor	M.Sc. Ph.D	International Marketing and Trade Fishing Technology
7	Dr. Dhanya, P.R	Assistant Professor (on Contract)	M.Sc. Ph.D	Industrial Fisheries

#### 4. Visiting Faculty (If any)

Sl.No.	Name	Designation	Qualification	Specilisation
1	Dr. Sanjeev S.	Visiting Professor	M.Sc. Ph.D	Microbiology

#### 5. Research/Project Staff

Sl.No.	Name	Designation	Qualification	Specilisation
1	Jenson Victor Rozario	JRF	M.Sc.	Fishery Biology
2	Deepak Jose	JRF	M.Sc.	Fish Biotechnology
3	Nidhin B	JRF	M.Sc.	Fishery biology
4	Anilkumar K.P	JRF	M.Sc.	Fishery biology

#### 6. Research Scholars

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Anupama.K.M		Dr.M.Harikrishnan	Life history traits of Carinotetraodon travancoricus
2	Nidhin.B	KSCSTE JRF	Dr.M.Harikrishnan	Fish Larval Taxonomy
3	Anilkumar	KSCSTE JRF	Dr.M.Harikrishnan	Taxonomy of Alpheids
4	Saswata Maitra	UJRF	Dr.M.Harikrishnan	Trophic levels of fishes
5	Deepak Jose	MoES	Dr.M.Harikrishnan	Crustacean phylogeny



6	Jenson Victor Rozario	MoES	Dr.M.Harikrishnan	Deep sea decapods taxonomy
7	Kaushik Dhas	UJRF	Dr.M.Harikrishnan	Crustacean chromatophores
8	Muhammed Rafeeqe	Part-time	Dr.Mini Sekharan.N	Food Safety Management Systems
9	Judin John Chacko	UJRF	Dr.Mini Sekharan.N	Ornamental Fisheries
10	Nashila Rahmaniya	UJRF	Dr.Mini Sekharan.N	Consumer Behavior towards Seafoods
11	Anju.P	UJRF	Dr.Mini Sekharan.N	Ornamental Fisheries
12	Jidesh Babu	UJRF	Dr.Mini Sekharan.N	Marketing Strategy of seafoods
13	Rajeshwari Kariat	UJRF	Dr.Mini Sekharan.N	Total Quality Management
14	Sariga.P.K	UJRF	Dr.Mini Sekharan.N	Fisheries Management
15	Dana E. B	UJRF	Dr. Saleena Mathew	Fish Protein Hydrolysate
16	Kala P. K	UJRF	Dr. Saleena Mathew	Collagen and Gelatin from discarded fishes
17	Remisha. O	UJRF	Dr. Saleena Mathew	Aflatoxin control in fish feeds
18	Liji Thomas	Part-time	Dr. Saleena Mathew	Glycosaminoglycans from cartilaginous fishes
19	Treesa Varghese	Part-time	Dr. Saleena Mathew	Autolytic enzymes on fish muscle
20	Jithu Paul Jacob	Part-time	Dr. Saleena Mathew	Oxidative stability of fish oil & PUFA
21	Pradeep. K	Part-time	Dr. Saleena Mathew	Utilization of mesopelagic fish
22	Rithin Raj	Full time	Dr.M.Harikrishnan	Studies on meso zooplankton in Vembanad lake
23	Saranya	Full time	Dr.Minisekharan	Implementation of food safety standards and regulations in restaurants in Kerala





## 7. Administrative Personnel

Sl.No.	Designation	No. of Posts
1	Section officer	1
2	Assistant Section officer	1
3	Senior Assistant	1
4	Typist	2 (1 Vacant)
5	Office Assistant	1
6	Sweeper cum cleaner	1 (Vacant)

## 8. Technical Personnel

Sl. No.	Designation	No. of Posts
1	Hatchery Assistant	1
2	Lascar	1
3	Lab Assistant	1 (Transferred to Dept of Computer Science)
4	Technician Gr.II	1 (Contract)
5	Net maker	1 (Vacant)
6	Hatchery Assistant cum Syrang and Driver	1 (Contract)

## 12. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1.	MSc in Industrial Fisheries	5	13	18
2.	MFSc in Seafood Safety and Trade	5	15	20
3.	MPhil in Fisheries Science	--	--	--
4.	Ph D.	1	1	2

## 13. Research Facilities

a. Laboratories, Aquaculture laboratory, Fishery biology laboratory, Molecular Taxonomy laboratory, Hatchery, Fish Processing and Quality Assurance Laboratory, Food Safety laboratory.

b. Major equipments Atomic Absorption Spectrometer, CHN analyser, Amino acid analyser, RT PCR, Gel doc, Nanodrop, Leica microscopes, HPLC, GC, Lyophilizer etc.

c. Library



## 14. Distinguished visitors

Sl.No.	Name	Affiliation	Remarks
1	Prof. Dr.Jason Hall Sponsor	Plymouth University	
2	Prof. Dr. Ian Stuart	Plymouth University	
3.	Dr.Sarwar Jahangir	City University of New York	
4.	Mr.Andre Bregger	Netuno, USA	
5	Dr.Yemi Oloruntuyi	Marine Stewardship Council	
6	Prof.H.Shivandanda Murty	Mangalore University	

## 15. Publications

### a. Papers

Sl. No.	Name of Paper	Impact Factor, if any
1	Jose, D. and M.Harikrishnan(2016) Non homologous COI barcode regions: a serious concern in decapod molecular taxonomy. Mitochondrial DNA DOI:10.3109/ 19401736. 2015.1137902 (impact factor 1.76)	<b>1.76</b>
2	Sanu, V.F., S.Bijoy Nandan, J.Deepak and M.Harikrishnan(2016) Molecular identification and systematic assessment of <i>Labidocera madurae</i> A.Scott, 1909 (calanoid copepod) from Lakshadweep Archipelago, south west coast of India, based on mitochondrial COI gene sequences. Marine Biodiversity.46(1): 95-103 DOI: 10.1007/s12526-015-0326-8	
3	Radhika,R., Nandan, S.B. and M. Harikrishnan (2016) Morphological and molecular identification of marine copepod <i>Dioithona rigida</i> Giesbrecht, 1896 (Crustacea:Cyclopoida) based on mitochondrial COI gene sequences, from Lakshadweep sea, India Mitochondrial DNA doi.org/ 10.1080/ 24701394. 2016. 1202941 (impact factor 1.76)	<b>1.76</b>
4	Jenson, V.R., Benjamin, D., Jose, D., Harikrishnan, M., Prabhakaran, M.P., Shanis,C.P., Sreedhar, U., Cubelio, S.S. and B.M.Kurup (2016) Re-description of <i>Lysirude channeri</i> (Decapoda Crustacea: Raninidae) from Bay of Bengal, Indian Ocean. Journal of Marine Biological Association of the United Kingdom., Doi:10.1017/S0025315416000746 (impact factor 1.09)	<b>1.2</b>
5	Bijoy, V.M., Zynudheen, A.A., George Ninan and M. Harikrishnan (2016) Quality Assessment of Formic Acid Silage Developed from <i>Squilla Oratosquilla nepa</i> (Latreille) Fishery Technology 53 (2016) : 125 – 132)	



6	Sisodia, A.V., Bijoy, V.M. and M. Harikrishnan (2016) Haematological Assessment on Toxicity of Fungicide Hexaconazole on Post larvae of <i>Macrobrachium rosenbergii</i> (de Man) Fishery Technology 53 (2016) : 64 – 68;	
7	Harikrishnan M (2016) On the exploited fisheries of three major estuaries of Kerala.pp:23-29 In.: Antony, P.J and Jose K.A. (eds) Sustainable Fisheries in Ecosystem Perspective St.Michaels College, Chertala 109p	
8	Koushik, D and M.Harikrishnan (2017) Efficiency of bioactive compounds extracted from various plant leaf to improving the quality of fish and shell fishes during chilled storage condition. Pp 121-125 In Ramachandran, A., Harikrishnan M., Shibu A.V., Minisekharan, N. and S.Sabu (Eds) Seafood Safety Trade and Management. CUSAT 148p	
9	Jithu Paul Jacob and Saleena Mathew, 2016. Increase of oxidative stability in fish oil using potent natural antioxidants present in three Indian medicinal plants (imp), International Journal of nutrition and agriculture research, Vol 2, issue 1, 25-34	
10	Tresa Varghese and Saleena Mathew (2016) Postmortem autolytic changes of iced stored banded snakehead ( <i>Channa striata</i> ) (Bloch, 1793). International Journal of Fisheries and Aquatic Studies 2016; 4(4): 262-267	
11	Dhanya Pulikkottil Rajan and Saleena Mathew, Biopreservation to stabilize <i>Euthynnus affinis</i> quality (2017) Turkish Journal of Fisheries and Aquatic studies, ISSN 1303-2712, DOI: 10.4194/1303-2712- v17_6_12. Accepted in April 2017. (NAAS – 6.55)	
12	Jithu Paul Jacob and Saleena Mathew, 2016. Effect of Lipases from candida cylinderacea on enrichment of PUFA in marine microalgae, Journal of food Processing and Preservation ISSN 1745-4549.	
13	Sameera Shamsudheen and Alappat Ramachandran (2016) Chain of custody of fish marketed in Cochin city: Safety and Quality issues. <i>International Journal of Management (IJM) Volume 7, Issue 3, 2016, pp. 279-292</i>	
14	Sariga, P.K., Anju, P., and Sekharan, M.N(2016). <i>Small Scale Ornamental Fisheries: A Livelihood Option for Tribal Community in the Villages adjacent to Chalakkudy River</i> . Marine Biodiversity and Bioprospecting for Sustainable Livelihood. 248 – 255p.	
15	Mini Sekharan (2016) Ornamental fish breeding for women empowerment in India, May Issue Ornamental fish International (OFI Journal)	
16	Minisekharan (2017) Market Trends in Indian Ornamentalfish trade, INFOFISH International Issue 3/2017 (MAY/JUNE), pgs 25 - 28	



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20	Sumina, N. S., Das, K., and Sabu, S. (2016). Quality and yield of chitin and chitosan extracted from shell wastes of <i>Ariosteus alcocki</i> and <i>Heterocarpus woodmasonii</i> . 26th Swadeshi Science Congress, 7-9 November 2016, Cochin (Book of Abstracts-p 146).	
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22	Shibu, A.V. (2016) International Marketing of Indian Seafood. Proceedings of the National Seminar on Seafood Safety Trade and Management. Ramachandran, A., Harikrishnan, M. Shibu.A.V., MiniSekharan, N. and Sabu, S. (Edts) 2016 Seafood Safety Trade and Management, School of Industrial Fisheries, Cochin University of Science and Technology, Kochi-16, 148p; ISBN: 978-93-80095-98-1., 91-98	
23	Shibu, A.V. (2016) Traceability in seafood supply chain: Need for sustainability approach. Proceedings of the National Seminar on Seafood Safety Trade and Management. Ramachandran, A., Harikrishnan, M. Shibu.A.V., MiniSekharan, N. and Sabu, S. (Edts) 2016 Seafood Safety Trade and Management, School of Industrial Fisheries, Cochin University of Science and Technology, Kochi-16, 148p; ISBN: 978-93-80095-98-1., 133-142.	
24	Anilkumar K.P, Harikrishnan M., Jose D and B.Nidhin (2016) DNA barcoding of <i>Alpheus euphrosyne</i> using mitochondrial markers (COI 16SrRNA) 26 <sup>th</sup> Swadeshi Science Congress Book of Abstracts p.98	
25	Anju P, Minisekharan N and M.Harikrishnan (2016) A study on length weight relationship and relative condition factor of <i>Sahyadria chalakudiensis</i> inhabiting Pooyamkutty river of Kerala 26 <sup>th</sup> Swadeshi Science Congress Book of Abstracts p.100	
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27	Jose D, Anupama K.M and M.Harikrishnan (2016) Mitochondrial COI gene reveals population difference within Carinotetraodon travancoricus Hora and Nair 1941. 26 <sup>th</sup> Swadeshi Science Congress Book of Abstracts p.111	
28	Rozario, J.V., Jose D. Koushik D. and M.Harikrishnan (2016) Length weight relationship of two deep sea Raninid crabs – Lysirude channeri and Raninoides personatus from Indian EEZ. 26 <sup>th</sup> Swadeshi Science Congress Book of Abstracts p.116	
29	Koushik D., Rozario JVR, Jose D, Saswata Maitra, Nidhin B and M.Harikrishnan (2016) Extraction of carotenoid pigments from deep sea crustaceans collected from harbours in Kollam, Kerala 26 <sup>th</sup> Swadeshi Science Congress Book of Abstracts p.118	
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39.	Deepak Jose, Jenson V Rozario, Diana Benjamin and Harikrishnan M (2016) Mitochondrial markers (COI and 16S rRNA) confirms the occurrence of <i>Ephyrina figueirai</i> Crosnier & amp; Forest, 1973 in Indian waters, In: International Conference on Towards a Sustainable Blue Economy, Kerala University of Fisheries and Ocean studies, 10p. 4th-6th February 2016	
40	Krishnaprasoon NP, Saswata Maitra, Jenson V. Rozario, Rahul Mondal, Koushik Das and M. Harikrishnan (2016) Morphometric analysis of the Peeble crab, <i>Lyphira perplexa</i> (Galil, 2009) collected from Neendakara Harbour, Kerala, In: National Seminar on Marine Biodiversity and Bioprospecting for sustainable livelihood, Dept. of Marine Biology, Microbiology and Biochemistry, School of Marine Science, CUSAT, 37 p	
41.	Rabeena V.I., M. Harikrishnan, Rahul Mondal, Koushik Das (2016) Studies on the efficiency of Tulsi extract on improving keeping quality of fish during iced storage. National Seminar on Seafood Safety, Trade and Management. School of Industrial Fisheries- CUSAT, Kochi-16. 9th -12th March 2016	
42	Nidhin B., Anil Kumar, K. P., Koushik, D., Krishnaprasoon and M. Harikrishnan (2016) Allometric growth of Juveniles of <i>Calappa lophos</i> (Herbst,1785) collected from south west coast of India, In: International Conference on Towards a Sustainable Blue Economy, Kerala University of Fisheries and Ocean studies, 116 p. 4th-6th February 2016	
43.	Annie Shafna,K.J., Anil Kumar K.P.,Nidhin, B., Rithin raj and M. Harikrishnan (2016) Studies on the Nutritional Quality and yield of Banded Snapping shrimp <i>Alpheus euprosyne</i> De Man 1897. National Seminar on Seafood Safety, Trade and Management. School of Industrial Fisheries- CUSAT, Kochi-16. 9th -12th March 2016	
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45	Koushik Das, Rahul Mondal, Saswata Maitra and Harikrishnan M. (2016) Evaluation of Tomato Pulp as an Attractant in Shrimp Feed, In: Advances in Marine natural products and Nutraceutical Research,SOFTI,CIFT- Matsyapuri, 92 p.	
46	Ancy I., Sooraj, B., Sandhya,E.S. and M.Harikrishnan (2016) Some aspects of biology of <i>Ambassis ambassis</i> (Lacepede, 1802) inhabiting Cochin and Kayamkulam backwaters. In: International Conference on Towards a Sustainable Blue Economy, Kerala University of Fisheries and Ocean studies, 116 p. 4th-6th February 2016	
47	Soumya, K.R., Anil Kumar, K. P., Nidhin, B., Rithin Raj, M. and M. Harikrishnan (2016) Population charecteristics of the banded Snapping shrimp <i>Alpheus euprosyne</i> De Man 1897 inhabiting Vembanad lake, In: National Seminar on Marine Biodiversity and Bioprospecting for sustainable livelihood, Dept. of Marine Biology, Microbiology and Biochemistry, School of Marine Science, CUSAT	
48	Chinnu S. Raj, Silpa T. Baby, Rahul Mondal, Gipson Edapazham and M. Harikrishnan (2016) Quality assessment of “Dusky finned bull eye” collected from a landing centre of Cochin, In: National Seminar on Marine Biodiversity and Bioprospecting for sustainable livelihood, Dept. of Marine Biology, Microbiology and Biochemistry, School of Marine Science, CUSAT. 24 p.	
49	Koushik Das, Harikrishnan M., Saswata Maitra and Rahul Mondal (2017)Evaluation of Tomato pulp concentrate as a dietary attractant for post larvae of <i>M. rosenbergii</i> . (I) Journal- Animal Feed Science & Technology. Access idElsevier_accessID_ANIFEE_2017_166	
50	V.M. Bijoy, S. Sabu and M. Harikrishnan 2017. Fish meal replacement with “ <i>Squilla</i> ( <i>Oratosquilla nepa</i> ) Latreille silage in the practical diet of giant freshwater prawn <i>Macrobrachium rosenbergii</i> (de Man, 1879)”. Aquaculture International, Springer. communicated	
51	Deepak Jose, Mahadevan Harikrishnan, Jenson Victor Rozario and Sameera Shamsudheen (2016) Species misrepresentation revealed by molecular markers (COI & 16S rRNA): A reminder to the trade and export of <i>Macrobrachium rosenbergii</i> (Submitted to <i>Journal of Food Science and Technology</i> with Submission ID: JFST-D-16-02332)	
52	Deepak Jose and Mahadevan Harikrishnan (2017) Evolutionary history of genus <i>Macrobrachium</i> inferred from mitochondrial markers: A molecular clock approach (Submitted to the journal <i>Molecular phylogenetics and evolution</i> with Submission ID: MPE_2017_312)	
53	Jose, D., Rozario, J.V.R and M.Harikrishnan (2017) Mitochondrial markers (COI and 16S rRNA) confirms rare occurrence of <i>Ephyrina figueirai</i> Crosnier & Forest, 1973 in South West Coast of India (Submitted to <i>Zootaxa</i> under the review of Dr. Joseph W. Goy, Associate Editor)	



54	Benjamin, D., M.Harikrishnan, Rozario, J.V., Jose, D., Cubelio, S., B.M.Kurup (2017) Reproductive traits of deep-sea armoured shrimp, <i>Glyphocrangon investigatoris</i> from Bay of Bengal, Indian Ocean" (Submitted to <i>Journal of Marine Biological Association of the United Kingdom</i> with Manuscript ID JMBA-02-17-OA-0042)	
55	Deepak Jose, Mahadevan Harikrishnan, Jenson Victor Rozario and Koushik Das Evolutionary history of infraorder Caridea inferred from COI gene: A molecular clock approach (Submitted to Mitochondrial DNA)	

### b. Books

Sl. No.	Name of Book
1	Seafood Safety Trade and Management (2017) Ramachandran, A., M.Harikrishnan, Shibu A.V., MiniSekharan, N and S.Sabu (Eds) Directorate of Public Relations and Publications, CUSAT 148p

### 13. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. M. Harikrishnan	26 <sup>th</sup> Swadeshi Science Congress 7-9 November, 2016 Cochin	Secretary General to Organizing Committee
Dr. M. Harikrishnan	International Conference on Towards a Sustainable Blue Economy, Kerala University of Fisheries and Ocean studies, 116 p. 4th-6th February 2016	Participant
Dr. M. Harikrishnan	National Seminar on Seafood Safety Trade and Management, 9 <sup>th</sup> to 12 <sup>th</sup> March, 2016, Kochi Jointly Organised by School of Industrial Fisheries CUSAT and U.G.C. at Kochi	Treasurer
Dr. M. Harikrishnan	One day Seminar on Emerging Techniques for Safe Seafood, 19 <sup>th</sup> December, 2016. Organised by School of Industrial Fisheries CUSAT	Chairman
Dr. Mini Sekharan. N	THEERA NAIPUNYA II – A Capacity building training programme –Skill enhancement and capacity building of fisher youth held at CMFRI during 5 <sup>th</sup> Nov to 7 <sup>th</sup> January, 2017 in CMFRI, Kochi.	INVITED LECTURE
Dr. Mini Sekharan. N	THEERANAIPUNYA III- A Capacity building training programme –Skill enhancement and capacity building of fisher youth held at CMFRI during 5 <sup>th</sup> Nov to 22 <sup>nd</sup> JULY, 2017 in CMFRI, Kochi.	INVITED LECTURE





Dr. Mini Sekharan. N	Training session “ Global trading of ornamental fishes- Share of India and Potential in Kerala” for the 51 <sup>st</sup> batch trainees on 27-10-2016 at Fisheries Training Centre, Aluva as per G.O (Rt) No.K2/14782/2016 dtd 5/9/2016.	INVITED LECTURE
Dr. Mini Sekharan. N	Invited lecture AQUAREALM 2017 “Advances in the sustainable trade of Indian ornamental fishes”	INVITED LECTURE
Dr. Mini Sekharan. N	Invited Lecture- 2 <sup>nd</sup> Srilankan International Ornamental Fish Trade Conference, 2017. “Trends in Indian ornamental fish trade”	INVITED LECTURE
Dr. S. Sabu	Short term “training on “Chromatographic Techniques (GC & HPLC): An Analytical Approaches in Food Analysis during 17.07.2017 to 21.07.2017, CSIR-CFTRI, Mysuru.	Participant
Dr. S. Sabu	26th Swadeshi Science Congress 7-9 November 2016, Cochin	General Convener
Dr. S. Sabu	One day Seminar on Emerging Techniques for Safe Sea foods, 19 December 2016	Convener
Dr. S. Sabu	Workshop on Seafood Industry Orientations, 3 May 2017.	Convener
Dr. S. Sabu	Training session “ Byproducts Technology and Emerging Preservation Techniques of Fish” for the 51 <sup>st</sup> batch trainees in November 2016 at Fisheries Training Centre, Aluva as per G.O (Rt) No.K2/14782/2016 dtd 5/9/2016.	INVITED LECTURE
Dr. Shibu. A.V.	National Seminar on Seafood Safety Trade and Management, 9 <sup>th</sup> to 12 <sup>th</sup> March, 2016, Kochi Jointly Organised by School of Industrial Fisheries CUSAT and U.G.C. at Kochi	General Convener
Dr. Shibu. A.V.	National Seminar on Seafood Safety Trade and Management, 9 <sup>th</sup> to 12 <sup>th</sup> March, 2016, Kochi Jointly Organised by School of Industrial Fisheries CUSAT and U.G.C. at Kochi	General Convener
Dr. Shibu. A.V.	One day Seminar on Emerging Techniques for Safe Seafood, 19 <sup>th</sup> December, 2016. Organised by School of Industrial Fisheries CUSAT	Convener



#### 14. Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
Dr. M. Harikrishnan	Society of Fisheries Technologists India	Executive Committee member
Dr. Shibu A.V.	KUFOS	Board of Studies Member, M. Tech. Fishery Engineering KUFOS

#### 15. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	"Resource assessment and biology of deep sea crustaceans inhabiting continental slope of Arabian sea and Central Indian Ocean"	Ministry of Earth Sciences, Government of India	Rs.80 Lakhs	Dr.M.Harikrishnan (Principal Investigator)
2	"Temporal and Spatial distribution of larval forms of Macrobrachium spp in Vembanad lake with special reference to changes in lacustrine ecology"	KSCSTE, Government of Kerala	Rs. 23.71 Lakhs	Dr.M.Harikrishnan (Principal Investigator) Dr.Mini Sekharan (Co-investigator)
3	"Taxonomy and genetic characterization of pelagic copepod (Crustacea) from the marine habitats of south west coast of India"	Department of Biotechnology Govt. of India	Rs. 42.22 Lakhs	Dr.S.Bijoy Nandan (Principal Investigator) Dr.M.Harikrishnan (Co-Principal Investigator)
4.	Adaptation Research" A Trans-disciplinary Transnational Community and policy Centered Approach (ARTISTICC)	Ministry of Earth Science, Govt. of India and BELMONT FORUM (supported by G8 countries Global Change Programme	Rs.147.0 lakhs	Prof. Dr. K. T. Thomson (Principal Investigator)
5.	Innovative Programme on Seafood Safety and Trade in School of Industrial Fisheries	University Grants Commission	Rs.125.0 Lakhs	Prof. Dr. A. Ramachandran (Course Co-ordinator) Dr. Shibu A. V, w.e.f. 31.05.2016



## 16. Research Programmes and Activities:

Sl. No.	Problem / Topic	Investigator (s)
1	Taxonomy and biology of deep sea crustaceans	Deepak Jose, Jenson Victor Rozario, M.Harikrishnan
3	Taxonomy of larval fishes collected from Vembanad lake	Nidhin B, Harikrishnan M
4	Collection and identification of larval forms of Macrobrachium in Vembanad lake	Anilkumar, Nidhin B Harikrishnan
5	Trophic level studies in Vembanad fish diversity	Saswata Maitra and M.Harikrishnan
6	Biology of freshwater puffer fishes	Anupama and Harikrishnan
7	Seed production of indigenous fishes	Rahul and M.Harikrishnan
8	Taxonomy of Alpheid shrimps	Anilkuamar and Harikrishnan
9	Isolation and purification of crustacean pigments	Koushik Das and Harikrishnan M
10	Identification of gelatinous plankton in Vembanad lake	Rithin Raj and Harikrishnan M
11	Studies on Brachyuran zoea of Vembanad lake	Sruti K and Harikrishnan M
12	Population dynamics of Ambassis sp of Estuaries in Kerala	Prasanth Francis and M.Harikrsihnan
13	Lengthweight relationship of Ambassisspp of Azheekode estuary	Anjana Unni and M.Harikrishnan

## 17. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl. No.	Title	Duration	Coordinator	Funding Agency
1	National Seminar on "Seafood Safety Trade & Management	4 Days, 9-12 March, 2016	Prof. Dr. A. Ramachandran (Organizing Chairman) Dr.A.V.Shibu (General Convenor)	UGC CUSAT MPEDA DSIR NFDB CIFT CIBA KSCSTE
2	One day Seminar on Emerging Techniques for Safe Seafoods, 19 December 2016	19 December 2016	Convener Dr. Sabu. S	CUSAT



3	Workshop on Seafood Industry Orientations, 3 May 2017.	3 May 2017.	Convener Dr. Sabu. S	CUSAT
4	International workshop on National Science Communication, at School of Industrial Fisheries, Kochi-16	2.12.2016	Chairman Dr. K T. Thomson	CUSAT
5	Participatory Policy Making Workshop of ARTISTICC on Climate Change Impacts and adaptation of coastal communities in India” at Cherai, Kerala	29.4.2017	Chairman Dr. K T Thomson	ARTISTICC



## SCHOOL OF LEGAL STUDIES

### 1. Brief History of the Department:

The School of Legal Studies was initially established as a P.G. Department of Law of the Kerala University in 1962 under the leadership of the late Prof.(Dr.) A.T. Markose, an Internationally reputed Jurist who was the founder Director of the Indian Law Institute, New Delhi and the Deputy Judge of International Administrative Tribunal. The Department of Law got delinked from Kerala University and was made a part of the Cochin University in the year 1971 and later renamed as Cochin University of Science and Technology in 1986. Subsequently Department of Law was renamed as School of Legal Studies with vision to expand it into different Centers of Excellence. The School of Legal Studies continues to remain as a prestigious institution in imparting Legal Education and Research. Its pioneering efforts in encouraging P.G. studies and research in the vital fields of law has earned it name and fame both nationally and internationally.

Its commitment to social development has made it to develop teaching and research in socially relevant and nationally important emerging areas of law such as Constitutional Law, Criminal Law, Consumer Protection Law, Environmental Law, Human Rights, Commercial Law, Labour Law, Maritime Law, Intellectual Property Law and Corporate Law. Its consistent dedication to social change has attracted the attention of the UGC and Govt of India. Its programmes in Human Rights, Intellectual Property Rights Law and Corporate Law are now substantially supported by these agencies. The Library of the School has rich collections of study materials and books. This priced holding and exceptional services have helped it gain global recognition as a Nodal Centre for IPR studies. Its faculty is being consulted by various agencies including the Govt. of India for law reforms. The institution takes pride in having its alumni at different levels such as High Court Judges, District Judges, Senior Professors of leading Law Schools, Law Officers in various financial institutions and leading members of the Bar in almost all parts of India. The School has been regularly organizing Seminars, Symposia both at national and local levels and Refresher programmes for law teachers to help the participants to update their knowledge in emerging areas of law. The Public Law Lecture series established by the School has already Produced commendable works in law. The LL.B programme which was initially started as an evening course in the year 1994 was converted into a full time regular course due to change in the policy adopted by Bar Council of India in Legal Education. Later the School switched over to five year.



Integrated programme with limited number of seats for rigorous training for Under Graduate. This course was later restructured as double degree Integrated Hons. programme in Law vis-a-vis BBA LL.B (Hons.) and B.Com LL.B. (Hons.). The School also introduced 3 year LL.B (Regular-evening) course with a view to train administrators and Law Enforcement Officers who need specialized training in Law. The School has been fortunate to attract scholars having experience and education at different parts of the world to be in its vibrant teaching faculty.

**Thrust Areas of Research:**

- Criminal Law                                      Jurisprudence                                      Constitutional Law
- Environmental Law                                      Consumer Law                                      Human Rights Law
- Intellectual Property Rights                                      Corporate Governance                                      Maritime Law
- Commercial Law

**2. Programmes of Study/Research : B.B.A.,LL.B.(Hons.), B.Com LL.B (Hons.)  
3 year LL.B (Regular-Evening), LL.M. and Ph.D.**

**3. Faculty Members:**

Sl. No.	Name	Designation	Qualification	Specialisation
1	Dr. N.S. Gopalakrishnan	Professor (on deputation to IUCIPRS)	LL.M., Ph.D.(Cochin)	Commercial Law Criminal Law Intellectual Property Law
2	Dr. N.S. Soman, (Rtd. on 30.04.2017)	Associate Professor	B.Sc, D.S.S., LL.B, LL.M., Ph.D. (NET)	Criminal Law, Constitutional Law, Human Rights and Jurisprudence and Land tenures
3	Dr. P.S. Seema, Director	Assistant Professor	BA (Economics) LL.M.,NET, Ph.D	Human Rights Law, Constitutional Law, Jurisprudence and Criminal Law
4	Dr.Vani Kesari. A	Assistant Professor	LL.M.,NET, Ph.D	Constitutional Law and Administrative Law
5	Smt. Jean Vinitha Peter	Assistant Professor	BAL, LL.M., NET	Criminal Law and Constitutional Law



6	Sri.Naveen S	Assistant Professor	LL.M. NET	Constitutional Law, Intellectual Property Law, International Organization and Human Rights, Law of the Sea and Environmental Law
7	Dr. Preetha S.	Assistant Professor	LL.M., NET, Ph.D	Criminal Law, Commercial Law and Jurisprudence
8	Dr.Sreejith S	Assistant Professor	MBA, NET, Ph.D	Management
9	Dr.Nemat Sheereen S	Assistant Professor	M.Com, M.Phil, NET, Ph.D	Financial Management
10	Smt.Arathi Ashok	Assistant Professor	LL.M, NET	Intellectual Property Rights, Labour Laws and Jurisprudence
11	Dr.Aneesh V. Pillai	Assistant Professor	LL.M., Ph.D, SET LAW	Consumer Law and Human Rights and Duties Education
12	Sri. Induraj V.R.	Assistant Professor	LL.M. NET	Commercial Law and Consumer Law
13	Sri.Harigovind P.C.	Assistant Professor	LL.M,NET	Human Rights and Duties Education and Criminal Law
14	Dr. Binu Mole K.	Assistant Professor	LL.M, NET, Ph.D	Maritime Law and Labour Laws

#### 4. Visiting Faculty (If any)

Sl.No	Name	Designation	Qualification	Specialisation
1	Dr. D Rajeev	"	LL.M, Ph.D	Constitutional Law and Administrative Law
2	Prof. P. Leelakrishnan	"	LL.M.,Ph.D	Constitutional Law, Administrative Law and Environmental Law
3	Smt. Thara Prabhakar	"	LL.M, D.C.A.	Labour Law, Maritime Law and Environmental Law
4	Dr. Mathew Jacob	"	M.Com, M.Phil, Ph.D	Management
5.	Prof. M.P. Joseph	"	M.A., PGDTE	English
6.	Smt. Smitha Kurian	"	LLM	Constitutional Law and Administrative Law



7.	Smt. Soumya. G.	"	M.A (Economics)	Economics
8.	Sri. K.D. Zacharia	"	LLM	Banking Law and Corporate Governance
9.	Adv. Shyam Kumar V.M	"	LLM,NET	Maritime Law and Administrative Law
10.	Adv. Russel S.	"	LLM	IPR and Human Rights
11.	Prof. M. Marcus	"	BA,BL,ML	Crimes and Torts
12.	Smt.Asha Mol V	"	LL.M, NET	Criminal Law and Human Rights
13.	Adv. Fathima Roobi P.B.	"	PG Diploma in Journalism and Mass Communication, LL.B, MA, LL.M	Administrative Law
14.	Smt.Anju N Pillai	"	LL.M, NET	Corporate/Business Law
15.	Smt.Saritha Krishnakumar	"	LL.M	Environmental Law and Consumer Law
16.	Smt.Diya C.R.	"	BAL, LL.B,LL.M	Constitutional Law
17	Smt.Lekshmi Sreenivas	"	LL.M	Criminal Law and Human Rights
18	Smt.Anna John	"	LL.M	Constitutional Law and Human Rights
19.	Smt.Manjula R S	"	LL.M	Law of Corporate Governance
20	Sri.Arun V.R.	"	LL.M	Constitutional Law and Criminal Law
21	Adv. Dineshkumar V.K.	"	LL.M	Human Rights and Consumer Law
22	Adv.Yash Thomas	"	LL.M	International Trade Law, Constitutional Law and Criminal Law
23	Smt.Neha Susan Varghese	"	LL.M,NET	Constitutional Law and Criminal Law
24	Sri. Rijo Gratius	"	MBA	Management
25	Dr.A.M.Viswambharan	"	LL.B,M.Com, Ph.D	Corporate Accounting





26	Adv. Mohanraj T.P.	“	LL.M, DCL	Constitution Law, Maritime Law
27	Dr. Lison K Varghese	“	MA, MPhil, Ph.D	English
28	Smt. Chithra P.K	“	M.Com (Finance), B.Ed. M.Phil, NET	Finance
29	Sri. Anson C.J.	“	M.Com	Information Technology for Managers
30	Adv. Glory Tharakan	“	LLM	Corporate Governance and Securities Law
31	Smt. Karishma Birthare	“	LLM	Intellectual Property laws
32	Nimmy K Abraham	“	Mcom (Finance), NET, MBA (Finance)	Finance
33	Sabitha Zageer Bamadeen	“	MBA, NET	Management
34	Veena Roshan George	“	LLM, NET	Human Rights Law, Environmental law
35	Soumya James	“	LLM, NET	Business Law, Law of Contract, Constitution Law, Environmental Law
36	Nanditha Narayan	“	LLM, NET	Constitutional Law, Criminal Law

### 5. Research Scholars:

Sl. No.	Name	Funding Agency	Guide	Area of work
1	Binu Poornamodan Cholayil (P.T)		Dr.V.S.Sebastian	Intellectual Property Law
2	Ambily.T (P.T)		Dr.V.S.Sebastian	Rights of Tribal People over Traditional Forest Land and its Resources in India
3	Premsey P.N. (P.T)		Dr.V.S.Sebastian	State Responsibility and Corporate Accountability under the Human Rights Treaties
4	Regi Joseph (F.T) (F.I.P)		Dr.V.S.Sebastian	Service and Working Conditions of Employees of unaided Schools in Kerala – A Study (Labour Law)



5	Pai Yogesh Anand (P.T) [Research Centre changed to IUCIPRS, CUSAT w.e.f. 22.06.2016]		Dr.T. G. Ajitha	International Technology Standardization Patent Competition Law Addressing Gaps in the International Frame work
6	Dhanalakshmy, C.N. (P.T)		Dr.V.S.Sebastian	Regulation of Crime in Cyber Space : Issues and Challenges
7	Naveen. S.(P.T.)		Dr. D. Rajeev	Towards a Legal regime on Global warming
8	Dileep C. A. (P.T.)		Dr.D. Rajeev	Protection of Witness in Criminal Proceedings
9	Tina K. Stephen (P.T)		Dr. V. S. Sebastian	Control of Deceptive Advertisements in India
10	Anusree A. (P.T.)		Dr. V. S. Sebastian	Emerging Role of Forensic Evidence in Criminal Justice System
11	Arya A. Kumar (P.T.)		Dr. D. Rajeev	Bioterrorism and the Right to Health – A study in the Human Rights Context
12	Joby Bhasker (P.T.)		Dr. D. Rajeev	Religious Practices under Indian Law
13	Harigovind P.C. (P.T.)		Dr. A. M. Varkey	Indian Law on Clinical Trials – A Human Rights Perspective
14	Krishnakumar N.K. (P.T.)		Dr. D. Rajeev	Law of Conservation of rivers in Kerala with a special reference to sand dredging in Periyar River
15	Anju N. Pillai (P.T.)		Dr. A. M. Varkey	Corporate Managerial Accountability Through Disclosure Regulations
16	Mamatha T.K (P.T)		Dr. N.S. Soman	Realization of Socio Economic Rights
17	Induraj V R (P.T)		Dr. N.S. Soman	Legal Pluralism in India A study with special reference to Tribal Laws & Custom
18	Neha Susan Varghese (F.T)		Dr. P.S. Seema	Sentencing Policy in Socio-economic Offences



19	Renuka V (F.T)		Dr. P.S.Seema	Challenges of Law of Taxation in Digital Economy – An Analysis
20	Nandita Narayan (F.T)		Dr. P.S.Seema	Concept of Reasonableness under the Indian Constitution

## 6. Administrative Personnel:

Sl.No.	Designation	No. of Posts
<b>OFFICE</b>		
1	Section Officer	1
2	Assistant Section Officer	3
3	Office Superintendent	1
4	Senior Grade Assistant	1
5	Computer Assistant	1
6	Office Attendant	2
7	Sweeper Cum Cleaner	1
<b>LIBRARY</b>		
1	Assistant Librarian (Sr. Grade)	1
2	Junior Librarian	1
3	Professional Asst. Gr. I	2
4	Library Assistants Gr. II	2

## 7. Student Enrolment

Sl.No.	Programme of Study	Men	Women	Total
1	LL.M.	11	22	33
2	BBA.LL.B (Hons.)	14	16	30
3	B.Com LL.B (Hons.)	12	21	33
4	3 Year LLB (Regular-Evening)	40	4	44
5	Ph.D.	0	3	3



## 8. Research Facilities

### (a) Library

No. of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
<b>Books – 30557</b>	<b>525</b>
<b>Journals – 56</b>	<b>56</b>

### 9. Distinguished visitors :

Sl.No.	Name	Affiliation	Remarks
1	Dr. P.R. Venkitaraman	Famous career guide, corporate trainer, specialised in organisational skills, leadership development and team-building	Orientation to the new students
2	Justice Padmanabhan Nair	Retd. Judge from the High Court of Kerala	
3	Adv. Sahasranaman	Famous lawyer and writer	
4	Mr. Jayesh J L	CEO, Vertex HR Management Consultants and Career Training Academy, Thiruvananthapuram	Two Days FDP on Excellence in Teaching and Transforming Classrooms
5	Mr. D Arun Gladwin	Director, Vantage Training Academy, Nagercoil	
6	Adv. Maria	Lawyer & Social Activist	One Day National Workshop on Human Trafficking: Prevention, Control and Rehabilitation One Day National Workshop on Human Trafficking: Prevention, Control and Rehabilitation
7	Shri. S. Sreejith, IPS	IG & Chief Investigation officer (CIO) of Kerala State Human Rights Commission	
8	Adv. M R Hariraj	Advocate, High Court of Kerala	
9	Shri. C S Mohit	Sub Judge & Secretary, District Legal Services Authority, Ernakulam	



10	<b>Justice P. Sathasivam</b>	<b>Hon. Governor of Kerala</b>	National Conference on Health Care Systems in India & Human Rights Concern, December 5 <sup>th</sup> to 9 <sup>th</sup> , 2016
11	Dr. NandiniKumar	(Former Dy.D.G. ICMR)	
12	Dr. Roli Mathur	(Scientist, ICMR)	
13	K.N. Janaraj	(S.P)	
14	Dr. Sherly Vasu	(Prof. HOD Forensic medicine KMCT, Medical College, Kozhikode)	Public Law lecture 2017
15	Hon'ble Justice Markandey Katju	Former Judge, Supreme Court of India	
16	C.P. Sudhakara Prasad	Advocate General, Kerala	
17	K.Surendra Mohan	Judge, High Court of Kerala	
18	Justice K. Sukumaran	Former Judge, High Court of Kerala	Two Day National Seminar on Cyber Laws: Issues and Challenges on January 6 <sup>th</sup> & 7 <sup>th</sup> , 2017
19	Justice A. Muhamed Mustaque	Judge, High Court of Kerala	
20	Shri. P. Hormis Tharakan	IPS, Former Chief of the Research and Analysis Wing (RAW), India	
21	Prof. Y.P. Ramasubbaiah	Dean, Faculty of Law, Acharya Nagarjuna University, Andhra Pradesh	Three day National Seminar on Protection of Migrant workers in India : Social & Legal Concerns 19-21 January 2017
22	<b>Prof. Shri Raveendrath</b>	<b>Honble Educational Minister of Kerala</b>	
23	Shri Arun R	Labour Commissioner	
24	Dr N. Ramakanthan	Former Director, Kerala Institute of Local Self Government	
25	Shri Prasad K.Paniker	BPCL Exe Director	
26	Dr. Jayadeep C. Menon	Cardiologist, AIMS, Kochi	
27	Dr Jayan Jose Thomas	Assot. Prof, IIT Delhi	
28	Shri Justice K.K Denesan	Rtd Judge, High Court, Kerala	
29	Justice Alexander Thomas	Judge, High Court of Kerala	
30	Prasad K. Paniker	BPCL, Kochi Refinery, Ambalamughal	



31	Dr. K. N. Raghavan	IRS, Customs Commissioner of Kochi	One Day Workshop on Goods and Services Tax (GST): Problems and Perspectives on February 4 <sup>th</sup> , 2017
32	Dr. Martin Patrick	Economist, Centre for Public Policy Research	
33	Dr. K. Gopakumar	Associate Professor, Gulati Institute of Finance and Taxation, Thriuvananthapuram, Kerala.	
34	Dr. Thomas Joseph	Associate Professor, Gulati Institute of Finance and Taxation, Thriuvananthapuram, Kerala.	One Day Workshop on Goods and Services Tax (GST): Problems and Perspectives on February 4 <sup>th</sup> , 2017
35	Dr. Pradeep K.P.,	Advocate, High Court of Kerala	
36	Dr. Kausar Edappagath	Special Judge, CBI/NIA Court No.2, Ernakulam & Chairman, Kanayannur Taluk Legal Services Committee	
37	Shri. C. S. Mohit	Sub Judge & Secretary, DLSA, Ernakulam	Pre Litigation Adalat jointly organised by Cochin University Legal Aid Clinic (CULAC) and District Legal Services Authority (DLSA), Ernakulam
38	Dr. John Vargheese	Judicial First Class Magistrate II, Aluva	
39	Dr Prabhakaran Paleri	Former Director General Coast Guard of India	
40	Prof. (Dr.) Sreejith,	Associate Professor, Associate Dean & Executive Director, Centre for International Legal Studies, Jindal Law School, O. P. Jindal Global University, Rajasthan	Special Talk on National Space Laws
41	Prof.Samson Thomas	Dean, marian International Institute of Management, Kuttikanam	Special Lecture on 'Marketing Management past'
42	B. Aliyar	Director, Kerala State Minorities Development Co. Ltd	Special lecture on 'Zero rate financing an alternative to conventional banking'
43	Adv. A. Jayashankar	Advocate, High Court of Kerala	Three Day Lecture Series in the name 'Freedom Lecturers- 2016'
44	Prof. M.K. Sanu	Retd. Renowned orator	



45	Hon. Mr. Justice J. Benjamin Koshy	Former Chairman, Kerala State Human Rights Commission & Former Chief Justice, High Court of Patna	National Conference on Health Care System in India & Human Rights Concern
46	Adv. Harikumar	Judge, High Court of Kerala	Inaugural function of 'Yukti 2017' National Law Fest and A.T. Markose Moot Court Competition
47	Justice J. Chitambaresh	Judge, High Court of Kerala	Valedictory function of 'Yukti 2017'
48	Justice Harilal	Judge, High Court of Kerala	
49	Justice Devan Ramendran	Judge, High Court of Kerala	
50	Adv. Ignatious	Advocate, High Court of Kerala	Judge, Debate Competition, 'Yukti 2017'
51	Priya Anna Stephen	Educational Manager, Growing Stars Ltd., Kochi	Judge,, 'Yukti 2017'
52	<b>Padma Bhushan Prof. (Dr.) Madhav Gadgil</b>	Environmentalist	Aanukaalikam 2017- Three Day Lecturer Series
53	Mr. C.R. Neelakantan	Activist, Environmentalist	
54	Dr. T.V. Sajeev	Head, Forest Health Division, Kerala Forest Research Institute, Thrissur	
55	Smt. Rajasree V.V.	Project Head, Livelihood Enhancement Programme, Vazhachal Region	
56	Dr. D. Rajasenan	Director, Centre for Economic Policy and Analysis, CUSAT	
57	Sarath S.	Celebrus Capital Ltd, EAK Tower, Panampally Nagar, Ernakulam	
58	Mrs. Nazeen Jahangir	Executive Director & CEO, NEST Group of Companies	
59	Dr. Dhaauraj	Chairman, Centre for Public Policy Research, Kochi	
60	Francis Pereya	Inspector of Police (Retd), Kerala Police Cyber Crime Cell	



61	Christo Shajan	Centre for Civil Society, Hanz Khas, New Delhi	
62	Riaz Ahmed	MD, Abad Hotels	
63	K.Kamaneesh	Additional District Judge, Ernakulam	
64	P.G. Ajithkumar	Additional Director, Kerala Judicial Academy, Ernakulam	
65	Gratious Kuriakose	Advocate, High Court of Kerala	

## 10. Publications :

### (a) Papers:

Sl. No.	Name of faculty	Name of Paper	Impact factor, if any
1.	Dr. P.S. Seema	1. "Medical negligence under section 304 A of the Indian penal code: Need to have a relook" ANU Law journal (accepted for publication)	N.A.
2.	Dr. Preetha S	1. "Conflict of Laws and the Jurisdictional Dilemma in the Italian Mariners' Shooting Case", 2016 Indian Journal of Law and Justice, 38-48 {ISSN: 0976-3570}.	
	Dr. Preetha S	2. "Use of Security Guards on Board Ships and its Legal Ramifications", Journal of the Marine Biological Association of India Vol. 58, No.2, Jul-Dec 2016.	
3.	Dr. Sreejith S.	1. (2016). Entrepreneurial Intentions among Women Telecentre- Owners in Kerala with Special References to Push Pull Theory of Motivation. <i>International Journal of Consumerism</i> , 1-5.	
		2. (2017). A Study on Entrepreneurial Motives with Special References to Akshaya Telecentres in Kerala. <i>TKM International Journal for Research in Management</i> , 48-55.	





4.	Dr. Nemat Sheereen S	<p>1. Indian market potential for bakery products.</p>	<p>Ingredients South Asia, A Saffron media publication, Vol.9, issue 11, pg.35-39, March 1-15, 2016</p>
		<p>2. Women customers and their behavioural pattern regarding online shopping</p>	<p>International Research Journal of Management and Commerce, Vol.3, Issue 7, July 2016, ISSN:2348-9766, pp.58-72 (Impact factor 3.861)</p>
6.	Dr. Aneesh V.Pillai	<p>1. A Chapter titled, "State Responsibility", in Dr. Shilpa Jain, <i>Public International Law</i>, Eastern Book Company, Lucknow, 2016, pp.89-108 (ISBN: 978-93-5145-254- 6.)</p>	
	Dr. Aneesh V.Pillai	<p>2. A Chapter titled, "Balancing the Conflict between Constitutional Morality and Public Morality: The Role of Indian Judiciary" in Dr. A M Sreedharan, <i>Multitude</i>, UGC Human Resource Development Centre, Kannur University, Thavakkara, Kannur, 2016, pp.19- 29. (ISBN:9788191070615)</p>	
	Dr. Aneesh V.Pillai	<p>3. A Chapter titled, "Right to Primary and Higher Education in India: An Analytical Study, in Dr. Ayan Hazra, <i>Law and Community: A Socio- Legal Perspective</i>, Satyam Law International, New Delhi, 2016, pp .61 – 75. (ISBN: 9789382823490)</p>	
		<p>4. "The Surrogacy (Regulation) Bill, 2016: A Critical Appraisal", Kerala Law Journal, 2017 (1) KLJ 13 (J)</p>	



7.	Sri.Harigovind P.C.	1. An Article titled <i>Recognising the Rights of Migrant Workers: Issues and Challenges</i> , in Protection of Migrant Workers in India: Legal and Social Concerns (ISBN 978- 93-80095-89-9) Published by Directorate Public Relations and Publications.	N.A.
		2. An Article titled <i>A Comment on Govindaswamy v. State of Kerala: Need for Reasoned Decisions from Apex Court</i> with Prof. (Dr.) K. N. Chandrasekharan Pillai in Complete Kerala High Court Cases Vo. 2 Part 6, April 2017.	N.A.
8.	Dr. Binu Mole K.	1. Marine Pollution Contingency Preparedness for Ships: A Practical study with Special reference to Indian Legal System, (3 International Research Journal of Human Resources and Social Sciences (2016))	5.4
9	Smt. Arathi Ashok	1. Book chapter titled <i>Exhaustion of IP: A Tool for Competition</i> in “Short Notes on Competition Law in India”, Aneesh V. Pillai (Ed.), Regal Publications, New Delhi, 2017, pp. 216-231 [ Chapter 16] 2. Book chapter titled <i>Innovation, IP and India: The Dichotomy Between Facts and Fiction</i> in “Innovation and IPR in China and India: Myths, Realities and Opportunities”, Kung- Chung Liu and Uday S. Racherla (Eds.), Springer, 2016, pp. 121-142 [Chapter 5].	
10	Sri. Induraj V.R.	An Article titled <i>Settled Plantation Labourers in KSFDC from Ceylon – Lesson on Migrant Rights</i> , in Protection of Migrant Workers in India: Legal and Social Concerns (ISBN 978-93-80095-89-9) Published by Directorate Public Relations and Publications.	



11	Dr. Vani Kesari A.	1. "ACCESS TO HUMAN GENETIC INFORMATION: APPREHENSIONS AND CHALLENGES" International Research Journal of Human Resources and Social Sciences	Sept2016 ISSN(p) 2394-4218 Impact Factor : 3.866
	Dr. Vani Kesari A.	2. <i>Commercialisation of Traditional Medicine of Indigenous Communities : Interface of Existing IP Regime and Human Rights</i> International Journal of Innovative Research and Advanced Studies	ISSN-2394-4404 Dec 2016

### (b) Books:

Sl. No.	Name of faculty	Name of Book
1	Dr. Nemat Sheereen S	"Consumer Buying Behaviour of Bakery Products in Kerala" ISBN 978-93-86138-51-4, Research India publications, Delhi (2017)
2	Dr. Aneesh V. Pillai	Dr. Aneesh V. Pillai (ed.), <i>Short Notes on Competition Law in India</i> , Regal Publications, New Delhi (2017), (ISBN No. 978-81-8484-642-3)
3	Dr. Vani Kesari A.	1. An article titled 'Third Party Proprietary Interests in Human Body: An Affront to Human Dignity' in an edited book. Book : <i>Concept of Property and Law : New Developments</i> , University of Madras ISBN- 978-93-81992 Year- 2017
		2. Co Editor of a book on the "Protection of Migrant workers in India : Legal and Social Concerns" Publisher CUSAT
4	Dr. Vani Kesari A.	3. An Article titled "Emerging Trends in Biomedical Research and their Commercialisation : An Intusion on Human Dignity" appeared in a conference proceeding published by NUALS in 2017

### 11. Participation in Seminar/Conference/Refresher Courses etc. by Faculty/ Students:

Name of Participant	Seminar/Conference/Refresher Courses	Role
Dr. P. S. Seema	1. One Day National workshop on Human trafficking: Prevention, control and rehabilitation conducted at the School of Legal Studies, on 19 <sup>th</sup> November, 2016	Resource person. Presented a paper on "Rehabilitation of victims of trafficking under the Indian Law"



	2. Five Days National conference on Health care systems in India: Human rights concerns, conducted at the School of Legal Studies, from 5 <sup>th</sup> to 9 <sup>th</sup> December, 2016	Resource person. Presented a paper on “Medical negligence under Criminal Law”
	3. Tribal welfare and protection: Issues and challenges, conducted at the School of Legal Studies from March 9 <sup>th</sup> to 11 <sup>th</sup> , 2017	Chaired a session on the theme “Protection of tribals under the Indian Constitution and other Laws”
	4. Sexual Harassment at workplace Act- A critical appraisal, special talk conducted at School of Management Studies, CUSAT, on April 2016	Resource person
	5. One Day workshop on “Rights of women and children in educational institutions organized by the Centre for Women and Family Studies, at Vidyodaya School, Thevakkal, Kochi on July 2016	Resource Person
	6. Seminar organized by the Elders Association at Govt. L.P. School, Kottappuram on 15 <sup>th</sup> January 2017	Key note address on “Protection of Women from domestic violence Act: Scope and ambit”
	7. Public Law Lecture Series by Honourbale (Mr.) Justice Markandey Katju on 20 <sup>th</sup> and 21 <sup>st</sup> December 2017	Co-ordinator
	8. Three Days National workshop on Sentencing policy in India: Need for a revamping held at His Highness Maharaja’s College, Ernakulam from December 20-22	Resource person. Presented a paper on “sentencing policy in offences against women and children”
	9. Lectures on Media and Freedom conducted by the Justice V.R. Krishna Iyer Chair on Human rights and Guild for Legal Research orientation and Writing (GLOW)	Co-ordinator
	10. Two Days National seminar on “Cyber Laws: Issues and challenges” conducted at the School of Legal Studies, CUSAT on 6 <sup>th</sup> and 7 <sup>th</sup> January 2017	Participant



	11. Special talk on the observance of Social Justice Day on February 20, 2017 conducted by UN Chapter of the Mar Athanasius College, Kothamangalam	Resource person
	12. Launching of the book "Of Vineyard equality" written by Justice Prabha Sridevan, at the Inter University Centre for Intellectual Property Rights (IUCIPRS) held on November 20, 2016	Special address on the theme "Equality under the Constitution of India"
Smt. Jean Vinitha Peter	1. Participated in the Two Day State Level Seminar on 'Extent and Intensity of Crime and Violence against Women and Children in Kerala' held on 27 <sup>th</sup> & 28 <sup>th</sup> February, 2017 at the Women's Studies Centre, Cochin University of Science & Technology	Presented a paper titled "Sentencing Policy in Sexual Offences: Need for Retributive Approach"
	2. Participated in the National Seminar on Tribal Welfare and Protection- Issues and Challenges, conducted at the School of Legal Studies, CUSAT from 9-11 March, 2017	Presented a Paper titled "Denotified and Nomadic Tribes: Scars of an unpleasant Legacy" and Chaired a Session
	3. Three day National Seminar on "Protection of Migrant Workers in India: Legal and Social Concerns" held at the School of Legal Studies, CUSAT from 19-21 January 2017	Chaired a Session
	4. Five Day National Conference on "Health Care System in India and Human Rights Concerns" organized by the Justice V.R. Krishna Iyer Chair on Human Rights from 05-09 <sup>th</sup> December 2016 at the SLS, CUSAT	co-ordinator
	5. Three Day UGC Sponsored Refresher Workshop on "Building Conducive Environment for Academic Leadership of Women Faculty" held from 27-20 <sup>th</sup> March, 2017 at Women's Studies Centre, CUSAT	Participated



	6. National Trial Advocacy Moot Competition-2017 conducted by the Centre for Criminal Laws, Govt. Law College, Ernakulam from 10-12 March 2017	Was judge in the competition
	7. One Day Workshop on Goods And Services Tax (GST) organized by the School of Legal Studies, CUSAT on 04 <sup>th</sup> February, 2017	Participated
	8. Two day National Seminar on “Cyber Laws: Issues and Challenges” held at School of Legal Studies, CUSAT on 06 <sup>th</sup> & 07 <sup>th</sup> January, 2017	Participated
	9. Two Day Faculty Development Programme on “Excellence in Teaching and Transforming Classrooms” held at the School of Legal Studies, CUSAT	Participat
Dr. Preetha S.	1. Refresher Course on Human Rights, UGC-HRDC, Kerala University, 19/8/2016 to 8/9/2016	Participant
	2. Refresher Workshop (UGC Sponsored) on Building Conducive Environment for Academic Leadership of Women Faculty, March, 2017, Women Studies Centre, CUSAT.	Participant
	3. “Corporate Board Diversity: The Regulatory Framework”, International Conference on Corporate Governance and Emerging Trends, University of Calicut, June, 2017.	Paper Presenter
	4. ‘Corporate Social Responsibility: A Critical Perspective”, International Conference on Ethics and Sustainable Business Practices”, Rajagiri Centre for Business Studies, Cochin, February, 2017.	Paper Presenter
	5. “Patient Autonomy and The Right to Refuse Treatment”, National Conference on Health Care System in India and Human Rights Concerns, School of Legal Studies, 05-09 Dec, 2016.	Paper Presenter & chaired a session



	6. Special Lectures on Corporate Finance, Department of Law, Calicut University	Resource Person
	7. Two day Workshop on “Corporate Law: National and International Perspectives”, Indian Society of International Law, New Delhi, 15th & 16th October, 2016.	Participant
	8. Two day Faculty Development Programme on “Excellence In Teaching & Transforming Class rooms”, 4th & 5th November, School of Legal Studies, CUSAT.	Participant
	9. National Seminar on Cyber Laws: Issues and Challenges, Jan 2017	Participant
	10. National Moot Court Competition, GLC, Trissur, Nov 2016	Judge, Preliminary Rounds
	11. One day national Workshop on “Goods and Services Tax: Problems and Perspectives”, Feb 2017.	Co-Coordinator
	12. Pre-Litigation Adalat, organised by Cochin University Legal Aid Clinic and District Legal service Authority, Feb, 2017.	Co-Coordinator
	13. One day Workshop on “Human Trafficking: Prevention, Control and Rehabilitation”, Nov 2016	Co-Coordinator
Dr. Sreejith S.	1. FLAIR Induction Training Programme, FLAIR, Directorate of College Education, Government of Kerala	Participant
	2. Refresher Course in Management, UGC HRDC, Kerala University	Participant
	3. 12 <sup>th</sup> Biennial Conference on Entrepreneurship, Entrepreneurship Development Institute of India, Ahmedabad	Paper Presenter
	4. XIME- IEF International Conference on Entrepreneurship & Innovation in the Knowledge Economy, XIME Bangalore	Paper Presenter



	5. National Conference on Sustainable Strategies in Competitive Business Environment, Priyadarshini Engineering College, Tamil Nadu	Paper Presenter
	6. National Conference on Management Research -Contemporary Perspectives, ICBM School of Business Excellence, Hyderabad	Paper Presenter
Dr.Nemat Sheereen S.	1. Paper in National conference on "Healthcare sector in India and human rights concerns" Dec 6, 2016	Paper Presentation "Corporate social responsibility of health care sector and its social implication"
	2. Paper in the International Conference on "Ethics and Sustainable Business Practices" organized by Rajagiri Centre for business Studies, Feb 21, 2017	Paper Presentation "An analysis of CSR Schemes of Hospitals in Ernakulam District"
	3. International carbon credit conference: Trading prospects from Indian carbon market perspective, conducted by BMC Thrikkakara & Cochin Chamber of Commerce & Industry, August 29-31, 2016	Participant
	4. "Data Analysis to Data Science – Management Perspective", conducted by BRIM, Thripunithura, October 5-6, 2016	Participant
	5. 2 days Faculty Development Programme Excellence in Teaching and Transforming Classrooms, SLS, CUSAT, Nov.4 & 5, 2016	Co-ordinator
	6. 5 days National Conference on Health Care System in India and Human rights concerns, conducted by SLS, CUSAT, Dec 5-9, 2016	Resource person
	7. 3 days UGC sponsored national seminar(Chaired a session Migrant Workers: Issues and Challenges), conducted by SLS, CUSAT, Jan 19- 21, 2017	Chaired a session Migrant Workers: Issues and Challenges





	8. 3 Days refresher workshop (UGC Sponsored), conducted by Women's Studies Centre, CUSAT, Mar 27-29, 2017	Participant
	9. 5 days FDP on "Effective and Innovative teaching "conducted by DDUKK, CUSAT, Mar 7 – 11, 2017	Participant
Smt. Arathi Ashok	1. Refresher Course for Law Teachers on Developmental Perspectives of Intellectual Property Laws, <i>Theme of 2017: Copyright: A Social Justice Perspective</i> organised by Inter University Centre for Intellectual Property Rights Studies, CUSAT, from 16 <sup>th</sup> to 23 <sup>rd</sup> June, 2017.	Resource Person in 1 Session and participant in all session
	2. Session on " <b>Entertainment Industry and the Triangular Relation among Authors, Owners and Users</b> " at the 4 <sup>th</sup> Rethinking Intellectual Property Rights Annual National Workshop for Law Students organised by Inter University Centre for Intellectual Property Rights Studies, CUSAT, from 8 <sup>th</sup> to 10 <sup>th</sup> February, 2017.	Resource Person
	3. Special Lecture on " <b>Intellectual Property and Forum Shifting</b> " at National University for Advanced Legal Studies (NUALS) on 3 <sup>rd</sup> February, 2017	Invited Speaker
	4. Session on " <b>Managing IPR in Universities</b> " at National Workshop on Emerging Trends in Information Technology in University Management organised by Association of Indian Universities and University of Calicut from 14 <sup>th</sup> – 16 <sup>th</sup> December, 2016.	Resource person
	5. Session on " <b>Access to Medicine and IP Regime</b> " at five day National Conference on Health Care System in India and Human Rights Concerns organized by Justice V. R. Krishna Iyer Chair of Human Rights, School of Legal Studies, CUSAT, from 05 – 09 December, 2016	Resource person



	6. <b>Lectures on Industrial and Intellectual Property</b> at Department of Law, University of Calicut on 5 <sup>th</sup> – 6 <sup>th</sup> August, 2016	Invited speaker
	7. Session on ‘Therapeutic Technique – ART, Organ Transplantation and Stem Cell Research’ in five day National Conference on Health Care System in India and Human Rights Concerns organized by Justice V. R. Krishna Iyer Chair of Human Rights, School of Legal Studies, CUSAT, from 05 – 09 December, 2016	Chair for the Session
	8. <b>First Asia – Pacific Colloquium on Intellectual Property and Competition Law</b> organized by National Law University, Delhi from 13 <sup>th</sup> to 17 <sup>th</sup> March, 2016.	Participant
	9. One Day <b>National Workshop on Human Trafficking: Prevention, Control and Rehabilitation</b> organized by School of Legal Studies, CUSAT in association with Anti Human Trafficking Club, Kochi on 19 <sup>th</sup> November, 2016	Participant
Dr. Aneesh V.Pillai	1. ‘New Age Challenges to Consumers’ in the Seminar organized by Legal Metrology Department (Central Zone), Ernakulam in connection with Consumer Day Celebration on 24 <sup>th</sup> December, 2016.	Chair
	2. Three Day UGC Sponsored National Seminar on Protection of Migrant Workers in India: Legal and Social Concerns Organized by School of Legal Studies, Cochin University of Science and Technology, Kerala, 2017.	Chair
	3. Three Day UGC Sponsored National Seminar on Protection of Migrant Workers in India: Legal and Social Concerns Organized by School of Legal Studies, Cochin University of Science and Technology, Kerala, 2017	Chair



	4. One Day Workshop on Foreign Direct Investment: Legal Implications in India organized by Center for Business Law, Government Law College, Thrissur, December, 2016	Resource Persons
Sri.Harigovind P.C.	1. Participated in the Five Day Appreciation Course in Parliamentary Process and procedures organized by Bureau of Parliamentary Studies and Training, Lok Sabha Secretariat, New Delhi from 02 to 06 May 2016.	Participant
	2. Participated and Presented a Paper titled <i>Climate Change and Refugee Problems: Some Introductory Insights</i> in the 45 <sup>th</sup> Annual Conference of The Indian Society of International Law, New Delhi on 7 & 8 May, 2016.	Participant and Paper Presentation
	3. Presented a paper titled <i>Sustainable Development &amp; Developing Countries: The Casualties posed by an Environmental Law Doctrine</i> in the Three Day UGC Sponsored International Carbon Credit Conference: Trading Prospects from Indian Carbon Market organized by the PG Department of Commerce Bharat Mata College, Thrikkakara from 29-31 August, 2016.	Paper Presentation
	4. Delivered a Special Lecture on General Principles of Criminal Law at Department of Law, University of Calicut on 3 & 4 September, 2016.	Invited/Special Lecture
	5. Delivered a Special Lecture on Judicial Process on 04 <sup>th</sup> November 2016 at Department of Law, University of Calicut.	Invited/Special Lecture
	6. Acted as the Judge of Preliminary and Semifinals Rounds of Justice T. Ramachandran Memorial National Moot Court Competition organized by Government Law College, Thrissur from 11-13 November, 2016.	Judge



	<p>7. Acted as Resource Person of a Session in the Three Day National Workshop on Sentencing Policy in India: Need for Revamping organized by His Highness Maharaja's Government Law College, Ernakulam.</p>	Resource Person
	<p>8. Participated and Presented a Paper titled <i>Recognising the Rights of Migrant Workers: Issues and Challenges</i> in the Three Day UGC Sponsored National Seminar on Protection of Migrant Workers in India: Legal and Social Concerns from 19-21 January, 2017.</p>	Paper Presentation
	<p>9. Acted as a Resource Person in the Two Day National Workshop on Integrated Double Degree Course in Law-Critical Reflections organized by Government Law College, Kozhikode on 21 &amp; 22 January, 2017.</p>	Resource Person
	<p>10. Participated and Presented a Paper titled <i>National Green Tribunal &amp; Environment Protection in India: An Analysis</i> in the UGC Sponsored International Conference on Society, Environment and Development organized by Department of Sociology, Annamalai University on 02 &amp; 03 February, 2017.</p>	Paper Presentation
	<p>11. Chaired a Session in the One Day State Level Workshop on Medical Negligence and Legal Remedies organized by Government Law College, Ernakulam on 18 February, 2017.</p>	Chair
	<p>12. Acted as Trial Judge in the National Trial Advocacy Moot Competition conducted by the Centre for Criminal Laws, Government Law College, Ernakulam from 10-12 March, 2017.</p>	Judge



Sri.Induraj V.R.	1. Participated in the Five Day Appreciation Course in Parliamentary Process and procedures organized by Bureau of Parliamentary Studies and Training, Lok Sabha Secretariat, New Delhi from 02 to 06 May 2016.	Participant
	2. Participated in the 45 <sup>th</sup> Annual Conference of The Indian Society of International Law, New Delhi on 7 & 8 May, 2016.	Participant
	3. Participated and Presented a paper on "climate change and Protection for Primitives : A legal Analysis on Policy measure held on 2 <sup>nd</sup> & 3 <sup>rd</sup> of January 2017	Presenter/ participant
	4. Participated in seminar conducted by SC development department on SC/ ST Legislations on 5 <sup>th</sup> January 2017.	Participant
	5. Participated in two day International conference on <i>Contemporary Issues and Challenges of Human Rights in the Era of Globalisation</i> organized by legal services clinic and ADR centre Govt. Law College, Thrissur on 10 <sup>th</sup> and 11 <sup>th</sup> of January 2017	Participant
	6. Delivered a Special Lecture on <i>Judicial Process</i> on 23 <sup>rd</sup> November 2016 at Department of Law, University of Calicut.	Invited/Special Lecture
	7. Delivered a Special Lecture on <i>Legal Education and Research Methodology</i> on 23 <sup>rd</sup> November 2016 at Department of Law, University of Calicut.	Invited/Special Lecture
	8. Acted as the Judge of Preliminary of Justice T. Ramachandran Memorial National Moot Court Competition organized by Government Law College, Thrissur from 11-13 November, 2016.	Judge



	<p>9. Acted as a Resource Person in the Two Day National Workshop on Integrated Double Degree Course in Law-Critical Reflections organized by Government Law College, Kozhikode on 21 &amp; 22 January, 2017.</p>	<p>Resource Person</p>
	<p>10. Presented a paper on "<i>Prevention of Corruption laws : An Unfinished Business</i>" in a seminar conducted by Govt. Law College, Thrissur on 3<sup>rd</sup> November 2016</p>	<p>Paper Presented</p>
<p>Dr. Binu Mole.K</p>	<p>1. International Conference on HRD, September 1, 2016, organised by DDUK, CUSAT</p>	<p>Paper Presenter</p>
	<p>2. International Conference on Ethics and Sustainable Practices organized by Rajagiri Centre for Business Studies, 21 February 2017</p>	<p>Paper Presenter</p>
	<p>3. National seminar on Indian Law on Maritime jurisdiction from 18-20<sup>th</sup> January 2017 organized by Govt. Law college, Ernakulam.</p>	<p>Resource Person &amp; Paper Presenter</p>
	<p>4. National Seminar on Research Methodology held at School of Legal Studies, Kannur University on 13 February, 2017</p>	<p>Resource Person &amp; Paper Presenter</p>
	<p>5. National Workshop on "Institutionalization of Arbitration and Development of an Arbitration Bar" organized by Cochin Institute of International Arbitration in association with Chartered Institute of arbitration, New Delhi held at Kochi on 25 February, 2017</p>	<p>Participant</p>
<p>Naveen S</p>	<p>1. Participated in the Five Day Appreciation Course in Parliamentary Process and procedures organized by Bureau of Parliamentary Studies and Training, Lok Sabha Secretariat, New Delhi from 02 to 06 May 2016.</p>	<p>Participant</p>



	2. Participated in the 45 <sup>th</sup> Annual Conference of The Indian Society of International Law, New Delhi on 7 & 8 May, 2016 and presented a paper on 'Paris Agreement: Opportunities and Challenges from a developing countries perspective'	Participant / Presented
	3. Acted as the Judge of Preliminary of Justice T. Ramachandran Memorial National Moot Court Competition organized by Government Law College, Thrissur from 11-13 November, 2016.	Judge
	4. Attended Orientation Training Programme for NSS Programme Officers at Empanelled Training Institution for NSS at Rajagiri College of Social Sciences, Kalamassery from 19 <sup>th</sup> to 25 <sup>th</sup> January 2017	Participant
Dr. Vani Kesari A.	1. Chaired a session of the three day State level workshop on Identification of socio legal issues faced by tribals in kerala held at SLS, CUSAT from 21-23 March 2016	Chairing a Session
	2. Chaired a session of the National Seminar on countering climate change-need for legal and policy reforms conducted by the Department of Law, Central University Of Kerala, Thiruvalla Campus on 17th march 2016	Chairing a Session
	3. Attended a two day workshop on Corporate Governance & Securities Law at a UGC Sponsored National Workshop on Corporate Governance and Disclosure Practices held at SLS,CUSAT from 18-19 march 2016	Participant
	4. National Seminar on Law & Medicine, Department of Law, University of Kerala	Chaired a Session



	<p>5. Five Day National Conference on Health Care System in India and Human Rights, SLS, CUSAT from 5-9 Dec 2016</p>	<p>Presented a paper &amp; Chaired a Session</p>
	<p>6. Refresher Course on Human Rights and Civil laws conducted by UGC-HRDC ASC, University of Kerala from 19-8-2016 to 8-9-2016</p>	<p>Participant</p>
	<p>7. Refresher course on Human Rights and Civil laws conducted by UGC-HRDC, ASC, University of Kerala from 13-6-2017 to 3-7-2017</p>	<p>Participant</p>
	<p>8. Three Day Refresher Workshop for Faculty- Building Conducive Environment for Academic Leadership of Women Faculty conducted by Women Studies Centre, CUSAT from 27-29 March 2017</p>	<p>Participant</p>
<p>Dr. Vani Kesari A.</p>	<p>9. Special Invited Lecture ; Identification of Research Problem in a seminar on Research Methodology, School of Legal Studies, Kannur University on 17-2-2017</p>	<p>Special Invited Lecture</p>
	<p>10. Acted as Resource Person &amp; presented a paper titled Human Rights Concerns on Commercialisation of Traditional Medicine of Indigenous Communities : a Synoptic Overview at the Second International Seminar on Health, Human Rights and IPR held at NUALS conducted from 21- 23 Oct 2016</p>	<p>Acted as Resource Person &amp; presented a paper</p>
	<p>11. Acted as a resource person &amp; presented a paper titled, “ Integration of Legalistic Notions of Human rights in CSR strategies” on an International Conference on Ethics and Sustainable Business Practices held at Rajagiri Centre for Sustainable Business Practices conducted on Feb21,2017</p>	<p>Acted as Resource Person &amp; presented a paper</p>





	12. Presented a paper titled “ Third Party Proprietary Interests in Human Body : An Affront of Human Dignity” National Seminar on Concept of Property and Law : New Developments, held by Madras University conducted on 18- 3-2017	Presented a paper
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## 12. Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
Dr. P. S. Seema	Cochin University Law Review, SLS, CUSAT	Chief Editor
Smt. Jean Vinitha Peter	Cochin University Law Review, SLS, CUSAT	Member, Editorial Board
Dr. Aneesh V. Pillai	1. Institutional Ethics Committee of Sree Chitra Tirunal Institute for Medical Sciences & Technology, Trivandrum (IEC – SCTMST).	Expert Member (Legal)
	2. Indian Journal of Human Rights Studies, (ISSN No. 2231-4296)	Assistant Editor
	3. European Academic Research Journal, (ISSN No. 2286-4822), Publishing from Romania, European Union	Member, International Editorial Board
	4. International Journal of International Law (ISSN No. 2394-2622).	Managing Editor
Dr. Binu Mole. K	1. Kerala University of Fisheries and Ocean Studies	Member, Board of Studies
Dr. Vani Kesari A.	1. Institutional Ethics Committee, Cochin Cancer Centre	Member, IEC
	2. SIEMAT, Government Of Kerala	Resource Person
	3. SIEMAT, Government of Kerala	Law Related Faculty

## 13. Sponsored Research Projects:

Sl. No.	Title	Sponsoring Agency	Amount	Investigators
1	SAP on Corporate Governance	UGC	70 lakhs	Dr. P.S. Seema & Dr. Preetha S.
2	Justice V.R. Krishna Iyer Chair on Human Rights	Kerala State Government	75 lakhs	Director, School of Legal Studies



**14. Research Programmes and Activities :**

Sl. No.	Problem/Topic	Investigator(s)
1.	i. Concept of reasonableness under the Indian Constitution ii. Sentencing policy in Socio-economic legislations iii. Challenges of Law of Taxation in Digital Economy- An Analysis iv. Green Technologies and Intellectual Property Rights v. Visually Impaired Treaty and Human Rights vi. Reconstructing a Conception of Social Access Facilitating Intellectual Property from Rawls' Theory of Justice	Dr. P.S.Seema
2	Conducted a survey programme among Kadar tribals of Vazhachal forest division, Thrissur on 28 <sup>th</sup> of March 2017	Sri. Induraj V.R. & Sri. Harigovind P.C.

**15. Seminar/Conference/Workshop/Refresher Courses conducted by the Department:**

Sl. No.	Title	Duration	Co-ordinator	Funding Agency
1.	Special Lecture on "Marketing Management Past, Present & Future" by Prof. Samson Thomas, Dean, Marian International Institute of Management, Kuttikanam, April 12, 2016	3 hours	Dr. Nemat Sheereen S	Department Fund
2.	"Zero rate financing an alternative to conventional banking", B. Aliyar, Director, Kerala state Minorities Development Co: Ltd, October 19, 2016	3 hours	Dr. Nemat Sheereen S	Department Fund
3	Two Day Faculty Development Programme on "Excellence in Teaching & Transforming Classrooms, Mr.Jayesh J L, CEO, Vertex HR Management Consultants and Career Training Academy, Thiruvananthapuram & Mr. D Arun Gladwin, Director, Vantage Training Academy, Nagercoil, Nov. 4-5, 2016	2 days	Dr. Nemat Sheereen S & Dr. Sreejith S.	Department Fund



4	National Workshop on Human Trafficking: Prevention, Control and Rehabilitation, jointly organized by Cochin University Legal Aid Clinic and Anti-Human Trafficking Club, Kochi, held at School of Legal Studies, CUSAT on 19 <sup>th</sup> November, 2016.	One Day	Dr. Aneesh V. Pillai	Private Funding
5	National Seminar on Cyber Laws: Issues and Challenges on January 6 <sup>th</sup> & 7 <sup>th</sup> , 2017 at School of Legal Studies, Cochin University of Science and Technology, Kerala.	TWO	Dr. Aneesh V. Pillai & Smt. Arathi Ashok	CUSAT
6	Pre Litigation Adalat" jointly organised by Cochin University Legal Aid Clinic (CULAC) and District Legal Services Authority (DLSA), Ernakulam on February 9 <sup>th</sup> , 2017 at School of Legal Studies, Cochin University of Science and Technology, Kerala.	ONE	Dr. Aneesh V. Pillai	DLSA
7	National Workshop on Goods and Services Tax" on February 4 <sup>th</sup> , 2017 at School of Legal Studies, Cochin University of Science and Technology, Kerala.	ONE	Dr. Aneesh V. Pillai	CUSAT
8	Three Day Lecture Series in the name <b>FREEDOM LECTURES-2016</b> Adv. A. Jayashankar, Dr. Sebastian Paul & Prof. M. K. Sanu.	16-18 August, 2016	Dr. P. S. Seema & Sri. Harigovind P. C.	School of Legal Studies
9	Five Day National Conference on <b>Health Care System in India and Human Rights Concerns.</b>	05-09 December 2016	Sri. Harigovind P. C. & Smt. Jean Vinitha Peter.	Justice V. R. Krishna Iyer Chair on Human Rights, SLS, CUSAT
10	<b>Public Law Lectures</b> by Honourable Justice <b>Markandey Katju</b> , Former Judge, Supreme Court of India.	20-21 December 2016	Dr. P. S. Seema & Sri. Harigovind P. C.	CUSAT



11	<b>Aanukaalikam-2017</b> – Three Day Lectures Series- By Padma Bhushan Prof. (Dr.) Madhav Gadgil	06-08 March 2017	Sri. Harigovind P.C. & Naveen S.	School of Legal Studies in Association with Balagopal Memorial Trust
12	Three Day National seminar on tribal Protection and Welfare :Issues and challenges	9 <sup>th</sup> to 11 <sup>th</sup> March 2017	S h r i. Naveen,S. & Induraj, V.R.	CUSAT
13	National UGC Sponsored Seminar on Protection of Migrant Labourers : Social & Legal Concerns, 19 -21 January 2017 at School of Legal Studies, CUSAT	3 days	Dr Binu Mole.K & Dr. Vani Kesari A.	UGC and BPCL –Kochi Refinery Ltd
14.	Organised a talk on the topic “ maritime Law Enforcement: Imperatives and Challenges”, by Dr. Prabhakaran Paleri, Former Director General, Indian Coastguard	April 11, 2016	Dr. Vani Kesari A.	



## SCHOOL OF MANAGEMENT STUDIES

### 1. Brief history of the Department:

The School of Management Studies was established in 1964 as part of an all India scheme of promoting management studies throughout the country. It is the major institution of its kind in Kerala offering post-graduate studies and research programmes in Business Administration, Commerce and related areas.

The School is located twelve kilometers north east of the city of Kochi. It is in the main campus of the University at Thrikkakkara, right in the heart of the industrial belt of the State. The campus is about two kilometers east of South Kalamassery on NH 47 between Ernakulam and Alwaye.

The School started functioning in October 1964 as part of the University of Kerala. With the formation of the University of Cochin in July, 1971 the School became a Department of the University.

Changes in the field of management education have always prompted School of Management Studies (SMS) of Cochin University of Science and Technology (CUSAT) to strive to affect and shape the field since 1964, in this part of the country. Over the past five decades, SMS has prepared students to live up to and make meaningful contributions through positions of importance in the business world.

### 2. Programmes of Study/Research

At present the School offers Master of Business Administration (MBA - Full-Time), Master of Business Administration (MBA - Part-Time), Master of Business Administration (International Business), Master of Business Administration (Travel & Tourism), M.Phil (Commerce) and Ph.D. programme.

- 1) MBA (FT) 2 years : Four semesters
- 2) MBA (PT) 3 years : Six semesters
- 3) M.Phil (Commerce) : Two semesters
- 4) Ph.D.

#### **Master of Business Administration (Full Time – 2 Years – Four semesters) with three batches 40 students each**

This is a two-year full time post-graduate programme leading to the Degree of Master of Business Administration. Its aim is to provide the young aspirants with the



opportunity to pursue a career in business, to acquire adequate knowledge, skills and attitudes which would constitute a foundation for their growth into competent and responsible business executives. The course has been so designed, as to enable the students to develop a thorough grasp of the basic concepts and techniques of management as well as the ability to practice them under Indian conditions. Further, it aims at developing their analytical decision making and communication skills.

### **Master of Business Administration (Part Time – 3 Years – Six semesters)**

The part-time programme leading to the degree of Master of Business Administration is a three-year evening programme. Its objective is to give an opportunity to executives working in Government and business organizations to improve their managerial ability and performance.

### **M.Phil. (Commerce) & Ph.D.**

One year (2-semester) Full time course in Master of Philosophy in Commerce for College Teachers and general category students.

Research students can pursue Ph.D. through Full Time or Part Time Programmes.

### **Methods of instruction**

The School employs different methods of instruction viz, lectures, case studies, seminars, role-plays, syndicates, field work etc. At the end of the third semester the students (F.T) are required to attach themselves to an organization for a period of eight weeks and prepare a project report on a problem related to the working of the organisation.

The unique programmes offered by the School aim at developing the personality of students and sharpening their oral and written communication skills.

### **Management Development programmes**

Besides academic programmes, the School conducts Management Development Programmes and undertakes Management Consultancy. The management development programmes in general are aimed at inducting personnel into more recent developments in their own specialized or allied areas, so that they would be able to develop a wider perspective.

### **Consultancy programmes**

The School undertakes consultancy assignments to provide managerial and technical – services to various organizations. The School has been recognised by the Government of Kerala as an authorised centre to provide consultancy services



to small scale industries in the State.

### 3. Faculty Members

Sl. No	Name	Designation	Qualification	Specialization
1	Dr. Moli P. Koshy	Professor & DIRECTOR	M.Sc., M.B.A., Ph.D.	Marketing Management, Consumer Behaviour, Strategic Management, Entrepreneurship
2	Dr. M. Bhasi	Professor	M.Tech., Ph.D.	Systems and Operations Management - Logistics, Supply Chain Management, IT Applications in Business and Management, Quality, Maintenance, Materials Management, Engineering and Technology Management.
3	Dr. James Manalel	Professor	M.B.M., Ph.D.	Finance Management, Banking, Management of Small Business
4	Dr. Jagathy Raj V. P.	Professor	M.Tech., M.B.A., DSADP, Ph.D.	Systems and Operations Management - Logistics, Supply Chain Management, IT Applications in Business and Management, ERP, MIS, Engineering and Technology Management.
5	Dr. Rajitha Kumar S.	Professor	M.Com., M.Phil., Ph.D.	Finance and General Management
6	Dr. D. Mavoothu	Professor	M.B.A., D.L.L., Ph.D.	HRM, Industrial Relations and Business Ethics
7	Dr. Zakkariya K. A	Professor	M.A., M.B.A., P.G.D.I.B., Ph.D.	Organisational Behaviour, Marketing, & Sales Management, Managerial Skills Development
8	Dr. Sam Thomas	Professor	B.Tech., M.B.A., Ph.D.	Systems and Finance



9	Dr. Santhosh Kumar S.	Professor	M.Com., M.B.A, M.Phil., Ph.D.	Finance
10	Dr. Manoj Edward	Associate Professor	B.Tech, M.B.A., Ph.D.	Operations and Service Management
11	Dr. Mohammed Aslam M. K.	Asst.Professor	M.Com., M.Phil., Ph.D	Finance Management and Accounting
12	Dr. Sreejesh S	Assistant Professor	M.A., M.B.A., M.Phil., Ph.D.	Quantitative Methods
13	Dr. Sangeetha K Prathap	Assistant Professor	M.Sc. Co- operation and Banking, MBA, M. Phil., Ph.D.	Banking, Financial Services, Financial Management

#### 4. Contract Faculty/Adjunct Faculty Visiting Faculty (if any) Contract Faculty

Sl. No.	Name	Designation	Qualification	Specialization
1	Smt.Smitha Xavier	Lecturer on Contract Basis	MBA	Finance
2	Smt. Meera Jaya Balan	Lecturer on Contract Basis	MBA	HR
3	Smt.Meera Prathapan	Lecturer on Contract Basis	MBA (Travel and Tourism)	Travel and Tourism
4	Smt. Rashmi. M.B.	Lecturer on Contract Basis	M.Com.	Finance

#### Adjunct Faculty

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. Sebastian Rupert Mampilly	Adjunct Faculty	M.S.W., M.B.A., Ph.D.	HRM, Organisational Behaviour and Industrial Relations, Research Methodology
2	Dr. G. Antony	Adjunct Faculty		
3	Dr. K.Krishnan Nampoothiri	Adjunct Faculty	M.Com., Ph.D.	Accounting, Banking, Co-operation, Business Communication, Finance

#### 5. Research Staff

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. Asha E. Thomas	PDF		





## 6. Research Scholars

Sl. No.	Name of the Research Scholar	-	Current Nature FT/PT	Date of Joining	Topic
1	2	4	5	6	7
1	Suresh Kumar G.	Dr. D. Mavoothu	PT	30.11.2009	A study on the work - Life balance among Women Managers/ Enterprisers in Kerala
2	Ranjana Mary Varghese	Dr. D. Mavoothu	PT	25.11.2010	Role of Self Help Groups in Political Empowerment of homes in Kerala- A Study with respect to Local Government Institutions in Kerala.
3	Shyni V.K.	Dr. D. Mavoothu	FT	29.11.2010	GAP Analysis of Financial Inclusion Policy and Practices.
4	Sangeetha.K.L.	Dr. D. Mavoothu	FT	23.04.2012	A study on the Role of Social Media in Social Capital Development with Reference to Kerala.
5	Saleena.M	Dr. D. Mavoothu	FT	23.04.2012	Re-entry of women managers and their career prospectus: An emerging issue of Indian organisations.
6	Neenet Baby Manjaly	Dr. D. Mavoothu	FT	03.11.2016	Use of Apps and the Differently Abled Employees
7	Sindu George	Dr. G. Antony	PT	18.09.2007	An Analysis of Emerging Perception of Indian Citizens and Financial Products as an Opportunity for Investment in the Global SED Economic, with special Emphasis on Mutual Funds
8	Syam S	Dr. Jagathy Raj V. P.	PT	21.12.2005	Information Management



9	Soumya Varghese	Dr. Jagathy Raj V. P.	PT	16.07.2012	Environmental Management and Human Resource Management
10	Anjali John	Dr. Jagathy Raj V. P.	FT	04.11.2016	Employee engagement in Work place
11	Deepa Babu K.G	Dr. James Manalel	PT	25.11.2010	A study on the Development Strategies for women Enterprenuer in the State of Kerala.
12	Vinodan A	Dr. James Manalel	PT	20.12.2006	Institutional framework of Ecotourism in Kerala
13	Ameer P.A.	Dr. James Manalel	FT	27.04.2012	Micro Finance
14	Simon Jacob C	Dr. James Manalel	PT	24.04.2012	Human Resource Practices - Professional and Organisational commitment in Service Quality. A study in Hospital Industry.
15	Shahnas.A.	Dr. James Manalel	FT	03.10.2013	A Study on investments of Retail investors in Indian Stock Market.
16	Baiju George	Dr. James Manalel	PT	01.12.2015	A Study on the Health Care Services Management
17	Krishnan M.	Dr. K. B. Pavithran	PT	31.12.2008	A Study on the Statergic Financial Management Practices in Small and Medium Enterprises in Kerala
18	Suja Karthika	Dr. K. B. Pavithran	FT	12.07.2012	Impact of Turnaround Management on the Financial Performance of SOEs



19	Raihanath M.P.	Dr. K. B. Pavithran	FT	13.07.2012	Financial inclusion Programmes of Nationalized Banks: A study with reference to Opportunities and constrains for both banks and the Target groups in Kerala.
20	Renuka V.V	Dr. M. Bhasi	FT	23.09.2013	Family business Managemnt in Kerala
21	Razeena Rasheed	Dr. M. Bhasi	PT	19.07.2012	perceived Over Qualification, perceived P-J Fit and Job outcomes.
22	Shiyaz.K.M	Dr. M. Bhasi	FT	06.01.2015	Personal attributes, Organizational culture an Organizational Committemnt among IT expoyeees
23	Arjun P	Dr. M. Bhasi	PT	04.11.2016	A Study on Usage Pattern of Selected ERP Models
24	Anton Joseph	Dr. Manoj Edward	PT	16.11.2011	Effectiveness of Social Media Marketing Initiatives in Selected Products/Market
25	Shemeer Salim	Dr. Manoj Edward	PT	02.04.2012	Private Labels and Kerala Retail Sector.
26	Remya R Kumar	Dr. Manoj Edward	PT	13.07.2012	A Study on the Challenges and prospects of Medical Tourism in Kerala.
27	Rijo Gratus	Dr. Manoj Edward	FT	12.09.2013	Relationship marketing and customer retention.
28	Sunitha T.R.	Dr. Manoj Edward	FT	27.09.2013	Social Cause Markting and its influence on consumer buying behaviour - An Indian context.
29	Syama.K.S	Dr. Manoj Edward	FT	30.07.2014	Brand Extension of Service Brands.
30	Nimitha Aboobaker	Dr. Manoj Edward	FT	19.09.2013	Workplace Spirituality and Employee Well-being



31	Nimmy A George	Dr. Manoj Edward	PT	03.09.2012	Impact of Corporate Social Responsibility
32	Dhanya Babu V.	Dr. Moli P. Koshy	PT	26.11.2009	A Study on Information Technology Implementation
33	Preetha P.K.	Dr. Moli P. Koshy	PT	17.09.2012	A Study on Marketing channels.
34	Sabira N	Dr. Moli P. Koshy	FT	19.09.2012	Destination competitiveness of Kerala, Assessing tourism competitiveness of Kerala from Stakeholders and Tourists perspective
35	Athena Joy	Dr. Moli P. Koshy	FT	30.09.2013	Reverse Socialisation in Consumption.
36	Heerah Jose	Dr. Moli P. Koshy	FT	01.10.2013	Organis Market in Kerala
37	Vignesh Karthik	Dr. Moli P. Koshy	PT	04.04.2014	Multiple Retailing Channels and consumer purchase behaviour with regard to selected products.
38	Minu John	Dr. Moli P. Koshy	FT	12.11.2014	Professional Education on Borrowed Funds in Kerala
39	Sreekumar B.	Dr. P. R. Wilson	PT	26.11.2010	A Study on the Purchase Behaviour for Purchase of Premeium Speciality Goods by Upper Middle and High Income Class of Customers in Kerala
40	Jackson D'Silva	Dr. P. R. Wilson	FT	13.07.2012	Mindfulness Meditation and Executive well being
41	Rashmi.M.B	Dr. P. R. Wilson	PT	16.07.2012	Personal Finance and Well being.
42	Shababna M Ilahi	Dr. P. R. Wilson	FT	06.08.2012	Orienting children towards market receptivity.



43	Vijay Kuriakose	Dr. P. R. Wilson	FT	01.10.2013	Personal Conflict Resolution Strategy and well-being
44	Sankaran U M	Dr. Rajitha Kumar S.	PT	13.09.2007	Financial Services of Indiapost - A Study of Kerala State
45	Anoopa Narayanan	Dr. Rajitha Kumar S.	FT	03.10.2013	Talent Management Activities and Organisational Performance.
46	Rajisha T	Dr. Rajitha Kumar S.	FT	26.03.2014	Innovative Products and services of new generation banks - an evaluative study in Kerala.
47	Venkidesh.V	Dr. Rajitha Kumar S.	FT	25.07.2014	Securitization - A Study with reference to Private Sector Commercial Banks in Kerala
48	Venugopal S	Dr. Rajitha Kumar S.	PT	20.11.2014	Energy Management in Kerala - A Study on Present Status and Future Potential.
49	Ronia Liza Mathew	Dr. Rajitha Kumar S.	FT	13.08.2015	Investment Behaviour of Individual Investors in Stock Market
50	Natasha P	Dr. Rajitha Kumar S.	FT	28.04.2017	Stock Return Behaviour with specific reference to Indian Stock Markets - A Study based on Selected Stocks.
51	Rama L	Dr. Sarada S	FT	26.11.2010	Career Competence of Teachers in the Higher Educational Sector of Kerala.
52	Jitha G Nair	Dr. Sarada S	FT	26.11.2010	Emotional Labour of Teachers in the Professional Colleges in Kerala
53	Tessla Arakal	Dr. Sebastain Rupert Mampilly	PT	30.11.2010	Performance Management System for Research and Developemet and Employees



54	Shelly Jose	Dr. Sebastain Rupert Mampilly	PT	31.12.2008	Industry Mindset and Organisational Performance
55	Geetha Jose	Dr. Sebastain Rupert Mampilly	FT	14.11.2011	Impact of HRD Practices on Employee Engagement
56	Neenu Wilson	Dr. Sebastain Rupert Mampilly	FT	02.07.2012	Organisational Human capital Management and work place performance
57	Smarty P. Mukundan	Dr. Zakkariya K. A.	PT	30.11.2009	Emotional Intelligence & Conflict management in team leaders in the service sector.
58	Chandra Vadhana R	Dr. Zakkariya K. A.	PT	15.11.2011	Development of Tools for Assessing Managerial Softskills.
59	Meera Prathapan	Dr. Zakkariya K. A.	PT	26.09.2013	Role of Perceived Value and Self-Congruity on Tourist Satisfaction and Consequent Behavioural Intensions.
60	Manoj Menon	Dr. Zakkariya K. A.	FT	26.04.2012	Perceived Organisational support, job involvement and organisational attachment in service sector.
61	Anju Varghese Philip	Dr. Zakkariya K. A.	FT	31.12.2014	Role of Social Media in Social Change
62	Nimmi.P.M.	Dr. Zakkariya K. A.	FT	13.08.2015	Employability issue of graduates in Kerala and various intervention initiatives
63	Vinney Zephaniah Vincent	Dr. Zakkariya K. A.	FT	01.09.2015	Management of Start-up Business



64	Milna Susan Joseph	Dr. Sam Thomas	PT	29.11.2010	Buying Behaviour in the Context of Organized Retailing.
65	D.S. Nagesh	Dr. Sam Thomas	PT	16.11.2011	Performance Management System for Research and Developemet (R &D)
66	Divya P Velayudhan	Dr. Sam Thomas	FT	23.09.2013	Project Management
67	Faisal Babu P	Dr. Sam Thomas	FT	15.10.2015	Effects of Health Seeking Behaviour of Patients for Chronic Conditions: Implications fpr segmentation for healthcare service providers"
68	Minnu F Pynadath	Dr. Sam Thomas	PT	01.11.2016	Valuation of Indian Start ups
69	Jose Pius Nedumkallel	Dr. Sam Thomas	PT	03.11.2016	Effect of interactivity on Brand attention and Memory in Social Media Websites.
70	Abhilash G Nambudiri	Dr. Sam Thomas	PT	04.11.2016	Study of Determinants & Outcomes of Different Models of Social Entrepreneurship
71	Farzana S. Hussain	Dr. Muhammed Aslam M.K.	PT	08.08.2011	Role of emotional intellegence and service climate in service Behaviour - A Study in Banking Sector.
72	Rafeeka Mol C.A,	Dr. Muhammed Aslam M.K.	<b>FT</b>	18.11.2011	Study on Flat Houses (A Study with special reference to the real estate scenerio in Kerala)
73	Ajith Kumar R	Dr. Muhammed Aslam M.K.	<b>PT</b>	10.11.2011	Information& Communication Systems Management
74	Thasleena K.P.	Dr. Muhammed Aslam M.K.	FT	02.03.2012	Practibility of Islamic Bank in Kerala's Economy



75	Nishanth P	Dr. Muhammed Aslam M.K.	PT	13.07.2012	Priority Sector lending by Commercial banks and its role on Micro & Small Enterprises. A Study with special reference to Kerala.
76	Shiji Mohan.N	Dr. Muhammed Aslam M.K.	FT	16.07.2012	A critical study on the priority action of Tourism Destination in Kerala.
77	Deepa Jawahar	Dr. Muhammed Aslam M.K.	FT	01.12.2014	Study on Tourism Destination Branding of Kerala and the role of Airports.
78	Minu M. Gopal	Dr. Muhammed Aslam M.K.	PT	31.10.2016	Scope for Kole Land Tourism and its Impact on Social Empowerment of Rural Kerala.
79	Rosin C Jacob	Dr. K. Krishnan Nampoothiri	PT	26.09.2013	A Study of the Financial Performance of Primary Agricultural credit societies (PACS) in Kerala.
80	Kavita Balan	Dr. K. Krishnan Nampoothiri	PT	01.10.2013	Management of Ports in India

## 7. Administrative personnel

Sl.No	Designation	No. of posts
1	Professor & Director	1
2	Section Officer	1
3	Sel.Gr. Assistants	1
4	Assistants	2
5	Office Supdt.	1
6	Computer Assistants	3
7	Photocopy Operator	1
8	Tech.Asst. in Computer Lab	1
9	Assistant Librarian	1
10	Professional Assistants	4
11	Library Assistant	1
12	Office Assistants	3
13	Sweeper/Cleaner	2
14	Gardener	1





## 8. Technical personnel

Sl.No.	Designation	No. of Posts
1.	Technical Assistant in Computer Lab on daily wage basis	1

## 9. Students enrollment 2016-17

Sl.No	Programme of study	Men	Women	Total
1	MBA(FT)	47	74	121
2	MBA (Part Time)	17	11	28
3	M. Phil (Commerce)	2	4	6
4	Ph.D.	3	5	8

## 10. Research Facilities :

### a) Laboratory :

Computers :	50
Printers :	1
UPS :	1
Scanner :	1

### b) Library :

No. of books/journals on 31 <sup>st</sup> March 2016	Additions during the year 2017-18
Books : 25071	<b>133</b>
Book Bank : 1468	Total No. of books added during the year : 180
Journals & Periodicals -	
Foreign : 4 Gift : 11 <b>Journals : National : 26</b>	24 (no additions; the no. of subscribed journals has reduced) 4 10
<b>Thesis/Projects : 5297</b>	20

### c) Others:



### 11. Distinguished Visitors:

Sl.No.	Name	Affiliation	Remarks
1	Prof.T. Asokan	Pro Vice Chancellor, Kannur University	Visit – Invited talks, Placement activities etc.
2	Prof. T. Krishna Kumar	Dept. of Commerce Osmania University Hyderabad	
3	Dr.Athmadas Yami Psycho-metic Counslelor	President, PsyCAI	
4	Shri.C.Balagopal	Terumo Penpol	
5.	Shri. Sijo Kuruvilla George	Start Up Kochi	
6.	Dr. Johnson, Professor & Head	DCMS	

### 12. Ph.Ds. awarded 2016-17

Sl. No	Title of thesis	Name of research scholar	Supervising guide	Date
1	A Study on Futures Trading in Commodities with Special Reference to Rubber	Dr. P. Sudarsanan Pillai	PETER THENANKAL	29.02.16
2	Study on Microcredit in Kerala with special reference to Employment and income generation through Microenterprises and Livelihood Projects.	Dr. G Antony	SALINI.K.	22.03.16
3	Antecedents and Performance Implications of Product and Process Innovation: An Empirical study of Small Indian Firms	DR. SAM THOMAS	RAJEEV MUKUNDAN	07.05.2016
4	Financial Inclusion of the Small and Marginal Farmers by the Banking Sector in Kerala	DR. Mary Joseph.T	BIJU JOHN M.	14.07.2016
5	Management accounting Practices and Organisational performance: A Study of Environmental and Organisational antecedents as perceived by Finance and Accounting Managers in the Manufacturing sector in India.	Dr. K.B. Pavithran	SREEKUMAR. K.	25.07.2016



6	A Study On Impact Of Information Technology Risk And Risk Management In Banks In India	Dr. Jagathy Raj V.P.	Anil kumar P.	26.09.2016
7	Brand Experience and True Brand Loyalty: An enquiry into product and customer dimensions.	DR. SAM THOMAS	Veeva Mathew	21.10.2016
8	Strategic HR Factors Influencing Innovative Work Behaviour of Managers – A Study with Special Reference to the Spices Exporting Companies in Kerala, India	Dr. D. Mavoothu	Lal V. Jose	16.11.2016
9	Collaborative Destination Marketing through Trade Shows - A Study of Kerala Travel Mart	Dr. Manoj Edward	Shobha Menon	09.12.2016
10	Modeling the influences on Customer Orientation and Sales Performance - A financial services industry perspective	Dr. Manoj Edward	Jose Varghese	09.12.2016
11	Success of Implementation of Core Banking Solutions - A Study of Factors Involved	Dr. M. Bhasi	Ayana Johny	06.01.2017
12	Factors leading to Entrepreneurial Success – Study based on MSMEs of Kerala	Dr. James Manalel	Joseph Mathews Cherukara	09.01.2017
13	Pre Owned Car Market in Kerala: A Model Linking Attitudes, Product and Dealer related Factors to Post Purchase Behaviour	DR. K.A. ZAKKARIYA	Deepthi Sankar	21.01.2017
14	Factors influencing the Behaviour of Consumers in Selecting Modern Retail Stores with special reference to Grocery and Apparel Stores in Ernakulam District	Dr. G. Antony	Shiny C.M.	03.02.2017
15	A study on Pilgrimage Tourism in Kerala with Special reference to Sabarimala.	Dr. S. RajithaKumar	Manesh N.A	16.05.2017



### 13. Publications

#### Dr. D. Mavoothu, Professor

##### Book Chapters :

- Mavoothu, D. (2016), "Critical Evaluation of the New Trends in Unemployment, Unemployability and Talent Crunch with Special Emphasis on India". In Zakkariya, K.A. et. al. *Human Capital, Employability and Competency Building*. Excel Publishers, New Delhi. pp. 56-66. **ISBN: 9789385777929**.
- Mavoothu, D. (2017), "An Analysis of Gender Justice in Climate Change Adaptation and Mitigation Policies for Environmental Empowerment of Women". In Edward, M. and Kumar, S.S, *Emerging Paradigms in Business: Marketing and HR Perspectives*. Directorate of Public Relations & Publications. pp. 147-160. **ISBN: 978-93-80095-99-8**.

#### Dr. M. Bhasi, Professor and Dean International Journal

1. M. Bhasi, Renuka V.V and S. Rajkumar (2017), "A study on influence of Religion on Inheritance in Family Business, Vol.14, No.1 pp.31-50 ISSN 0973-1954
2. Thomas Asha E. and M. Bhasi (2017) "Sustainable Education: Re-Visioning for Twenty- First Century", *Asian Journal of Research in Social Sciences and Humanities*, Vol. 7, No.5, pp.47-62, ISSN 2249-7315, DOI NUMBER:10.5958/2249-7315.2017.00296.9

##### Chapter in Edited Book

1. Thomas Asha E., M. Bhasi and R.Chandramouli (2017), "Financial Accessibility and Economic Growth-Evidence from SAARC Countries", *Contemplations on New Paradigms in Finance*, Directorate of Public Relations and Publications, CUSAT, pp 32-52, ISBN:978-93-80095-99-8

##### Invited papers presented

1. Presented a paper at the National conference on "New Paradigms in Business and Management" held at Cochin University of science and Technology titled "Financial Accessibility and Economic Growth Evidence from SAARC Countries" held on April 20-21, 2017.

##### Ph.D. Awarded

1. Ayana Johny, Success of implementation of Core Banking Solutions – A study of Factors involved, Ph.D. awarded December, 2016.

#### Dr. Jagathy Raj V. P., Professor International Journals

1. S. R. Anand. C. A Babu and Jagathy Raj V. P., (2016) "*A practical Approach to*



*Assessment of the Base Power Contracts and Peak Power Contracts for a Distribution Utility*”, International Journal of Electrical Power & Energy Systems, Volume 78, pp 385-389.

- 2 Suresh Kumar Balakrishnan and Jagathy Raj V. P.,(2016), “*Practical implementation of a secure email system using certificateless cryptography and domain name system*”, International journal of Network Security, Vol. 18, Issue No. 1, pp99-107.

### **National Journals**

1. Ajith Kumar K. and Jagathy Raj V. P., (2016), “*Application of Systems Engineering principles for Concept Design of New Products*”, Springer Journal of the Institution of Engineers Series C, June (ISSN 2250-0545).
- 2 Suresh Kumar Balakrishnan and Jagathy Raj V. P., (2016), “*Practical Implementation of Secure Email System Based on IBE, DN*, Journal of Applied Engineering (JOAE), 4(3), March-2016 (Volume-IV, Issue-III), ISSN 2348-4802, pp292-297.

### **International conference Proceedings**

1. Ajith kumar R., M. K. Muhammed Aslam, and Jagathy Raj V. P., (2016), “*A Statistical Analysis of Soil Fertility of Thrissur District, Kerala*”, Proceedings of The International Conference on Data Science and Engineering (ICDSE2016), organized by Dept. of Computer Science, Cochin University of Science and Technology during 23-25 August.

### **Chapters in Edited Books**

1. Soumya Varghese and Jagathy Raj V. P.,(2017),”*Internal Drivers that influence the adoption of Green Innovation Practices and Its impact in Manufacturing Firms*”, Emerging Paradigms in Business: Marketing and HR Perspectives, published by Directorate of Public Relations and Publications, Cochin University of Science and Technology, Kochi, pp 271-281.
- 2 Suresh P. K. and Jagathy Raj V. P., (2016),” *Training for Excellence: Skill Development in Line with Quality Needs*”, Human Capital, Employability and Competency Building published by Excel India Publishers, Newdelhi, pp 225-232.

### **Invited Papers Presented**

- Paper titled “*Achievement of Competitive advantage through Logistics Framework*”, at National Seminar on Logistics and SCM organized by MES College, Marampally, Aluva on 24<sup>th</sup> November, 2016.



## Ph. D awarded

- Mr. Anilkumar P., CTO, TKM InfoTech, Technopark, Thiruvananthapuram: - *Title of the thesis is "A study on Impact of Information Technology Risk and Risk Management in Banks in India, 2016"*

## Dr. James Manalel, Professor

1. Deepa Babu & James Manalel (2016). "Entrepreneurial Orientation and Firm Performance: A Critical Examination" ***IOSR Journal of Business and Management*** (IOSR-JBM) e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 18, Issue 4. Ver. IV (Apr. 2016), pp 21-28 www.iosrjournals.org.
2. Manalel, James & Manu Melwin Joy (2016). "Influence of Gender on High Involvement Work Processes in IT Sector" ***International Journal of Engineering Technology, Management and Applied Sciences*** www.ijetmas.com May 2016, Volume 4, Issue 5, ISSN 2349 – 4476.
3. Manalel, James & Manu Melwin Joy (2016). "A Study on the Impact of Job Satisfaction on Employee Withdrawal Behaviours in Information Technology Industry" ***International Journal of Business & Management*** (ISSN 2321-8916) Vol 4 Issue 5 May, 2016, pp 340-343 www.theijbm.com.
4. Cherukara, Joseph Mathews and James Manalel (2016). "A Definition of Entrepreneurial Success through Empirical Study based on MSMEs of Kerala" ***International Journal of Engineering Technology, Management and Applied Sciences*** pp 64-74 www.ijetmas.com July 2016, Volume 4, Issue 7, ISSN 2349 – 4476.
5. Shahnas A. & James Manalel (2017) "A Quantile Regression Decomposition of Oil Price, US Economic Policy Uncertainty Dependence with the US Dollar Exchange Rate: The case of "Fragile Five" Currencies" Paper presented at the **2<sup>nd</sup> Applied Financial Modelling Conference held at Deakin University (Melbourne, Australia)** from 2<sup>nd</sup> to 3<sup>rd</sup> February, 2017.
6. Vinodan, A., Manalel, J., & Edward, M. (2017). Community Intervention in Destination Development: A Cross Destination Analysis. In Sharma, A (Eds.), ***Tourism Development and Destination Branding through Content Marketing Strategies and Social Media***. Apple Academic Press, Taylor and Francis Group. (Accepted)
7. Vinodan, A., Meera, S., & Manalel, J., (2017). Factorial structure of community intervention strategies in ecotourism. ***Journal of Environmental Management and Tourism***, ASER. (Under review)
8. Vinodan, A., Meera, S., Manalel, J., & Edward, M. (2017). Biodiversity



Conservation through Eco-Tourism: Role of Non-formal Education. *Journal of Education for Sustainable Development*, Sage. (Under review)

#### **Dr. Manoj Edward, Associate Professor**

- 1 NimithaAboobacker, Manoj Edward and Pramatha K.P. (2017), *Work-family conflict, Family – work conflict and intention to leave the organization: Evidences across five industry sectors in India*, *Global Business Review*, a Sage journal (scopus listed), anagement. Vol. 18(2).
- 2 Jose Varghese and Manoj Edward (2016), *Role of customer orientation and its influence on sales performance in an organizational context*, *BSCAN Journal of Management and Socio-economic Transformation*, Vol 1.(2)
- 3 NimithaAboobacker and Manoj Edward (2017), *Work-family conflict and Family work conflict among employess across five business sectors in India – examining the role of individual diffrenecs*, *SAJMMR South Asian Journal of Marketing and management Research*, Vol 7(2).
- 4 Anton Joseph and Manoj Edward (2017) *Determinants of customer’s online purchase intention: a conceptual study*, *BHARATMATA Journal of multidisciplinary studies* Vol4(1)
- 5 Remya R Kumar and Manoj Edward (2016) *Exploring residents perception towards supprnal of Conort for tourism : A review of literature*, *Journal of contemporary Indian Polity and Economy*, Vol 6(4)

#### **BOOKS**

Manoj Edward and Santhosh Kumar S (2017) *Emerging Paradigms in Business-Marketing and HR perspecives*, Directorate of Public Relations and Publications, Cochin University of Science and Technology, Kochi (ed)

#### **Dr. S. Rajitha Kumar, Professor**

1. **Postal Life Insurance: An Investigation into Northern Region of Kerala**, *International Journal of Management and Social Science Research Review* (E-ISSN- 2349-6746, ISSN – 2349-6738), Volume No -1, Issue No – 28, October – 2016, Impact Factor: 3.996, p. 154 – 160. (Co-authorship with Sankaran U. M.)
2. **Relationship Among Qualities of Fund Management and Investment Decisions in Mutual Funds – A Pragmatic Approach**, *ZENITH International Journal of Business Economics & Management Research* (ISSN 2249- 8826), Vol.6 (9), September 2016, pp. 21-28. (Co-authorship with Dr. Sindhu K. P.)



3. **Postal Banking and Financial Inclusion: A Strategy for Reaching the Unreached**, *International Journal of Microfinance – A Biannual Journal* (ISSN: 2229-449x) Vol.2, No.1, January – June, 2016. P. 83-89. (Co-authorship with Sankaran U.M.)
4. **Application of Information Technology in Banking**, *Book of Abstracts, International Conference on Science & Technology for National Development* organised by Kerala University of Fisheries and Ocean Studies in Association with Indian Science Congress Association – Cochin Chapter and Indian Society of Life Sciences on 25<sup>th</sup>& 26<sup>th</sup> October 2016. P.72.

## II. Paper Presentation

1. E-Banking at the *International Seminar on Reinvesting India's Business for 21<sup>st</sup> Century – Role of Business Schools* organised by CONSPI Academy of Management Studies, Thiruvananthapuram on 30<sup>th</sup> September 2016.
2. Application of Information Technology in Banking at the *International Conference on Science & Technology for National Development* organised by Kerala University of Fisheries and Ocean Studies in Association with Indian Science Congress Association – Cochin Chapter and Indian Society of Life Sciences on 25<sup>th</sup>& 26<sup>th</sup> October 2016.

## Ph. D. Produced

Name of Candidate: Shri. Manesh N. A.

Title of the Study: A Study on Pilgrimage Tourism in Kerala with Special Reference to Sabarimala

## Consultancy Work

A Senior Consultant of the Study Team for Restructuring the Hierarchical Positions and Delegation of Authority and Responsibility in Kerala State Financial Enterprises Limited (Year 2016)

## Dr. Santhosh Kumar S.

### Journal Articles

1. Brand Loyalty of Customers in Smartphone Brands, *Indian Journal of Marketing*, Vol. 47, No. 3. (Scopus Indexed)
2. Impact of Micro Credit Dispensation on Economic Empowerment of Women in Kerala, *Journal of Rural Development*, National Institute of Rural Development (NIRD), Ministry of Rural Development, Government of India, Vol. (Scopus Indexed)





3. What Parents Thought about Higher Secondary Schools in Kerala, India, Journal of Indian Education, National Council for Education, Research and Training.
4. Implications of GST in Kerala, Commerce Spectrum, Vol. 4 No.2. (Indexed in ISID, New Delhi and annotated in Journal of Economic Literature, US)

### Book Chapters/Contribution to Book

1. Identification of Financial Risk Factors of Petroleum Companies in India: An Exploration Based on Alexander Bathory's Model" in Kumar & Edward (eds) book *Contemplations on New Paradigms in Finance*.
2. Capital Intensity and Firms' Performance in India" in Kumar & Edward (eds) book *Emerging Paradigms in Business: Marketing and HR Perspectives*.

#### a. Books

Sl.No.	Name of Book
1	Contemplations on New Paradigms in Finance.
2	Emerging Paradigms in Business: Marketing and HR Perspectives.

### Dr. Sreejesh S., Associate Professor Case

#### Study Publications

1. Sreejesh, S. and Anusree, M.R. (2017), "M &T Automotive Inc: Solving a Dilemma for Expanding Business through Probability Assignment", *Sage Business Cases*, Sage Publications, UK.

#### International Journal Publications

1. Sreejesh, S., & Anusree, M. R. (2017). Effects of cognition demand, mode of interactivity and brand anthropomorphism on gamers' brand attention and memory in advergaming. *Computers in Human Behavior*, 70, 575-588. Indexed in ABDC-A & Scopus. Impact Factor: 3.435 (Thomson Reuters, 2015).
2. Vashisht, D. and Sreejesh, S. (2017), "Effect of nature of the game on ad-persuasion in online gaming context: moderating roles of game-product congruence and consumer's need for cognition", *Internet Research*, Vol. 27 No. 1 (Forthcoming). Indexed in ABDC-A & Scopus. Impact Factor: 3.017 (Thomson Reuters, 2015).
3. Chetana, A, Sreejesh S, & Anusree. M. R. (2017), "Effect of Information Quality of Employment Website on Attitude towards the Website: A Moderated Mediation Study", *International Journal of Manpower*(Forthcoming). Indexed in ABDC-A & Scopus. Impact Factor: 0.46 (Thomson Reuters, 2015).



4. Sengupta, A. and Sreejesh, S (2017), "Impact of other customers in high and low involvement services: moderating role of customer's need for uniqueness", *Journal of Indian Business Research* (Forthcoming). Indexed in ABDC-C & Scopus.
5. Sengupta, A. and Sreejesh, S (2017), "Impact of Other Customers on Service Quality Evaluation and Revisit Intention in Hospitality Services", *International Journal of Culture, Tourism, and Hospitality Research* (Forthcoming). Indexed in ABDC-C & Scopus.
6. Achyut Telenga, Debajani Sahoo & Sreejesh S. (2017), "The effect of ad context congruity on ad persuasion: a research framework exploring the moderating role of consumer motives & argument strength", *The Marketing Review*, Vol. 17 No. 2, Indexed in ABDC-C.
7. Vashisht, D. and Sreejesh, S. (2017), "How advergame-speed, game-product congruence and players' persuasion knowledge influence brand recall", *Journal of Asia Business Studies*, Vol. 11, No. 3 (Forthcoming). Indexed in ABDC-C & Scopus.
8. Vashisht, D. and Sreejesh, S. (2016), "The effect of nature of online advergames on gamers ad-persuasion: moderating roles of game involvement and need for cognition", *International Journal of Internet Marketing and Advertising* (Forthcoming). Indexed in ABDC-C & Scopus.
9. Mathew, P. & Sreejesh, S. (2016), "Impacts of responsible tourism on destination sustainability and quality of life of community in tourism destination", *Journal of Hospitality and Tourism Management* (Forthcoming). Indexed in ABDC- B & Scopus.
10. Debajani Sahoo & Sreejesh S. (2017), "Role of mobile banking servicescape on customer attitude and engagement: an empirical investigation in India", *International Journal of Bank Marketing*, (Forthcoming). Indexed in ABDC- B & Scopus

#### **Program coordinator**

1. Program Coordinator: "Annual Research Methodology Course (Series 1): Research Skills and Data Analysis Using R", on May 11-13, 2016 at School of Management Studies, Cochin University of Science and Technology, Kochi, Kerala, India.
2. Program Coordinator: "Annual Research Methodology Course (Series 1): Research Skills and Data Analysis Using R", on May 25-27, 2016 at School of Management Studies, Cochin University of Science and Technology, Kochi, Kerala, India.



3. Program Coordinator: “Multivariate Data Analysis: Basics and Advances”, on May 08-12, 2017 at School of Management Studies, Cochin University of Science and Technology, Kochi, Kerala, India.

### **Dr. Zakkariya K.A., Professor**

#### **a. Journal Articles**

1. Farzana S Hussai;, Muhammed Aslam M.K. and Zakkariya K.A. (2017). Service Climate, Job Involvement and Employee Service Behaviour- An Empirical Study in Banking Sector. International Journal of Commerce and Management Research, Vol.3; Issue.5; May 2017. Impact Factor: RJIF 5.22; ISSN: 2455-1627

#### **Book Chapters**

1. Chandra Vadhana R. and Zakkariya K.A. (2016). Soft Skills Competencies of Fresh Management Graduates: Expectations of the Indian Corporate World. In Zakkariya K.A., Renjini D. and George Joseph (Edts.), Human Capital, Employability and Competency Building, Excel Publishers (August), p-170-182. (ISBN-9-789385-777929)
2. Nimmi P.M. and Zakkariya K.A. (2016). The Socio-cultural Dimensions Employability: A Case Study in Kerala. In Zakkariya K.A., Renjini D. and George Joseph (Edts.) Human Capital, Employability and Competency Building, Excel Publishers (August), p-38-47. (ISBN-9-789385-777929)

#### **b. Books**

1. Zakkariya K.A., Renjini D. and George Joseph (2016). Human Capital, Employability and Competency Building, Excel Publishers, New Delhi, ISBN-9-789385-777929.

### **Dr.Sangeetha K. Prathap**

#### **Book Chapter**

1. Sangeetha K Prathap, 2016, Crafting Co-operative Identity on Political Landscapes- Role of Co-operative Leadership, in Governing Co-operatives: The State and Leadership Roles (Eds) Dongre Y, Paranjyothi T and Elangovan R, VAMNICOM, Pune, ISBN: 978-93-85456-12-1

#### **Trainings Attended:**

1. Participated in the Faculty Development Programme (5 days) March 7-11, 2017 conducted by DeenDayalUpadhyayKaushal Kendra, CUSAT
2. Participated in Foundation Course (Orientation Programme) organized by



ICAR- National Academy of Agricultural Research Management, Hyderabad for 30 days (2- 31<sup>st</sup> May 2017)

3. Participated in the 3 day refresher workshop for Women by Women Studies Centre, CUSAT, 27-29<sup>th</sup> March 2017

### **Dr. Moli P. Koshy**

#### **Publications**

1. Paul V. Mathew and Moli P. Koshy (2016), Development and Validation of a scale to Measure perceived Sustainability of Tourism Destinations: A Multi Stakeholder Approach, Innovation Issues and Approaches in Social Sciences, 9(1), 8-29. ISSN 1855-0541
2. Joemon Pappachen and Moli P. Koshy (2016), Moderation Effect of Travel Context in the Linkage Among Employee Service Quality, satisfaction and trust on Word of Mouth of Airline Passengers in India, Amity Journal of marketing (International), 1(1), 75-92.

#### **Research Scholars paper publications : Under Review**

1. Abhilash G. Namboodiri: Spatiotemporal study of inwards migration of low and unskilled workers to Kerala and its effects on social and physical infrastructure (Accepted, Under peer review, ABDC Cat "C")

Journal: The International Journal of Social Sustainability in Economic, Social and Cultural Context

1. Nimmi PM: Submitted an article titled "Developing Metacognitive Skills: A Potential Intervention for Employability Enhancement" in the Journal of Contemporary Research in Management (Print ISSN :0973-9785, Online ISSN :2348-4764).
2. Sunitha T.R paper under review at John Wiley Publications – International Journal of Non- Profit and Voluntary Sector Marketing).

#### **Research Scholars Paper Publications**

1. Anoop Narayanan (2016) 'Talent Management and Employee Retention: Implications of Job Embeddedness - A Research Agenda', Journal of Strategic Human Resource Management, Vol. 5(2), June issue
2. Anoop Narayanan(2016), 'Talent Management: A Process View', International Journal of Social Science & Interdisciplinary Research IJSSIR (ISSN 2277-3630), Vol. 5 (12), pp. 66-79, Dec 2016
3. Divya P. Velayudhan & Sam Thomas (2016), Measuring Project Success:



- Emergence of Dimensions. The International Journal of Business & Management, Vol 4 Issue 4, April 2016.
3. Thomas Asha E. & M. Bhasi, (2017), “ Sustainable Education: Re-Visioning for Twenty- First Century”, Asian Journal of Research in Social Sciences and Humanities, Vol. 7, No. 5, May 2017, pp. 47-62. ISSN 2249-7315, DOI NUMBER: 10.5958/2249- 7315.2017.00296.9
  4. Thomas Asha E. (2016), “Labour migration in Kerala: A Study on Working Conditions of Unskilled Labourers”, International Journal of Exclusive Management Research, (Conference Special Issue),ISSN 2249-8672,E-ISSN 2249-2585
  5. Thomas Asha E. (2016), “Impact of FDI on Indian Economy – An Analytical Study”, International Journal of Business and Administration Research Review, Vol-1,No.4, ISSN 2348-0653,E- ISSN 2347-856X
  6. Thomas Asha E. (2016), “Transnational Education in UK Universities With Special Reference to Higher Education Sector”, South Asian Journal of Marketing and Management Research (SAJMMR), ISSN 2249-7137 (online)
  7. Thomas Asha E. (2016), “Green Business-Key for Sustainable Growth in Emerging Countries : A Study on Kerala State, India”, International Journal of Management and Applied Science, Vol.2,No.5,pp 219-240,ISSN:2394-7926
  8. Minu John (2017). “Major concerns for education loans in Kerala”, International Journal of Management & Social Sciences (ISSN 2455-2267); Vol.07, Issue 02 (2017), Pg.no 244-249.
  9. Minu John (2016). “Current scenario in Education Loans in India”, International Journal of Management & Social Sciences (ISSN 2455-2267); Vol. 03 Issue 01 Pg.no 96-109.
  10. Nimitha Aboobaker, Dr. Manoj Edward and Pramadha K.P, (2017), “Work-Family Conflict, Family-Work Conflict and Intention to Leave the Organization - evidences across five Industry Sectors in India”, Global Business Review, Sage Publications, Vol 18, Issue 2, pp. 524 - 536
  11. Nimitha Aboobaker, Dr. Manoj Edward (2017), “Work-Family Conflict and Family- Work Conflict Among Employees Across Five Business Sectors in India-Examining The Role of Individual Differences”, South Asian Journal of Marketing & Management Research, Volume : 7, Issue : 2p. -24-34. ISSN : 2249-877X. DOI : 10.5958/2249- 877X.2017.00007.8
  12. Rama L and DR.Sarada S Titled “ Role of self-esteem and self-efficacy on



- competence - A conceptual framework” in IOSR Journal Of Humanities And Social Science (IOSR- JHSS),(2279-0845) in February 2017 page 33-39.
13. Rama L and DR. Sarada S Titled “A study on the effect of personal variables on factors of Competence of Engineering professors” in International journal of core engineering & management (2348-9510) in February 2017 page 14-26
  14. Shelly Jose and Sebastian R. Mampilly, 2017, “Innovative Work Behaviour: Propositions on Influence from Within and Without an Individual in the Organizational Context” Asia Pacific Journal of Management Research and Innovation, March, 2017. 12, 3-4 SAGE Publication
  15. Vijay Kuriakose (2017), “Relationship Conflict and Affect States of The Employees: Role of Perceived Relationship Conflict Importance”, *International Journal Of Economics and Management Studies (Issn: 2393-9125) Vol:3., Issue.,., Page no 14-10* Seventh Sense Research Group, Chennai.

### 3. Chapters in Books

1. Thomas Asha E., M. Bhasi, R. Chandramouli (2017), “Financial Accessibility and Economic Growth-Evidence from SAARC Countries”, *Contemplations on New Paradigms in Finance*, Directorate of Public Relations and Publications, CUSAT, pp 32-52,ISBN: 978-93-80095-99-8
2. Thomas Asha E. (2016), “Societal Perception on Corporate Social Responsibility (CSR) Initiatives of Indian Companies”, proceedings of the International Conference on Re-Engineering Business Concepts and Rapid Changes in Worldwide Business Patterns, pp 67-73,ISBN: 978-93-84234-83-6
3. Thomas Asha E. (2016), “Green Business-Key for Sustainable Growth in Emerging Countries : A Study on Kerala State, India”, Proceedings of the IRES International Conference held at Singapore, pp 15-17,ISBN: 978-93-85973-33-8
4. Abhilash Namboodiri and Minnu F Pynadath, 2017, “Weather derivatives and its application in Agriculture Sector : A product Development Perspective of risk management” – “New paradigms in Business and Management”
5. Nimitha Aboobaker and Dr. Manoj Edward,(2016), “Work-Family Conflict and Work –Family Enrichment as predictors of Employee Wellbeing at Work“, *Proceedings of the UGC Sponsored National Seminar on Emerging Trends in Indian Banking Sector*, ISBN-978-93-85567-62-9
6. Nimitha Aboobaker, Dr. Manoj Edward(2017), “Workplace Spirituality and Intention to Stay in Higher Education Sector”, in Edited Book titled “Emerging Paradigms in Business: Marketing and HR perspectives”, Directorate of Public Relations and Publications, CUSAT, ISBN: 978-93-80095-99-8.



7. Nimitha Aboobaker, Dr. Manoj Edward(2016), “Gender Diversity as a facilitator towards Human Capital Development in Boardrooms - the case of Corporate Governance law in India”, in Edited Book titled “Human Capital, Employability and Capacity Building “, ISBN: 978-93-85567-62-9.
8. Rijo Gratus: (Published a chapter in the book titled “Emerging Paradigms in Business” on the topic “Customer Experience Management and its impact on Customer Loyalty” published by Cusat. ISBN: 978-93-80095-99-8)

### **Case studies**

Abhilash G. Nambodiri (2016) Published a cases tudy titled “Zegema Retail: Space Planning” in ET Cases (Case # OM-1-0044)

### **Publications:**

1. Abhilash G. Nambodiri Weather Derivates and its Application in Agriculture Insurance, National Conference on New Paradigms in Business and Management, School of Management Studies, CUSAT, Kochi, India (April 2017)
2. Abhilash G. Nambodiri Indian Super League and it’s Impact on Perception of Kochi Residents, Vaidakthya - National Conference on Recent Trends in E-Business: Opportunities and Challenges, Naipunya Busines School, Thrissur, India (May 2017)
3. Anju Varghese Philip, Dr. Zakkariya K. A, (2016), “Satisfaction of social and psychological needs through social media: A conceptual framework” International Conference of Marketing, Technology and Society organized by IIM Kozhikode on Sep 29<sup>th</sup> to Oct 1<sup>st</sup>.
4. Anoop Narayanan (2017), ‘Talent Development Practices and Employees’ Intention to Stay: An Empirical Study in Knowledge Intensive Organisations’, 2nd International Academic Conference on Entrepreneurship & Innovation in the Knowledge Economy, XIME Bangalore, March 30-31
5. Anoop Narayanan (2016) 'Talent Management: A Process Snapshot', 5th International HR Conference (IHR), SDMIMD campus, Mysore, December 9 & 10,
6. Athena Joy- Presented a paper titled “*Children As Change Agents in Parental Adoption Of Mobile Banking*” in the national paper presentation competition on “Disruptive Innovations in Indian Banking Industry: Emerging Business Paradigms” organized by post graduate department of commerce, Kristu Jyothi College of Management and Technology, Changanacherry
7. Athena Joy- Presented a paper titled “*Digital Wallets: Children As Change Agents*” in the “International Conference On Methodological Developments In Business



- Research”, organized by Xavier Institute Of Management & Entrepreneurship, Kochi
8. Divya P. Velayudhan (2016), “Sustainability and Iron Triangle in Project Management”, International Conference on Triple Bottom Line For Sustainability, organized by School of Management, De Paul Institute of Science & Technology on 19<sup>th</sup> & 20<sup>th</sup> Dec.
  9. Presented a paper at the National Conference on ‘New Paradigms in Business and management’ held at Cochin university of Science and Technology titled “*Financial Accessibility and Economic Growth- Evidence from SAARC Countries*” held on April 20-21, 2017.
  10. Presented a paper at the National Conference on ‘Emerging Strategies In Business Management & Economic Growth’ held at K S School of Engineering & Management, Bangalore, titled “Labour Migration In Kerala: A Study on Working Conditions of Unskilled Labourers” held on November 5<sup>th</sup> 2016
  11. Presented a paper at the IRES International Conference held at Singapore, titled “Green Business-Key for Sustainable Growth in Emerging Countries: A Study on Kerala State, India”. held on February 13<sup>th</sup> 2016
  12. Heerah Jose(2017), Reaching Consumers at their end: A case on VFPCCK, National Conference on Recent Trends in E-Business: Opportunities& Challenges organised by Naipunnya Business School, May 20, 2017
  13. Heerah Jose(2017), Emerging Market for Organic Food Products, Role of Trust and Fear in Buying, 2017 Annual Conference of Emerging Markets Conference Board, IIM Lucknow Noida Campus, January, 5-7, 2017
  14. Heerah Jose(2016), Motivational Factors Leading to Healthy Lifestyle, International Conference on Marketing, Technology and Society, IIM Kozhikode, September 29-October 1, 2016
  15. Heerah Jose(2016), Who buys organic food products: A study on personal value in buying, International Conference on Emerging Trends in Markets and Marketing, Viswajyothi School of Management Studies, February 19 &20, 2016
  16. Nimitha Aboobaker, Dr. Manoj Edward, (2017), “Workplace Spirituality and Intention to Stay in Higher Education Sector”, at National Conference on New Paradigms in Business and Management, organized by School of Management Studies, CUSAT, on April 20<sup>th</sup> and 21<sup>st</sup>.
  17. Nimitha Aboobaker, Dr. Manoj Edward, (2017), “Influence of Work Family Conflict and Work Family Enrichment on Turnover Intentions- exploring the moderating effects of individual differences ” at International Conference on





Methodological Developments in Business Research, organized by XIME, Kochi, on 3<sup>rd</sup> and 4<sup>th</sup> of March 2017.

18. Nimitha Aboobaker, Dr. Manoj Edward, (2017), "Role of workplace spirituality in facilitating ethical behavior among employees " at International Conference on Ethics and Sustainable Business Practices, organized by Rajagiri Centre for Business Studies, Kochi, on 21<sup>st</sup> of February 2017.
19. Nimitha Aboobaker, Dr. Manoj Edward, (2017), "Workplace Spirituality as a precursor to Employee Wellbeing at Work - a structural equation model", at International Conference on Spirituality & Skill For Leadership And Sustainable Management, organized by School of Management Studies, Varanasi, on 18<sup>th</sup> and 19<sup>th</sup> of February 2017.
20. Nimitha Aboobaker, Dr. Manoj Edward, (2017), "Workplace Spirituality as a precursor to sustainable Employee Wellbeing", at International Conference on Triple Bottom Line for Sustainability, jointly organized by DIST Angamaly and School of Public Service, Chicago, on 19<sup>th</sup> and 20<sup>th</sup> of December 2016.
21. Nimitha Aboobaker, Dr. Manoj Edward and Ann Thomas, (2017), "Factors influencing Brand Loyalty and Repurchase Intention: A structural equation model" International Conference of Marketing, Technology and Society organized by IIM Kozhikode on Sep 29<sup>th</sup> to Oct 1<sup>st</sup>.
22. Nimitha Aboobaker, Dr. Manoj Edward, (2017), "Gender Diversity as a facilitator towards Human Capital Development in Boardrooms - the case of Corporate Governance law in India", at International Conference on HRD, Human Capital and Competency Building Initiatives, Interventions & Innovations, organized by DDU Kaushal Kendra, CUSAT
23. Syama K.S, Dr. Manoj Edward and Nimitha Aboobaker, (2016), " The Influence of Online Brand Community Characteristics on Community Commitment and Brand Loyalty – Empirical Evidence across Online Retailer Brand Communities in India", International Conference on Emerging Trends in Market and Marketing, organized by the Vishwajyothi School of Management Studies, Vazhakulam.
24. Shiyaz K.M and Nimitha Aboobaker, (2016), "Human Capital Resilience During Crisis", National Seminar on Crisis Management and Business Continuity Planning, organized by School of Management Studies, Cochin University of Science and Technology, on 11<sup>th</sup> and 12<sup>th</sup> of February.
25. Nimmi P.M. (2016), 'The socio cultural Dimensions of Employability: A Case Study in Kerala' on International Conference on Human Resource Development by DDU Kaushal Kendra on September



26. Nimmi P.M. (2016), "Emerging Job Requirements in Retail Industry- Prospects, Issues and Challenges." at UGC sponsored National Seminar on Retail Sector of India, WMO Arts and Science College, Muttill, January 20-21.
27. Nimmi P.M., Vinney Zephaniah Vincent (2016), "Social Entrepreneurship – A social means to social end" National conference on start up India, SCMS School of technology and management, September 23.
28. Shelly Jose, 2017 "Innovative Work Behaviour as an outcome of Individual and Organizational factors: An Ecological Psychology Perspective" at the 3rd international Social Sciences and Business Research Conference held 17th -20th May, 2017 at University of California, Berkeley, USA.
29. Suja Karthika and Dr. K. B Pavithran, (2016), "The Cropped Cable: Reasons of Performance Decline Unravelling", ICBM's 4th International Case Conference 2016, ICBM- School of Excellence, Hyderabad, December 17<sup>th</sup>.
30. Suja Karthika and Dr. K. B Pavithran, (2016), "The Coiled Slump: Organizational Performance Decline of a SOE", COGNOSCO, 2016, the Fifth National Conference on Case Studies, Institute of Management, Christ University Bangalore, 30<sup>th</sup> September.
31. Suja Karthika and Dr. K. B Pavithran, (2016), "Endeavouring Turnaround through Retrenchment: Case Study of a State Owned Enterprise in Kerala", FLAME International Case Conference 2016, FLAME campus, Pune, 15<sup>th</sup> and 16<sup>th</sup> July, 2016.
32. Suntitha T.R and Dr. Manoj Edward (2016), "An Experimental Examination of Framing Effects on Consumer Response to Cause Marketing Campaigns", International Conference On Marketing, Technology and Society, organised by IIM Kozhikode at IIMK campus from September 27th & Oct 1st 2016.
33. Vijay Kuriakose(2017), " Role of Perceived Process Conflict Importance In The Relationship Between Process Conflict and Affect States of the Individual" at the National Conference on Recent Trends in E-Business: Opportunities& Challenges organised by Naipunnya Business School, May 20, 2017.
34. Vijay Kuriakose (2017), "Process conflict and Negative Affect : The Role of Perceived Social Support" at the National Conference on Emerging Trends In Business & Management organised by Bhavans Royal Institute of Management Tripunitura, on January 20, 2017.
35. Vijay Kuriakose (2016), "Relationship Conflict and Affect States of the employees: Role of perceived relationship conflict Importance" in the 5<sup>th</sup> International Conference on Managing Human Resources at the Workplace



organised by Shri Dharamastala Manjunatheswara Institute for Management Development, Mysuru on December 09 & 10, 2016.

### **Other Awards/ Achievements/ Contributions during the PhD :**

- a. Heerah Jose- Dr. Saji K.B Nair Best Doctoral Student Paper Award (First Prize) for the paper titles “Emerging Market for Organic Food Products, Role of Trust and Fear in Buying”, IIM Lucknow, January 5-7, 2017.
- b. Suja Karthika- Was awarded the First Prize (Best Case Study) in student category at the ICBM's 4th International Case Conference 2016, held at ICBM-School of Excellence, Hyderabad on December 17<sup>th</sup>, 2016.
- c. Sunitha T. R- Won the Most Commendable paper award at the International Conference On Marketing, Technology and Society, organised by IIM Kozhikode at IIMK campus from September 27<sup>th</sup> to Oct 1<sup>st</sup> 2016.
- d. Best Paper Award for the paper titled “ Process Conflict and Negative Affect: Role of Perceived social support at the National conference on Emerging Trends In Business & Management organised by Bhavans Royal Institute of Management Tripunitura, on January 20, 2017

### **Other Contributions**

#### **Dr. Asha E. Thomas**

1. Delivered lecture on the topic ‘*How to be Successful person in Life?*’ in the programme called IGNITE 2017 on February 2017 as part of Scholar Support Programme which was organised by Office of New Initiatives in Higher Education, Directorate of Collegiate Education, Government of Kerala for college students at KC Chacko Memorial HRD Centre, Aluva
2. Delivered lecture on the topic ‘*Power of Positive Thinking*’ in the programme titled ‘ Reminiscence 2017’ on February 2017, as part of Walk With the Scholar Programme which was organised by Office of New Initiatives in Higher Education, Directorate of Collegiate Education, Government of Kerala for college students at KC Chacko Memorial HRD Centre, Aluva
3. Delivered lecture on the topic ‘*Leadership in Academics*’ at Institute of Cooperative Management, Kannur, Kerala, India for the newly joined Government College Teachers on 01<sup>st</sup> November 2016. This lecture was organized by Higher Education Department, Government of Kerala, India.
4. March 16<sup>th</sup> – 20<sup>th</sup> 2016, Judge for the ‘SARGAM 2016’, The Cochin University Inter Collegiate Arts Festival organised by Cochin University of Science and Technology, Kochi.



5. February 4th 2016, Panelist in Manorama News Channel for Financial Budget Analysis
6. January 2016, Has been the Co-Organiser for International Workshop on Virtual Internationalisation held on 18th and 19th January 2016 at University of Kerala

**Resource Persons – Research Scholars**

1. Rijo Gratius: Resource Person for Two Day Faculty Development Programme on “The Art of Literature Review and Publishing in Scholarly Journals” organized by the Department of Management Studies and Research Centre at SNGCE on October 8, 2016.
2. Suja Karthika- Chaired a panel discussion at the Women Leadership Conclave – LIFE, organized by KMA women manager’s forum on 4<sup>th</sup> March, 2016 at Hotel Avenue Centre, Kochi
3. Suja Karthika- Moderated an interactive “My Story ” session of Mr. John Kuriakose at KMA House, Cochin on December 21<sup>st</sup>, 2016
15. **Participation in Seminar/Conference/Refresher courses etc. by the Faculty / Students.**

Name of the participant	Name of Seminar / Conference / Workshop	Role
Dr.D.Mavoothu	<ul style="list-style-type: none"> <li>• Panel Discussion on “Business Ethics: Basic Foundation for Corporate Organisation” as part of the 2-day <i>Awareness Conference on Responsible Business Practices</i> organized by ASSIST, Chennai, in collaboration with CII and Amrita University, held at Hotel Radisson Blue, Kochi, on 21-9-2016.</li> </ul>	Moderator
Dr.D.Mavoothu	<ul style="list-style-type: none"> <li>• National Seminar on “Digital Banking: Paradigm, Problems &amp; Prospects”, organized by Dept. of Commerce, St.John’s College, Tirunelveli on 27/01/2017.</li> </ul>	Resource Person
Dr.D.Mavoothu	<ul style="list-style-type: none"> <li>• Inter Collegiate Fest-2017, organized by Dept. of Business Administration, Nanjil Catholic College of Arts &amp; Science, Kaliyakkavilai, on 23/02/017.</li> </ul>	Resource Person



<b>Dr.S.Rajitha Kumar</b>	<p>1. Resource Person of <i>Short-term Course in Research Methodology in Commerce &amp; Management</i> organised by the Human Resource Development Centre, University of Kerala, sponsored by the UGC on 16<sup>th</sup> &amp; 17<sup>th</sup> March 2017.</p> <p>2. Resource Person on the topic '<i>Industry Expectations from Management Graduates</i>' at the Intercollegiate Seminar, 'CASPIAN PAULIAN2017' organised by St. Paul's College, Kalamassery on 17<sup>th</sup> February 2017.</p> <p>3. Workshop on <i>Syllabus Modernisation of BBA &amp; B. Sc. Hotel Management</i> organised by the Board of Studies in Business Management Pass, University of Kerala from 2<sup>nd</sup> to 4<sup>th</sup> February 2017.</p>	Resource Person/ Moderator
<b>Dr.S.Rajitha Kumar</b>	<p>1. Workshop on <i>Syllabus Modernisation of MBA Programmes in Kerala</i> jointly organised by Admission Supervisory Committee for Professional Colleges in Kerala and Kerala University of Fisheries and Ocean Studies on 10<sup>th</sup> and 11<sup>th</sup> November, 2016 in Kochi</p> <p>2. Moderator of the Panel Discussion at <i>International Seminar on Reinvesting India's Business for 21<sup>st</sup> Century – Role of Business Schools</i> organised by CONSPI Academy of Management Studies, Thiruvananthapuram on 30<sup>th</sup> September 2016.</p>	
<b>Dr.Santhosh Kumar S.</b>	<p>New Paradigms in Business and Management (NCNPBM-2017)</p> <p>Two Day UGC sponsored National Workshop on "Research Methodology in Social Science" organised by IDE, University of Kerala (2017).</p>	Conference Convenor  Resource Person



<p><b>Dr.Sreejesh.S.</b></p>	<ol style="list-style-type: none"><li>1. Resource Person for the MDP conducted by IIM Kozhikode for the faculty members of the College of Engineering, Thalassery, Kerala, on 24-09-2016, at IIM Kozhikode Campus.</li><li>2. Resource Person for the MDP conducted by IIM Kozhikode for the faculty members of the College of Engineering, Trikkaripur, Kerala, on 25-09-2016, at IIM Kozhikode Campus.</li><li>3. Resource Person: On a topic titled “factor analysis and structural equation modelling for researchers”, on July 10, 2016 at the Department of Mechanical Engineering, Rajiv Gandhi Institute of Technology, Kottayam, Kerala, India.</li><li>4. Resource Person: On a topic titled “data analysis with open source statistical software”, from 18-10-2016 to 19-10-2016 at Government Engineering College, Thrissur, Kerala, India.</li><li>5. Resource Person: On a topic titled “Research methodology”, from 07-09-2016 to 09-09-2016, at the School of Gandhian Thoughts and Development Studies, MG University, Kottayam, Kerala, India.</li><li>6. Resource Person: On a topic titled “Research methodology”, on 29-11-2016, at the School of Gandhian Thoughts and Development Studies, MG University, Kottayam, Kerala, India.</li><li>7. Resource Person: On a topic titled “research and publication strategy for academic career”, on 04-10-2016, at School of Management Studies, Cochin University of Science and Technology, Kochi, Kerala, India.</li></ol>	<p>Resource Person</p>
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<b>Dr.K.A.Zakkariya</b>	1.Workshop on Multivariate Data Analysis: Basics and Advances organized by School of Management Studies, CUSAT from 8 <sup>th</sup> to 12 <sup>th</sup> May 2017	Participant
	2.National Conference on “ New paradigms in Business and Management (NCNPBM-2017) organised by the School of Management Studies, Cochin University of Science and Technology, Cochin on April 20-21, 2017	Session Chair
	3.Five day Faculty Development Programme on “Effective and Innovative Teaching” organised by DDU KAUSHAL Kendra, Cochin University of Science and Technology, Cochin from March 7-11, 2017.	Organiser and Participant
	4.National Trainers Summit 2017 Organised by ISTD Cochin Chapter, T for Trainers and Jansikshan Sansthan(Under MHRD) Trivandrum on 21-22 February 2017 at CUSAT Seminar Complex	Panelist
	5.Two day workshop on “Case Study Writing and Developing Teaching Notes” organised by Bhavan’s Royal Institute of Management Cochin, Kerala on 12 <sup>th</sup> & 13 <sup>th</sup> of January 2017.	Participant
	6.Vidya Council Teachers’ Conference-Inspire 2016 organized at Ansar English School, Perumbilavu on 24-10-2016	Inaugurated the Conference
	7.Participated in the International Conference on Marketing, Technology and Society organised by Indian Institute of Management Kozhikode (IIM-K), during September 29 to October 1, 2016	Participant and also session chair
	8.The International Conference on HRD: Human Capital and Competency Building-Initiatives, Interventions and Innovations organised by DDU KAUSHAL Kendra, Cochin University of Science and Technology on 1 <sup>st</sup> September, 2016.	Conference Chair
	9.National Seminar “Organising Human” organized by Dept. of Psychology, University of Calicut, 16-18 June, 2016	Keynote Speaker in the valedictory session
	10.Appreciation Course in Parliamentary Process and Procedures organized by the Bureau of Parliamentary Studies and training, New Delhi from 02-06 May 2016	Participant



	<p>11. One Day Workshop on “ Building High Power Teams” organized by Kerala Management Association, Kochi, on 27-04-2016</p>	<p>Participant</p>
	<p>12. The 2016/17 Australian Indian Vocational Education Leadership Training Programme at New Delhi organized jointly by The Australian Government, UGC, AICTE and Ministry of Skill Development and Entrepreneurship</p>	<p>Participant</p>
<p><b>Dr.Sangeetha K. Prathap</b></p>	<p>1. Handled class on the topic “Planning and Organising” for training programme for Extension Officers of the Rubber Board on Management Skills from 9.00 AM to 11 AM on 14.3.2017 at Rubber Board Training Institute, Kottayam</p> <p>2. Handled training sessions on “Preparation of Agribusiness Plans, development plans and bankable projects” to the facilitators from 14 Model Agro Service Centres on 16<sup>th</sup> March 2017. At Agricultural Research Station, Kerala Agricultural University, Mannuthy.</p> <p>3. Handled training sessions on “Branding of agricultural products” to potential entrepreneurs on 16<sup>th</sup> March 2017. At Agribusiness Incubator, KCAET, Thavanur, Kerala Agricultural University, Kuttippuram.</p> <p>4. Handled training sessions at Centre of Excellence in Post Harvest Technology is organizing a one day workshop on “Entrepreneurship Development in Food Processing Sector” to young food Entrepreneurs, and Agricultural Engineers on 17<sup>th</sup> of February, 2017 at KCAET, Tavanur</p> <p>5. Handled training sessions at Centre of Excellence in Post Harvest Technology is organizing a one day workshop on “Entrepreneurship Development in Food Processing Sector” to Agricultural graduates on 11<sup>th</sup> of April, 2017 at College of Horticulture, Vellanikkara.</p>	<p>Training sessions</p>
	<p>6. Invited talk in the Training Programme on “Gender Sensitisation” for Nursing and Paramedical Staff of ESIC Hospitals of Kerala Region held at ESIC hospital Udyogamandal on 28<sup>th</sup>, 30<sup>th</sup> and 2<sup>nd</sup> July 2016</p>	<p>Invited talk</p>





	7. Handled training sessions on “Topics related to banking” to the Vocational Teachers and Instructors of VHSE Teachers in Banking and Insurance Services conducted by College of Co-operation, Banking and Management, Kerala Agricultural University from 16-18 <sup>th</sup> January 2017.	Training Session
	8. Resource Person in the Panel Discussion held as part of the State Level two days Workshop on Reinventing the structure of Coop. Credit sector in Kerala conducted by Institute of Co-operative Management, Kannur during 01-02 July, 2017 at Thiruvananthapuram and presented paper on Structural Reforms as a Panel Member. <b>Resource Person for Seminar</b> 1. As resource person in the two day National Seminar on Extent and Intensity of Crime and Violence against Women and Children in Kerala” held on 27 <sup>th</sup> and 28 <sup>th</sup> February 2017 at Women’s Studies Centre, CUSAT, Kochi 2. Served as chair for the Technical session in the National Conference on New Paradigms in Business and Management organized by SMS, CUSAT, April 20-21, 2017	Resource person  Session Chair

### 15. Awards/Honours/Fellowship etc. received

Name of Recipient	Name of Fellowship/Honours/Award	Awarding Agency
Dr. D.Mavoothu	Member, Board of Studies in Business Management(PG)	University of Kerala, w.e.f. 08/07/2016 for three years.
Neenu Wilson	Senior Research Fellowship	UGC
Suja Karthika	Junior Research Fellowship	UGC
Shiji Mohan N	Senior Research Fellowship	UGC
Rijo Gratus	Senior Research Fellowship	UGC
Nimitha Aboobaker	Senior Research Fellowship	UGC
Divya P Velayudhan	Senior Research Fellowship	UGC
Athena Joy	Senior Research Fellowship	UGC
Vijay Kuriakose	Senior Research Fellowship	UGC
Anoop Narayanan	Senior Research Fellowship	UGC
Shahnas A	Senior Research Fellowship	UGC



Rajisha T	Senior Research Fellowship	UGC
Venkidesh V	Junior Research Fellowship	UGC
Syama K.S	Junior Research Fellowship	UGC
Minu John	Junior Research Fellowship	UGC
Anju Varghese Philip	Junior Research Fellowship	UGC
Nimmi. P. M.	Junior Research Fellowship	UGC
Vinney Zephaniah Vincent	Junior Research Fellowship	UGC
Faisal Babu P	Junior Research Fellowship	UGC
Natasha P	Junior Research Fellowship	UGC
Sangeetha K L	Senior Research Fellowship	UGC
Saleena M	Senior Research Fellowship	UGC
Ameer P A	Senior Research Fellowship	UGC
Raihanath M P	Moulana Azad National Fellowship	UGC
Sunitha T R	University Senior Research Fellowship	University
Heerah Jose	University Junior Research Fellowship	University
Ronia Liza Mathew	University Junior Research Fellowship	University
Minnu F Pynadath	University Junior Research Fellowship	University
Neenet Baby Manjali	University Junior Research Fellowship	University
Anjali John	University Junior Research Fellowship	University

### 16. Sponsored Research Projects -

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1.	Strengthening of Agribusiness Incubator	Kerala State Planning Board at Kerala Agricultural University	R.50 lakhs	Dr. Sangeetha K. Prathap Role as Co-Investigator

### 18. Research Programmes and Activities - NIL

Sl. No.	Problem/Topic	Investigator(s)
1	Annual Research Methodology Course (Series 1): Research Skills and Data Analysis Using R", on May 11-13, 2016	Dr.Sreejesh S. Dr.Sam Thomas Dr.Manoj Edward



2	Annual Research Methodology Course (Series 1): Research Skills and Data Analysis Using R”, on May 25-27, 2016	Dr.Sreejesh S. Dr.Sam Thomas Dr.Manoj Edward
3	Multivariate Data Analysis: Basics and Advances”, on May 08-12, 2017	Dr.Sreejesh S. Dr.Sam Thomas Dr.Manoj Edward
4	<p><b>PhD Awarded:</b></p> <ul style="list-style-type: none"> <li>PhD awarded to <b>Mr.Lal V. Jose</b> during November 2016 for the thesis titled “Strategic HR Factors Influencing Innovative Work Behaviour of Managers –A Study with Special Reference to the Spices Exporting Companies in Kerala, India” under the Faculty of Social Sciences, CUSAT.</li> </ul>	Guide: Dr.D.Mavoothu
5	<p><b>PhD Thesis Submitted:</b></p> <ul style="list-style-type: none"> <li><b>Mrs.Saleena M.</b> submitted her PhD thesis titled “A Study on Career Re-entry Factors Impacting Career Success of Woman Professionals” during April 2017 under the Faculty of Social Sciences, CUSAT.</li> </ul>	Guide: Dr.D.Mavoothu
6	<p><b>PhD Thesis Submitted:</b></p> <ul style="list-style-type: none"> <li><b>Ms.Sangeetha,K.L.</b>, submitted her PhD thesis titled “A Study on the Role of Intensity of Social Networking Site Usage in Promoting Social Capital for Willingness to Collective Action” during May 2017 under the Faculty of Social Sciences, CUSAT.</li> </ul>	Guide: Dr.D.Mavoothu

### 17. Seminar/Conference/Workshop/Refresher Course conducted by the Department.

Sl. No.	Title and Duration	Duration	Co-ordinator	Funding Agency
1	Workshop on Case Studies	(one day) May 2016	Dr. Manoj Edward	Sponsors and Registered participants
2	Annual Research Methodology Course (Series 1): Research Skills and Data Analysis Using R, on May 11-13, 2016	Three days May 2016	Dr. Sreejesh S. & Dr. Sam Thomas	Sponsors and registered participants
3	Annual Research Methodology Course (Series 1): Research Skills and Data Analysis Using R, on May 25-27, 2016.	Three days May 2016	Dr. Sreejesh S. & Dr. Sam Thomas	Registered Participants



4.	New Paradigms in Business and Management (NCNPBM-2017)	April 2017	Dr.Santhosh Kumar Sr.Sam Thomas	Program Convenors
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### 18. Consultancy work

Sl. No.	Name of Consultancy	Name of Consultant	Amount	Investigator(s)/Co-ordinator
1.	KUDUMBASHREE - Training	KUDUMBASHREE	180000	Dr. M. Bhasi
2	KSFE - Study on Re-structuring of KSFE Ltd.	KSFE	2500000	Dr. M. Bhasi Dr. S. Rajitha Kumar Dr. James Manalel Dr. Sam Thomas



## KUNJALI MARAKKAR SCHOOL OF MARINE ENGINEERING

### 1. Brief History of the Department :

Kunjali Marakkar School of Marine Engineering (KMSME) has started with a precise vision of creating expert marine engineers who can cope up with the demands of the ever-growing shipping industry. It is the only marine engineering training institute in India, which is under the direct control of a state owned university. This department functions under the aegis of the Directorate General of Shipping, Govt. of India, Mumbai. Located in the heart of Cochin University campus, KMSME started its first batch of 4 year B. Tech Marine Engineering programme in 2003. The presence of various other departments in the Cochin University, which have their own strong research wings, enable our students to acquire profound knowledge in every topic prescribed by the curriculum.

Admission to the course is through the rank list prepared from All India Entrance Examination conducted by the CUSAT. The girl students are also given opportunity to study this course. As an incentive to promote women participating in the maritime field, they are given 50 % remission on their tuition fees as per the advice from the Directorate General of Shipping.

M.Tech programme in Marine Engineering was started in this department in the academic year 2014-15 which is the unique endeavor initiated first time in University level in India. The first batch of M.Tech Marine Engineering course was completed in 2016. Out of the two years in M.Tech course, first year is devoted for theory classes, labs and seminars and second year is devoted for internship and project works. For the internship, project work and lab, MoU has been made with Cochin Shipyard Ltd., for availing of their facility at their yard. Apart from this, department has commenced research programme in Marine Engineering. The department is equipped with a Full Mission Engine Room Simulator, where pre-sea and post-sea mandatory short term course for appearing to competency exams are conducted.

KMSME has participated in the competitive bid regarding the “IMO- European Union Project on Capacity Building for Climate Change Mitigation in the Maritime Shipping Sector” and to host Maritime Technology Co-operation Centre (MTCC) in India. KMSME has been consistently graded A1, Outstanding by independent bench marking agency CARE and by Indian Register of Shipping.



## 2. Programmes of Study/Research:

1. Pre-sea Engineering – 4 year B.Tech in Marine Engineering.
2. Engine Room Simulator course of Operational and Management levels commenced for MEO Class IV and MEO Class II candidates respectively.
3. M Tech – 2 year Marine Engineering Programme
4. Indian Maritime University (IMU) – Afloat Training & Workshop Overhauling for cadets from IMU Chennai.

## 3. Faculty Members

Sl. No.	Name	Designation	Qualification	Specilisation
1	Prof.(Dr.) K.A. Simon	Director	B.Sc (Engg.), MEO Class I (Motor) with Steam endorsement MS(Sweden), Extra First Class Marine Engineer.	Safe Watch Keeping MARPOL
2	Prof. N.G.Nair	Course-in-Charge	B.Sc(Engg.), MEO Class I (Motor)	Marine Auxiliary Machinery, Gas turbines
3	Mr.Roy.V.Paul	Associate Professor	M.Tech	Thermodynamics Machine Drawing
4	Mr.Venugopal R	Associate Professor	M.Tech	1. Marine Aux. Machinery 2. Marine Internal Combustion Engine
5	Mr.Jis George	Associate Professor	M Tech	1. Marine Internal Combustion Engine 2. Marine Refrigeration and Air Conditioning
6	Mr. K.Vidyadharan	Assistant Professor	M.Tech.	Mechanical Engineering and Ocean Engineering
7	Dr. Ajin C Sajeevan	Assistant Professor	M.Tech, Ph.D	Mechanical Engineering
8	Ms. Chinchu Varghese	Assistant Professor	M.Tech	Electronics Measurements & Instrumentation
9	Mr. Anoop Mathew Kurian	Assistant Professor	M. Tech	Mechanical Engineering



10.	Mrs. Mage Reena Varghese	Assistant Professor	M Tech	Electrical Engineering
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**5. Emeritus Professor/Scientist (if any): Nil**

**6. Visiting Faculty**

Sl. No.	Name	Designation	Qualification	Specialization
1	Mrs. Betsy Kurian	Guest Faculty	M.A.Economics	Economics & Commercial Geology
2	Prof. A.N Sukesan	Guest Faculty	M.Sc.Physics	Physics
3	Mr. S.Krishnankutty	Guest Faculty	B.Sc,(Engg..)	MEO Class I Steam & Motor
4	Mrs. Serene P Tom	Guest Faculty	M.Sc. Mathematics	Mathematics
5	Mr. M R Chandrasekharan	Guest Faculty	B.Sc. Engg.. First class Competency certificate issued by Govt. of India	Marine Engineering
6	Mrs. Shalini Sanil	Guest Faculty	B.Tech.	Computer Science
7	Mr. P R R Pillai	Guest Faculty	B.Sc. Engg. First class Competency certificate issued by Govt. of India	Marine Engineering
8	Mr. P.M. Sukumaran	Guest Faculty	B.Tech, B.Sc(Engg.)	Naval Architecture
9	Mr.C. Reghunadhan Chettiar	Guest Faculty	B.Tech.	Mechanical Engineering
10	Capt. Jayaprakash	Guest Faculty	Senior Master Mariner	Navigation
11	Miss. Rakhi	Guest Faculty	M.Sc Mathematics	Mathematics
12	Mr. Issac P Issac	Guest Faculty	B.Sc. Engg.. First class Competency certificate issued by Govt. of India	Marine Engineering



13	Mr.K P Venugopal	Guest Faculty	B. Sc Mechanical Engineering, MBA	Mechanical Engineering
14	Mrs.Radha Lakshmy S A	Guest Faculty	M.A, B.Ed	Technical Communication
15	Mrs.Santha Mathai	Guest Faculty	M.Sc Chemistry	Engineering Chemistry
16	Ms.Jitha G	Guest Faculty	M.Sc, Ph.D, Post Doctoral Fellowship	Environmental Studies
17	Ms.S.Ramya Praveen	Guest Faculty	MCA	Computer Science
18	Ms. Nisha Rani G S	Guest Faculty	M.Tech	Basic Electrical Engineering, Mechanical Lab
19	Ms. Janet Maria Thomas	Guest Faculty	M.E. (Applied Electronics)	Applied Electronics and Instrumentation
20	Ms. Smijas J	Guest Faculty	M. Tech	VLSI and Embedded System Design
21	Ms. Bensy J Odakal	Guest Faculty	M.Tech	Power Electronics and Drives

**7. Research/Project Staff :Nil**

**8. Research Scholars : Nil**

**9. Administrative Personnel**

Sl. No.	Designation	No. of Posts
1	Section Officer	1
2	Asst. Librarian.	1
3	Assistant	3
4	Computer Assistant	2
5	Peon	2
6	Gardener	2
7	Sweeper cum Cleaner	6
8	Warden cum physical Trainer	3





## 10. Technical Personnel :

SI No.	Designation	No. of Post
1	Workshop Superintendent	1
2	Technical Assistant Grade III	3
3	Technical Assistant Grade II	1
4	System Analyst	1
5	Technician Grade II	2

## 11. Student Enrollment 2016

SI.No.	Programme of Study	Men	Women	Total
1	B.Tech Marine Engineering	78	2	80
2	M.Tech Marine Engineering	10	---	10

## 12. Research Facilities

### a. Laboratories

1. Mechanical Lab (Kinematic lab)
2. Instrumentation & Control Lab
3. Engine Simulator Lab
4. Ship-in-Campus
5. Machine overhauling Lab
6. Cut section Models Lab
7. Purchase for computer lab

### b. Major equipments available

- (1) Morris single Girder, EOT Crane.
- (2) Incinerator
- (3) Steam Turbine
- (4) Marine Auxiliary Water Tube, Boiler
- (5) Fresh Water Generator
- (6) Stearing Gear
- (7) Cargo Oil Pump
- (8) Refrigerator



- (9) Life boat (46 Persons) with complete kit. - 1 set
- (10) PLC Scada Training kit-
- (11) Hydraulic Circuit
- (12) Gas Turbine Model
- (13) Diesel Engine Model
- (14) Petrol Engine Model
- (15) Full Mission Engine Room Simulator
- (16) APL UPS for Engine Room Simulator
- (17) Marine Diesel Engine (Sulzer 5AL 25/30)
- (18) Air Compressor Water Cooled (Hatlapa)
- (19) Connecting Rod with cross head (35MC)
- (20) Winch
- (21) Two Stroke Cylinder Head
- (22) Fuel Pump Combine Type
- (23) Shell & Tube Heat Exchanger
- (24) Used Ship Machinery items were purchased from M/s Hoosami Metals Pvt. Ltd. Gujarat, at a total cost of Rs.30,64,320/- as follows
  - a. Marine Diesel Engine (Suizer 5AL 25/30)
  - b. Marine Diesel Engine Special Tools
  - c. Filter's main Tools
  - d. Vane Pump
  - e. Gear Pump (without motor)
  - f. Reciprocting Pump (with motor)
  - g. Gate Valve/Relief Valve/Butterfly/Glob/Variouis
  - h. Quick closing Valve
  - i. Air Compressor water cooled (Hatiapa)
  - j. Shell and Tube heat exchanger
  - k. Plate type heat Exchanager
  - l. Air starting Valve



- m. Crank Case relief Valve
  - n. Air circuit breaker (Amps=1000)
  - o. Air Start distributor
  - p. Fuel pump with roller base
  - q. Fuel Injector
  - r. Engine Governor(UG-40)
  - s. Blige Pump (without motor)
  - t. Oil water separator
  - u. Two stroke cylinder head
  - v. Fuel pump combined type
  - w. Turbo charger (BBC VTR – 250)
  - x. Winch
  - y. Turning gear
  - z. P.V.Valve
- aa. Deflection Gauge ab. Outside Micrometer ac. Fuel testing pump
- ad. Connecting rod (4 stroke) ae. Weldon pump
- af. Sounding tape ag. Port hole (Alu) ah. Float Switch
- ai. Hand air Compressor
- aj. Connecting rod with cross head (35 MC) ak. Bearing (various)
- al. Trust Pedestal am. Puller
- an. Anchor chain with – approx. 130kg., 100kg. ao. Indicator cock
- ap. Indicator card gauge
- aq. Lub Oil/Fuel oil filter(Mistubishi SJ3000) ar. D.C. Motor
- as. Inside Micrometer at. Air bottle 14 mc<sup>3</sup> au. Air Compressor
- av. Centrifugal pump (without motor)
- aw. Two Stroke Engine Piston, Crown with piston- rod and stuffing box ax. Two stroke engine cylinder liner
- ay. Cylinder liner (900 MM Bore) az. Air Venter weighted cock
- ba. Air bottle 7m<sup>3</sup>

**c. Library**

No of books as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
5656	623

**d. Others****13. Distinguished visitors**

Sl. No.	Name	Affiliation	Remarks
1	Mr. Maneesh Jha	Vice Principal, SIMS	Visited to see the infrastructure at KMSME
2	Mr. Rajiv Ranjan	General Manager, LDCL	Visited to see the infrastructure at KMSME
3	Mr. Deepak Shetty	IRS, Director General of Shipping, Secretary, GOI, Mumbai	Visited to see the infrastructure at KMSME, Passing out ceremony of 9 <sup>th</sup> batch Marine Engineering cadets
4	Shri.Suresh P Kurup	CEO, M/s.Synergy Oceanic Pvt.Ltd	Maritime Symposium on Leadership and Team Work
5	Shri. Uday Purohit	Hon. General Secretary Institute of Marine Engineers (I), Mumbai	Maritime Symposium on Leadership and Team Work
6	Shri.Suresh P Kurup	CEO, M/s.Synergy Oceanic Pvt.Ltd. Cochin	Maritime Symposium on Leadership and Team Work
7	Dr.Malini V Shankar, IAS	Director General of Shipping, Mumbai	Visited to see the infrastructure at KMSME and to see "Sasthrayan"2017 conducted by CUSAT
8	Shri. Leslie Hemachandra	IMO Auditor, Srilanka	Inauguration of IMS '16, Techno-Cultural Fest and M Tech Marine Engineering Graduation Ceremony
9	Shri. C.J Mathew, IRS	Commissioner and Customs & Central Excise Tax Applets Tribunal, Mumbai	Passing out ceremony of 9 <sup>th</sup> batch Marine Engineering cadets



10	Dr.V.Ajit Prabhu	Joint Director, Kerala State Council for Science, Technology & Environment and State Nodal Officer	National Technology Day Celebrations
11	Shri.Reuben Mathew Jacob IRS	Lakshadweep Development Corporation Ltd, Kavarathi	Passing out ceremony of 9 <sup>th</sup> batch Marine Engineering cadets

#### 14. Ph. Ds Awarded : Nil

#### 15. Publications:

##### a. Papers

Sl. No.	Name of paper	Impact factor (if any)
1	Balamurugan,S, Sajeevan, Ajin C. and Sajith,V Stability of Cerium Zirconium mixed oxide catalytic nanoparticle in diesel - An experimental investigation, Journal of Nanofluids, April 2016, Volume 5,pages.1-7.	
2	Sajeevan, Ajin C and Sajith, V Synthesis of stable Cerium Zirconium oxide nanoparticle - diesel suspension and investigation of its effects on diesel properties, Fuel,November 2016, Volume 183, pages 1-686.	

##### b. Books: Nil

#### 16. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Sl. No	Name of Participant	Name of Seminar / Conference/ Workshop	Role
1	Prof.(Dr.) K.A. Simon	International Maritime Seminar "IMS '16" On 5 <sup>th</sup> August, 2016	General Convener
2	Prof.(Dr.) K.A. Simon	Workshop on Merchant Shipping Act On 6 <sup>th</sup> August, 2016	Participant
3	Prof.N.G.Nair	International Maritime Seminar "IMS '16" On 5 <sup>th</sup> August, 2016	Participant
4	Mr. Roy V Paul	International Maritime Seminar "IMS '16" On 5 <sup>th</sup> August, 2016	Participant
5	Mr. Mr. Vidyadharan	International Maritime Seminar "IMS '16" On 5 <sup>th</sup> August, 2016	Participant
6	Mr. R Venugopal	International Maritime Seminar "IMS '16" On 5 <sup>th</sup> August, 2016	Participant



7	Mr. Jis George	International Maritime Seminar "IMS '16" On 5 <sup>th</sup> August, 2016	Participant
8	Mrs. Chinchu Varghese	International Maritime Seminar "IMS '16" On 5 <sup>th</sup> August, 2016	Participant
9	Mrs. Nisha Rani G S	International Maritime Seminar "IMS '16" On 5 <sup>th</sup> August, 2016	Participant
10	Dr. Ajin C Sajeevan	International Maritime Seminar "IMS '16" On 5 <sup>th</sup> August, 2016	Participant
11	Capt. Jayaprakash	International Maritime Seminar "IMS '16" On 5 <sup>th</sup> August, 2016	Participant
12	Mrs. Shalini Sanil	International Maritime Seminar "IMS '16" On 5 <sup>th</sup> August, 2016	Participant
13	C. Reghunadhan Chettiar	International Maritime Seminar "IMS '16" On 5 <sup>th</sup> August, 2016	Participant
14	Mrs. Mage Reena Varghese	International Maritime Seminar "IMS '16" On 5 <sup>th</sup> August, 2016	Participant

#### 17. Role of Faculty in International /National organizations/Institutions/ Editorial Boards:

Name of Faculty	Name of Organization	Role
Prof.(Dr.) K.A. Simon	Kerala Public Service Commission	Revision of syllabus for selection to the post of Works Manager in Kerala State Water Transport Department.
	M/s. Lakshadweep Department Corporation Ltd.	Director on the Board of Directors
	St. Alberts College, Ernakulam	Member of Academic Council
	Indian Maritime University, Chennai	Member of Selection committee for appointment of Professors.

#### 18. Awards/ Honours/ Fellowships etc. received. :

Name of the Recipient	Name of Fellowship/ Honour/ Award	Agency
Prof. (Dr.) K.A. Simon	Outstanding Contribution to Maritime Education and Training	National Maritime Day Celebrations (Central) Committee, under the Ministry of Shipping, Govt. of India

#### 19. Sponsored Research Projects : Nil



## 20. Research Programmes and Activities:

In an effort to overcome the unprecedented challenges with regard to control of emission from ships in the wake of MARPOL convention, the K.M. School of Marine Engineering, Cochin University of Science and Technology has formulated a Maritime Research Board involving the representatives of organizations such as Indian Register of Shipping, Directorate General Shipping, Mercantile Marine Dept., Kerala State Maritime Development

Corporation, Indian Maritime University etc. MARPOL convention of IMO stipulates the reduction of emission of oxides of Sulphur & Nitrogen from various ships. The immediate priority of the research wing is the following. (I) Exhaust gas recirculation in Marine diesel engine as a primary means of NO<sub>x</sub> reduction. (II) Fuel oil emulsification techniques to comply with emission requirements. (III) Water injection into combustion chamber of compression ignition engine and scavenge air moisturizing in order to regulate NO<sub>x</sub> production and (IV) Study of nozzle flow characteristics of sonic and subsonic flows with the aid of anechoic chamber.

## 21. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department :

Title of the Seminar	Event Date	National/ International	Funding Agency	Co-ordinator
International Maritime Seminar "IMS 16	05-08-2016	International	University	Mr. Roy V Paul
National Technology Day Celebration	11-05-2016	National	University	Prof. N G Nair
Workshop on Merchant Shipping Act	06-08-2016	National	Institute of Marine Engineering Company of Master of Mariners	Prof.(Dr.) K A Simon

## 22. Consultancy Work: Nil

## INTERNATIONAL SCHOOL OF PHOTONICS

### 2. Brief History of the Department:

The International School of Photonics (ISP) at Cochin University of Science & Technology was inaugurated on the National Science Day, February 28<sup>th</sup> 1995. The nucleus of the ISP was formed by delinking the laser laboratories along with faculty members of the laser group from the Department of Physics of CUSAT. ISP has been carrying out pioneering work by way of Research and Development in lasers and their applications as well as in Fiber Optical Technology. ISP offers a Four Semester M.Tech degree course in Optoelectronics and Laser Technology, 5 year Integrated M.Sc Photonics and Ph.D programmes in all branches of Photonics/Optoelectronics. Research and Development work in frontline areas are being pursued and these include topics like laser induced plasmas, photo thermal and photo acoustic phenomena, nonlinear optics, nonlinear dynamics, photonic materials, laser material processing and fibre optic sensors as well as some defense related applications of lasers. Most of the research projects are being funded by the national funding agencies like Department of Science and Technology (Govt. of India as well as Govt. of Kerala) UGC, AICTE, DRDO, KSCSTE etc. ISP had an International collaboration with the Technical University of Eindhoven (TU/e) under the MHO programme funded by the Netherlands Organization for International co-operation in higher education during 1999-2004. A sub Pico second laser facility is available in the laboratory under the CELOS programme which is being used as a national facility.

### 3. Programmes of Study/Research

- 1 M.Sc. (5 year Integrated) in Photonics
- 2 M.Tech Opto Electronics & Laser Technology
- 3 Ph.D Photonics

### 4. Faculty Members

SI No.	Name	Designation	Qualification	Specialization
1	Dr.A Mujeeb	Professor & Director	M.Sc., M.Phil Ph.D	Opto electronics Optical NDT Bio Photonics
2	Dr.M.Kailasnath	Professor	M.Sc, M.Phil, M.Tech, Ph.D	Fibre Optics & Laser Technology





3	Dr.Pramod Gopinath	Professor	M.Sc., NETPh.D.	Laser Plasma Spectroscopy, Nonlinear Optics and Nanophotonics
4	Dr.Sheenu Thomas	Professor	M.Sc., Ph.D	Experimental Solid State Physics, Nonlinear Optics, Photonic materials
5	Dr.Manu Vaishakh	Assistant Professor	M.Sc., Ph.D	Non-linear optics, Optical imaging, Fiber optics
6	Dr.Saji K.J.	Assistant Professor	M.Sc. NET, Ph.D.	Optoelectronic Devices, Nano materials and Solar cells
7	Mr.Muhammad Rishad	Assistant Professor	M.Sc., NET,Ph.D. (doing)	Ultrafast laser-matter interactions, Metamaterials
8	Dr.Priya Rose T.	Assistant Professor	M.Sc. Ph.D	Photonic bandgap materials, Metamaterials, Ultrafast laser- matter Interactions

### 5. Emeritus Professor/Scientist (if any)

SI.No.	Name	Designation	Qualification	Specialization
1	Dr. V.P.N.Nampoori	KSCSTE, Emeritus Scientist	M.Sc. Ph.D	Laser Spectroscopy, Non-linear Optics
2	Dr.P.Radhakrishnan	UGC Emeritus Fellow	M.Sc. Ph.D	Laser Spectroscopy and Non-linear Optics
3	Dr. S.K. Sreenivasan Nair	Adjunct Faculty	M.Sc., M.Tech. Ph.D	Solid state lasers

**6. Visiting Faculty (if any)**

Sl.No.	Name	Designation	Qualification	Specialization
1	Dr. Ananthakrishnan	Visiting Professor	M.Sc., PhD	Spectroscopy
2	Prof. Varadarajan	Visiting Professor	M.Sc	Theoretical Physics
3	Prof. M Rajendran	Visiting Faculty	M.Sc., M. Phil.	Theoretical Physics

**7. Research/Project Staff**

Sl.No.	Name	Designation	Qualification	Specialization
1	Ramya	Project Fellow	M.Sc., Mphil, NET	Electronics
2	Anupama	Project Fellow	M.Sc., M.Tech, NET	Chalcogenide glasses

**8. Post Doctorate Fellowship**

Sl.No.	Name	Funding Agency	Guide	Area of work
1	Dr.Mathew S	UPDF	Prof. A Mujeeb & Prof. M Kailasnath	Nano photonics

**9. a. Research Scholars (Full – time)**

Sl.No.	Name	Funding Agency	Guide	Area of work
1	Adrine Antony Correya	UGC JRF SRF	Prof. A Mujeeb and Prof. V. P. N. Nampoori	Nano photonics
2	Ajina C	UJRF, CUSAT	Dr. Sheenu Thomas	Glasses for photonics
3	Alina C Kuriakose	UGC Maulana Azad National Fellowship	Dr. Sheenu Thomas	Nano photonics
4	Anand V.R	KSCSTE Fellowship	Prof. M Kailasnath	Optical fiber based devices
5	Arindam Sarkar	UJRF, CUSAT	Prof. V. P. N. Nampoori	Nano photonics
6	Bini. P.Pathrose	UGC JRF	Prof. A Mujeeb Prof. P Radhakrishnan	Nano photonics
7	Bobby Mathews C	UGC BSR	Dr. P. Radhakrishnan	Fiber Optic Sensors



8	Boni Samuel	KSCSTE Fellowship	Prof. A Mujeeb Prof. VPN Nampoori	Nano photonics
9	Bejoy Varghese	DAE BRNS	Dr. V M Nandakumaran	Nonlinear dynamics
10	Jaison Peter	UGC JRF	Prof. M. Kailasnath	Fiber optics, Polymer fibers, Fiber lasers
11	LinslalC L	UGC BSR	Prof. M. Kailasnath	Fiber Optics
12	Nideep T K	E Grantz,Kerala Govt.	Prof. M. Kailasnath	Nano photonics
13	PoojaGitty	UJRF, CUSAT	Prof. M. Kailasnath	Nano photonics
14	Pradeep Chandran C	UGC Rajiv Gandhi	Prof. V P N Nanpoori	Biophotonics
15	Anupama V	KSCSTE Fellowship	Dr. Sheenu Thomas	Chalcogenide Glasses
16	IshaqAhamed A	UGC JRF	Prof. M. Kailasnath	Fiber optic sensors
17	Jessy Simon	UGC Maulana Azad National Fellowship	Prof. M. Kailasnath	Nano photonics
18	Priyamvada V C	UJRF, CUSAT	Dr. P. Radhakrishnan	Fiber Optic Sensors
19	Ramya M	KSCSTE Fellowship	Prof. M. Kailasnath	Nano photonics
20	Sony U	UGC JRF SRF	Dr. Sheenu Thomas	Biophotonics
21	Raj Sha M M	UGC JRF	Prof. A Mujeeb Prof. VPN Nampoori	Nano photonics
22	Roopa Venkataraj	KSCSTE Fellowship	Prof. M. Kailasnath	Optical fiber based devices
23	Vijesh K R	UGC NFHESTS	Dr. Sheenu Thomas	Photonics Materials
24	Retheesh R		Prof. A Mujeeb	Speckle Interferometry
25	Pradeep kumar V	UGC NET	Prof. A Mujeeb Prof. P Radhakrishnan	Metal nanoparticles



26	Keerthana S H	KSCSTE Fellowship	Prof. A Mujeeb	Laser speckle technique
27	Hajira P	Gate-2016	Dr.Saji K.J.	Solar cell

### 9. b. Research Scholars (Part – Time)

Sl.No.	Name	Funding Agency	Guide	Area of work
1	Manju Joseph		Dr. M Kailasnath	Nanomaterials
2	Musfir P.N		Dr.Sheenu Thomas	Chaleagenide glasses
3	Sabitha P V		Dr V P N Nampoori	Nanophotonicse

### 10. Administrative Personnel

Sl.No.	Designation	No. of Posts
1	Section Officer	1
2	Office Superintendent	1
3	Assistant	2
4	Computer assistant	1
5	Office Attendant	1
6	Sweeper cum cleaner	1

### 11. Technical Personnel

Sl.No.	Designation	No. of Posts
1	Store keeper Gr.III	1
2	Instrument Technician	1

### 12. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1	M.Tech (OE&LT)	10	9	19
2	M.Sc. (5 year integrated) in photonics	64	35	99
3	Ph.D	17	13	30



### 13. Research Facilities

### Laboratories

1. Laser lab
2. Fiber lab
3. Chemical lab
4. Computer lab
5. Electronics lab
6. Optics lab

#### **b Major Equipments**

- i 12 W Argon ion Laser (Spectra Physics 171)**
  - ❖ Argon ion laser(Liconix 5000)
  - ❖ Pulsed Nd:YAG lasers (Quanta Ray DCR – 11 and Quanta Ray GCR – 170)
  - ❖ Optical Parametric Oscillator (Spectra Physics MOPO – 700)
  - ❖ Ring Dye Laser (Spectra Physics 380) v Pulsed Dye Laser (Quanta Ray PDL 2)
  - ❖ Diode Pumped Solid State Lasers
  - ❖ Low temperature solution growth unit
  - ❖ UV–VIS–NIR Spectrophotometer (Jasco V-750)
  - ❖ Optical time domain reflectometer (Anritsu MW 920 A)
  - ❖ Photon counting system (Stanford research systems SR 400).
  - ❖ High resolution CCD camera and accessories (Panasonic KR222).
  - ❖ Boxcar Averager System.
  - ❖ Fiber Drawing System
  - ❖ High Vacuum Systems and accessories
  - ❖ Optical Spectrum Analyser
  - ❖ Optical Multi-channel Analyser
  - ❖ Quadrant Detector
  - ❖ Lock-in Amplifiers, Digital storage oscilloscopes
  - ❖ Femtosecond Laser system (80 fs -100fs, 80 MHz, Spectra Physics, TSUNAMI)
  - ❖ Splitfire Pro Ultrafast Ti:Sapphire Amplifier (2 mJ, 1 KHz)
  - ❖ 100 ns, 1KHz, 30 W, 527 nm Q-switched DPSS (EMPOWER, Spectra Physics)



- ❖ 5W,532 nm DPSS (MILLENIUM, Spectra Physics)
- ❖ Fluorescence Spectrophotometer (CARY Eclipse, VARIAN)
- ❖ Fiber Optical Fusion Splicer (FUJIGAWA, JAPAN)
- ❖ High Resolution Fiber Optic Spectrometer (HR 4000 Ocean Optics)
- ❖ Optical Spectrum Analyzer (AQ 6319 YOKOGAWA)
- ❖ Broad band white light source (AQ 4305 YOKOGAWA)
- ❖ 1J, 8 ns, 10 Hz, Nd:YAG laser (quanta Ray, Spectra Physics)
- ❖ Tunable Semi Conductor laser (Sacher Lasertechnik Marburg)
- ❖ 1 GHz Digital Phosphor Oscilloscope (Techtronix)
- ❖ 15 W CO<sub>2</sub> laser
- ❖ Research Centrifuge
- ❖ SPIN 150 (Spin coater unit)
- ❖ Vaccum Oven (KEMI)
- ❖ Ceramic Tape Casting Machine
- ❖ Narrow Motorized translation stage with DC Motor
- ❖ Precision polishing and grinding machine
- ❖ Galvnometer scanner
- ❖ Zeeman effect measuring unit
- ❖ Digital speckle pattern interferometry system
- ❖ Particle size analyser
- ❖ Thickness measurement system
- ❖ High speed Photodetectors
- ❖ Fluri meter- TCSPC life time system with pulsed diode excitation
- ❖ Speckle interferometry setup

**c Library**

No. of books and journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
3951	19



#### d Others

Subscribing 11 Indian Journals published by Indian Academy of Science

#### 14. Distinguished visitors

Sl.No.	Name	Affiliation
1	Chen Nanguang	National University, Singapore
2	Dr. Anil Prabhakar	IIT Madras
3	Dr. Andal Nara-yan	LAMP Group, Raman Research Institute, Bangalore
4	Prof. K Thyaga-rajana	Dept. of Physics, IIT Delhi
5	Dr. Ajayaghosh	Distinguished Scientist and Director NIIST, Thiruvananthapuram
6	Prof. V Unnikrishnan Nair	Formerly Professor, Kerala University/IISER
7	Prof. K Girish Kumar	Head, Department of Applied Chemistry, CUSAT
8	Prof. M Vijayakumar	Head, Department of Mathematics, CUSAT
9	Prof. Ravikrishnan	Head Dept of English, Sree Keralavarma College, Thrissur
10	Dr. Archana Pai	Assistant Professor, IISER, Thiruvnanthapuram
11	Prof. Sushil Mujumdar	Professor, TIFR Mumbai
12	Prof. M Abdul Khader	Former Professor Kerala University
13	Prof. Reji Philip	Professor, RRI Bengaluru
14	Dr. V R Supradeepa	Professor, IISc, Bengaluru
15	Dr. Rajeev Kini	Assistant Professor IISER, Thiruvananthapuram
16	Prof. A R Ganesan	Professor IIT Madras
17	Mr. Arun	IISc Bangalore
18	Prof. C Vijayan	Professor, IIT Madras
19	Dr Ramesh Varma	USA

#### 15. Research Facilities

Sl.No	Research Facilities
1	Sub-Picosecond Laser
2	Nd-YAG Laser
3	Vacuum Coating
4	Thermal Lens Setup
5	Spectrophometer



6	CCD Spectrograph
7	Trinocular Microscope
8	Fluorimeter
9	Film Thickness Measurement
10	Fluorescence Lifetime
11	Z-Scan
12	Spin Coating
13	Optical Fiber Drawing
14	Nanoparticle Size Analyzer
15	Laser Induced PL
16	Speckle Interferometry

### 16. Ph.D Awarded

SI.No.	Title of thesis	Name of Research Scholar	Supervising Guide
1	“Studies on Deoxyribonucleic Acid Based Photonic Materials and Their Applications”	Pradeep chandran	Prof. (Dr.) V P N Nampoori, Dr. P. Radhakrishnan
2	“Theoretical investigations of delay induced effects in semiconductor lasers with optical and optoelectronic feedback”	Bejoy Varghese	Dr. V.M. Nandakumar
3	“Fabrication, Optical Analysis and Photonic Applications of Certain Metallic Nanostructure-Integrated Dye Doped Polymer Optical fibers”	Suneetha Sebastian	Prof. M. Kailasnath

### 17. Publications

#### a Papers

##### Journal & conference publications

- Bini Pathrose, V.P.N. Nampoori, P.Radhakrishnan, H. Sahira, A. Mujeeb, Effect of femtosecond laser ablated silver nanoparticles in the thermo-optic properties of basic fuchsin dye, *Optik* 127 (2016) 3684–3687.
- Kalle Koskinen, Abdallah Slablab, Sasi Divya, Robert Czaplicki, Semen Chervinskii, Madanan Kailasnath, Padmanabhan Radhakrishnan, and Martti





Kauranen, Bulk second-harmonic generation from thermally evaporated indium selenide thin films, *Optics Letters*, Vol 42. No. 6, 2017

- Linslal C.L, M.Kailasnath, Nideep T.K, Mathew S. Radhakrishnan P.Nampoori VPN, Girijavallabhan C.P.Tuning Whispering gallery laser modes from Polymer Optical fibres under tensile strain - *Optics Letters*, 41, 3, 551, 2016.
- N. Saltmarsh, G.A. Kumar, M. Kailasnath, Vittal Shenoy, C. Santhosh, D.K. Sardar Spectroscopic characterizations of Er doped LaPO<sub>4</sub> submicron phosphors prepared by homogeneous precipitation method *Optical Materials*, 24-29, 53, 2016
- G.A.Kumar, Nicolas R. Balli, M.Kailasnath, Spectroscopic and magnetic properties of Neodymium doped GdPO<sub>4</sub> submicron stars prepared by solvothermal method, *Journal of Alloys and Compounds*, 672, 668-673, 2016.
- Silica Nano-spheres Prepared by Modified Stober Process for Colloidal Crystal Growth. Author: C Ajina ; Shabana MA, Fathima PS, Krishnendu, Thomas SheenuSource: *AIP Conference Proceedings. 2017, Vol. 1849 Issue 1, p1-5. 5p.*
- Correlation between Physical, Thermal and Optical properties of Ge-Se-Sb Chalcogenide Glasses. Author: Anupama V, Thomas, Sheenu Source: *AIP Conference Proceedings. 2017, Vol. 1849 Issue 1, p1-6. 6p*
- Effect of thickness on nonlinear absorption properties of graphite oxide thin films Author: Sreeja VG ; Cheruvalathu Ajina ; Reshmi R., Anila EI, Thomas Sheenu ; Jayaraj MK Source: In *Optical Materials October 2016 60: 450-455*
- Fabrication and Characterization of Chalcogenide Glass Based Waveguide StructuresAuthor: Indu Sebastian, Dayal Chakraborty, Nampoori V. P. N,Radhakrishnan P. and Sheenu Thomas.Source: In *Sci. & Soc. 14 (1) June 2016, 33-42*
- Bini Pathrose, V.P.N. Nampoori, P.Radhakrishnan, A. Mujeeb, Investigations on the third order nonlinear optical properties of Basic Fuchsin dye using zscan technique, *Optik 127 (2016) 7717–7725.*
- Bini Pathrose, Nampoori VPN, Radhakrishnan P and Mujeeb A. Stability, Size and Optical Properties of Silver Nanoparticles Prepared by Femtosecond Laser Ablation, *JNanomater Mol Nanotechnol 2016, 5:3.*
- Bini Pathrose, V. P. N. Nampoori, P. Radhakrishnan, A. Mujeeb, Influence of Femtosecond Laser Ablated Silver Nanoparticles on the Nonlinear Optical Properties of Basic Fuchsin dye, *Plasmonics*, DOI 10.1007/s11468-016-0346-7.
- Bini Pathrose, V. P. N. Nampoori, P.Radhakrishnan, A. Mujeeb, Solvent effect



- on the Femtosecond laser induced two-photon emission from Rhodamin 6G, Journal of photochemistry and photobiology A:Chemistry 333(2017) 26-32
- Retheesh R, Boni Samuel, P.Radhakrishnan, V.P.N. Nampoori and A. Mujeeb, Use of Laser Biospeckle for the Evaluation of Fruit Ripening, Journal of Pure Applied and Industrial Physics, Vol.6(5), 65-70, May 2016
  - Retheesh R, Boni Samuel, A. Mujeeb, Numerical Processing Techniques for the Detection and Analysis of Biospeckle Activity, International Journal of Science, Engineering and Technology Research (IJSETR) Volume 5, Issue 4, April 2016
  - Koshy Obey, Thankappan A. Vibin, Bini, Thomas S, Mujeeb, A. Naked Eye Detection of Hydrogen Peroxide by Laser Ablated Silver Nanoparticle Coated Flexible Paper Journal of Bionanoscience, Volume 10, Number 5, October 2016, pp. 377-380(4)
  - Bini Pathrose, V.P.N. Nampoori, P.Radhakrishnan, A. Mujeeb, Optical limiting characteristics of Basic Fuchsin, Published in the Proceedings of NPSAW, ISP, CUSAT, Cochin (February 2016).
  - B C Mathews, K Bhavsar, T Thevar, P Radhakrishnan and R Prabhu, Preliminary investigations on materials/metal structures using laser induced breakdown spectroscopy for underwater structural health monitoring, Intl. Conference on Material Science and Technology, ICMST 2016, Pala, Kerala, India 2016
  - Bini Pathrose, V.P.N. Nampoori, P. Radhakrishnan, A. Mujeeb, Enhancement in the optical limiting performance of Basic Fuchsin dye in the presence of colloidal silver nanoparticles, National Laser Symposium (NLS-25), KIIT, Bhubneshwar, (December 2016).
  - Priyamvada.V.C, Nisa Jacob, Swathy Krishna, Stephy Maria Francis, P.Radhakrishnan, Investigation of the herbal content of the commercially available Hibiscus tea by optical measurement methods, National Laser Symposium (NLS-25), KIIT, Bhubaneshwar, Dec 20-23, 2016
  - C L Linslal, S Mathew, M Kailasnath, "Strain Tuning of the Whispering Gallery Lasing Modes of a Hollow Polymer Fiber", International Conference on Fibre Optics and Photonics (Photonics-2016), Dec 2016, IIT Kanpur, India
  - C L Linslal, V R Anand, M Kailasnath, "Amplification of the microlasing modes of polymer fibers", International Conference on Fibre Optics and Photonics (Photonics-2016), Dec 2016, IIT Kanpur, India.
  - C L Linslal, S Mathew, Anand V R, M Kailasnath, "Whispering Gallery Mode Lasing From Cladding Doped Polymer Optical Fiber", 25th DAE - BRNS



## National Laser

Symposium (NLS-25), Dec 2016, KIIT University, Bhubaneswar.

- Bobby Mathews C, T.M. Libish, V.Vivek, Mathew.P.Abraham, P.Radhakrishnan, Design and Development of a Cholesterol Sensor Based on the Refractive Index Sensing of Tilted Fiber Bragg Grating; Proceedings: Photonics 2016 International Conference on Fiber Optics and Photonics, OSA 2016.KIIT University, Bhubaneswar.
- Vijesh K R, Ramya M, Sony U, Mathew S, V P N Nampoori and Sheenu Thomas, Solvent effect on thermal diffusivity of Alizarin Red S dye using dual beam thermal lens technique, 25th DAE - BRNS National Laser Symposium (NLS-25), Dec 2016.
- V R Anand, S Mathew, Jaison Peter, Boni Samuel, P. Radhakrishnan, M. Kailasnath, Whispering Gallery Mode Laser Emission from Dye Doped Hollow Polymer Fiber, National Laser Symposium (NLS-25), KIIT, Bhubneshwar, 20-23 Dec, 2016
- Roopa Venkataraj, Arindam Sarkar, M Kailasnath, Laser induced fluorescence from Curcumin doped silica xerogel, NLS 25, KIIT, Bhubhaneshwar, Dec 20-23 2016
- Boni Samuel, Retheesh R, A. Mujeeb and V. P. N. Nampoori., Nondestructive evaluation of fruits using correlation of time history of biospeckle pattern. 26th National seminar and international exhibition on non-destructive evaluation.15-17 Dec. 2016.
- Alina C Kuriakose, V P N Nampoori and Sheenu Thomas, Studies on optical, linear and nonlinear properties of CdS quantum dots prepared by chemical method and microwave method, NLS – 25, Bhubaneshwar, December 2016.
- Jessy Simon, C. Pradeep, S. Mathew, V.P.N. Nampoori, M. Kailasnath, Laser irradiated BSA-gold nanoparticle conjugates, NLS – 25, Bhubaneshwar, December 2016.
- Priyamvada.V.C and Radhakrishnan. P, Evanescent Wave Sensing and Absorption Analysis of Herbal Tea Floral Extracts in the Presence of Silver Metal Complexes, Optics'17 (National Conference on Optics), NIT Calicut, Jan 9-11, 2017
- Ajina C, Fathima shabana, Krishnendu PS, Sheenu Thomas, Colloidal crystal growth from silica nanospheres prepared by modified stober process Optics 2017 Jan 9\_11 NIT Calicut
- V Anupama, C Ajina, Sheenu Thomas, Correlation between Thermal, Physical



and Optical Properties of Ge-Se-Sb Chalcogenide Glasses, Optics 2017 Jan 9-11, NIT Calicut

- Jessy Simon, Sony U, V.P.N. Nampoori, M.Kailasnath, Effect of gold nanoparticle

concentration on BSA-gold nanoparticle conjugates, National Physics Symposium (NPS), St. Teresa’s College, Ernakulam, February 2017.

- Sony U, Mathew S, Vijesh KR, V.P.N. Nampoori, Sheenu Thomas, Optical studies on micro-viscosity variation of Styryl 7 dye on different solvents, National Physics Symposium (NPS), St. Teresa’s College, Ernakulam, February 2017
- Roopa Venkataraj, P Radhakrishnan and M Kailasnath, Curcumin Based Optical Sensing of Fluoride in Organo-aqueous Media Using Irradiation Technique, Optics 17, NIT Calicut, Jan 9-11 2017
- Boni Samuel, Rethesh R. and A. Mujeeb. “Development of a low cost and indigenous laser biospeckle technique for the detection and analysis of pesticides in vegetables and fruits”. 29th Kerala Science Congress. 28-30, Jan. 2017
- Anand V.R., Mathew Sebastin, Pradeep Kumar V., Radhakrishnan P, Prof. M. Kailasnath M “Characteristics of whispering gallery mode lasing from dye doped hollow polymer microfiber”, Proceedings of National Photonics symposium 2017, International School of Photonics, CUSAT 2017 Feb-March 2017

**18. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students**

Sl.No.	Name of Participant	Name of Seminar/conference/ Workshop	Role
1	Dr. A. Mujeeb	1. 26 <sup>th</sup> national Seminar & International Exhibition on Non-destructive evaluation 15-17 Dec-2016, NDE-ISNT Thrivandrum  2. 29 <sup>th</sup> Kerala science Congress (28-30 Jan 2017), Marthoma college, Thiruvalla organised by KSCSTE	Organising Committee Member Principal Investigator  for project under KSCSTE
2	Dr.Saji K.J	1. International winter course on organic solar cells: Principles and practices held during 2-9 Nov 2016. GIAN-NIT, Calicut	



3	<b>Dr.Manu Vaishakh</b>	<ol style="list-style-type: none"> <li>1. Content Development as a part of CUSAT 2020. Directed a documentary on C-SiS</li> <li>2. "Asian seminar on changing higher education scenario: Experiences in Open Educational Practices" (4-5 November 2016, Kochi)</li> </ol>	<p>Participated Convenor Participated</p>
4	<b>Anand V R</b>	<ol style="list-style-type: none"> <li>1. 25th DAE-BRNS NATIONAL LASER SYMPOSIUM(NLS- 25), Dec 20-23 2016.KIIT University, Bhubaneswar</li> <li>2. National Photonics Symposium(NPS-2017),27 Feb-1st March 2017</li> </ol>	<p>Paper presented</p> <p>Best paper award</p>
5	<b>Anupama V</b>	<ol style="list-style-type: none"> <li>1. National Seminar on "Advances in Scientific and industrial instrumentation (ASCI-2016)" organized by Department of instrumentation,CUSAT held on 11 and 12 Feb-2016.</li> <li>2. Optics'17 –NIT,Calicut (9-11 Jan 2017).</li> <li>3. Workshop on IoT System Design-Department of Instrumentation,CUSAT</li> </ol>	<p>Paper presented</p> <p>Paper presented</p> <p>Participated</p>
6	<b>Nideep T K</b>	<ol style="list-style-type: none"> <li>1. International winter course on organic solar cells:Principles and practices held during 2-9 Nov 2016. GIAN-NIT,Calicut.</li> <li>2. Workshop on IoT System Design-Department of Instrumentation, CUSAT</li> </ol>	<p>Participated</p> <p>Participated</p>
7	<b>Nideep T K</b>	<ol style="list-style-type: none"> <li>1. International winter course on organic solar cells:Principles and practices held during 2-9 Nov 2016.</li> <li>2. Annual Physics Symposium- Department of Physics, St. Terasa's college.</li> </ol>	<p>Participated</p> <p>Paper presented</p>
8	<b>Ishaq Ahmed A.</b>	<ol style="list-style-type: none"> <li>1. Global initiative of academic networks,Course on Distributed Fiber Sensors and its Applications conducted during 17-28 Oct 2016. ISP,CUSAT</li> </ol>	<p>Participated</p>



9	<b>Ramya M</b>	<p>1. 25th DAE-BRNS NATIONAL LASER SYMPOSIUM(NLS-25),Dec 20-23 2016.KIIT University,Bhubaneswar.</p> <p>2. Annual Physics Symposium-Department of Physics,St. Terasa's college.</p> <p>3. Workshop on IoT System Design-Department of Instrumentation,CUSAT</p> <p>4. National Photonics Symposium(NPS-2017),27 Feb-1st March 2017</p>	<p>Paper presented</p> <p>Paper presented</p> <p>Participated</p> <p>Paper presented</p>
10	<b>Boni Samuel</b>	<p>1. 26th national Seminar &amp;International Exhibition on Non-destructive evaluation 15-17 Dec-2016,NDE-ISNT Thrivandrum</p> <p>2. 29th Kerala science Congress(28-30 Jan 2017),Marthoma college,Thiruvalla</p> <p>3. National Photonics Symposium(NPS-2017),27 Feb-1st March 2017</p>	<p>Paper presented</p> <p>Paper presented</p> <p>Participated and Paper presented</p>
11	<b>Vijesh K R</b>	<p>1. International winter course on organic solar cells:Principles and practices held during 2-9 Nov 2016. GIAN-NIT,Calicut.</p> <p>2. 25th DAE-BRNS NATIONAL LASER SYMPOSIUM(NLS-25),Dec 20-23 2016. KIIT University,Bhubaneswar.</p> <p>3. National Photonics Symposium(NPS-2017),27 Feb-1st March 2017</p>	<p>Paper presented</p> <p>Paper presented</p> <p>Participated</p>
12	<b>Boby Mathew C</b>	<p>1. Second International Conference on Materials science and technology,ICMST 2016(5-8 June 2016). Department of Physics,St. Thomas college,Palai</p> <p>2. 13th Intrnational Conference on Fiber Optics and Photonics,IIT Kanpur</p>	<p>Poster Presented</p> <p>]Paper presented</p>



13	<b>Priyamvada V C</b>	1. 25th DAE-BRNS NATIONAL LASER SYMPOSIUM(NLS-25),Dec 20-23 2016. KIIT University,Bhubaneswar 2. Optics'17 –NIT,Calicut (9-11 Jan 2017).	Paper presented  Paper presented
14	<b>Ajina C</b>	1. National Photonics Symposium(NPS-2017),27 Feb-1st March 2017 2. Workshop on IoT System Design-Department of Instrumentation,CUSAT 3. Optics'17 –NIT,Calicut (9-11 Jan 2017).	Participated  Participated  Paper presented
15	<b>Jessy Simon</b>	1. Annual Physics Symposium (2nd& 3rd feb 2017)	Paper presented
16	<b>Arimdam Sarkar</b>	1. Workshop on IoT System Design-Department of Instrumentation,CUSAT	Participated
17	<b>Sony U</b>	1. Annual Physics Symposium (2nd& 3rd feb 2017)	Paper presented
18	<b>Roopa venkataraj</b>	1. Optics'17 –NIT,Calicut (9-11 Jan 2017).	Paper presented
19	<b>Alina C.kuriakose</b>	1 National Photonics Symposium(NPS-2017),27 Feb-1st March 2017	Participated
20	<b>Rajshaj M M</b>	1. National Photonics Symposium(NPS-2017),27 Feb-1st March 2017. 2. International winter course on organic solar cells: Principles and practices held during 2-9 Nov 2016. GIAN-NIT, Calicut	Participated  Participated
21	<b>Mathew S</b>	1. National Photonics Symposium(NPS-2017),27 Feb-1st March 2017	Participated

**Eleven Research Scholar's participated in One day training programme on Fourier Transform Infrared Spectroscopy conducted by STIC on 18<sup>th</sup> Nov-2016.  
Three Research Scholar's participated in One day training programme on X-ray Diffraction conducted by STIC on 25<sup>th</sup> Nov-2016**



### 19 Awards/Honours/Fellowships etc. received

Sl. No	Name of Participant	Name of Fellowship/ Honour/Award	Awarding Agency
1	Mr.Varun Raj (MSc Photonics),2012-2017	Award for demonstrating “The Light absorption Experiments”, in the programme ‘Frontiers in Optics-Laser Science 2016	OSA at Rochester in New York,USA
2	Ms.Bini Pathrose	Best Researcher award-2016	Award is endowed by Prof. P. Radhakrishnan (Emeritus professor,CUSAT) to honor the best researcher of ISP.
3	Ms.Gayathri Reshma Sasidharan(M.Sc Photonics)	The topper in first semester M.Sc Photonics course.	Award is endowed by Prof.N G K Devaki(Emeritus professor,CUSAT)
4	Ms.Divya Bharti & Ms.Geethika M	The best project from Integrated M.Sc Photonics course (2011-2016).	Award is endowed by Prof.V.P.N.Nampoori (Emeritus professor,CUSAT)
	Ms. Geethika M	Prof. Leggett AwardSecuring the highest CGPA in MSc Photonics 2016	Prof. Leggett
5	Ms. Neethu Udayan	Photonics Society of India Award-2016 Satish John memorial Award -2016	Photonics Society of India Alumini
6	Divya Nair(M-Tech 2015-17 Batch)	Best poster award at the International Conference	ICAGST held at CGCRI, Kolkata during 23-25, January 2017
7	Alvin Varghese & Jeemol James (M-Tech 2015-17 Batch)	Achievers of Erasmus Mundus – Scholarships for students and academics   EACEA	





## 20. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	Development of laser Bio-speckle technique for monitoring Biological Activities of plants, vegetables & fruits	KSCSTE	15,99,600/-	Dr.A.Mujeeb
2	Chalcogenide glasses for photonics applications	KSCSTE	30,00,000/-	Dr. Sheenu Thomas
3	Design and Fabrication of biopolymer based biophotonic device with special reference to organic LED	KSCSTE	6,14,800/-	Dr.V.P.N.Nampoori
4	Investigation of Doped Copper Oxide for p-channel thin film transistor application	DST-SERB	22,94,087	Dr.Saji K.J.

## 21. Role of Faculty in International/National Organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organizations	Role
<b>Dr. A. Mujeeb</b>	1. Cochin University of Science and Technology.	<b>Member</b> : Syndicate, Senate, Academic Council, Faculty of Technology, Board of Studies in Photonics and Electronics, Advisory Committee, C-SiS, IQAC
	2. Calicut University	Member, PG Board of Studies in Physics.
	3. Dr APJ Abdul Kalam Technological University Kerala	Member, Appeal Committee for Affiliation
<b>Dr.M.Kailasnath</b>	1. Photonics - International School of Photonics, CUSAT	Member, Board of Studies



<b>Dr.Pramod Gopinath</b>	1. Photonics - International School of Photonics, CUSAT	Member, Board of Studies
	2. Physics - Sacred Heart College (Autonomous), Thevara	
	3. Physics - Maharajas College (Autonomous), Ernakulam	
	4. Physics - St. Alberts College (Autonomous), Ernakulam	
<b>Dr.Saji K.J.</b>	International Society for Optics and Photonics	Professional Member of SPIE

## 22. Seminar/Conference/Workshop/Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1	National Photonics Symposium and Workshop	3 Days, February 26-28, 2017	Dr.Saji K.J.	KSCSTE & UGC
2	Sign In programme	5 days, February 14-18,2017	Dr.A.Mujeeb Dr. Priya Rose Prof VPN Nampoori	KSCSTE
3	Sastrayaan	January 2017	Dr.Manu Vaishakh	CUSAT
4	Optics fair ETCH NEW 2017	16 <sup>th</sup> and 17 <sup>th</sup> of January	Mr.Muhammad Rishad	ISP

## Seminars

Sl.No	Seminar Topic	Presented by
1	Simulation of material properties	Adrine Antony Correya
2	Axiomatic approach to Quantum Mechanics	Prof V.P.N Nampoori
3	Gravitational Waves	Prof C.P Grijavallabhan
4	How to publish more scholarly articles	Dr. Surendran Cherukodan
5	Study of protein- gold nanoparticle conjugates	Jessy Simon
6	Cancer cell imaging using protein modified cds QD's	Alina C Kuriakose



7	DNA bases-Thymine and Adenine for Bio-OLED	Sony U
8	Biosensing with plasmonic nano sensors	Priyamvada V C
9	Tuning whispering gallery mode lasing from self-assembled polymer droplets	Anand V R
10	Controllable synthesis and change of emission color from green to orange of ZnO QD's using different solvents	Ramya R
11	Super-flat supercontinuum generation	Arindam Sarikar
12	Full color light emitting carbon dots with surface controlled luminescence mechanism	Vijesh K R
13	Lanthanide based resonance energy transfer between Ce doped LaPo4 nan rods and coumarin 440 dye	Pooja Gitty
14	How to prepare a winning research proposal view point of an expert evaluator	Prof Suresh C Pillai
15	Determination of chlorinated hydrocarbon in water using highly sensitive Mid-IR sensor technology	Ishaq Ahamed A
16	Measuring milk fat content by random laser emission	Anitha Prakash
17	Thermo-tunable hybrid photonic crystal fiber based on solution processed chalcogenide glass nano layer	Anupama V
18	Improved air stability of perovskite solar cells via solution processed metal oxide transport layer	Hajara p
19	Lanthanide doped multifunctional Nano materials and their photonic applications	Dr. G Ajith Kumar
20	Biophotonics	Dr. A Sreekumar
21	3D micro printing by direct laser writing	Jerald Cleetus

### 23. Invited Lectures given by faculty Prof. A. Mujeeb

- "C V Raman : The Legend who placed India on World Science Map", during National science Day Celebrations at NSS College Karamana Thiruvananthapuram on 20<sup>th</sup> February 2017
- "Photonics- Technology using light" in KSCSTE SPEED Programme for Pratibha Scholars- SIGN IN15<sup>th</sup> February 2017
- Special Address at 26<sup>th</sup> National seminar & International Exhibition on Non-Destructive Evaluation organized by Indian Space Research Organization (ISRO) and Indian Society for Non Destructive Testing during 15- 17 December 2016



- “Laser Assisted synthesis of materials” at UGC HRDC University of Kerala on 14th December 2016
- "Laser assisted non destructive testing of materials" and "Ultra fast lasers for nano material synthesis" at UGC HRDC University Kannur University on 14th March 2017

### **Prof. M. Kailasnath**

- 15<sup>th</sup> February 2017, International School of Photonics, CUSAT, Invited talk on “Optical Fiber based Devices” in KSCSTE SPEED Programme for Pratibha Scholars- SIGN IN
- *Micro lasers for Sensing Applications*, STTP, National Seminar on optoelectronics and communication, Kidangoor Engineering College, Kottayam on 8th March 2017
- *Doped Ring Resonators*, Centre for Intellectual Property Rights- CUSAT Knowledge Forum, Electronics Auditorium, CUSAT on 11th January 2017
- *Optical Communication* - Sign In Programme -KSCSTE, CUSAT on 15th February 2017
- *Physics teaching at higher secondary level* - Higher Secondary Teacher Empowerment Program, Govt. of Kerala, St. Theresa's HSS, Ernakulam on 7th December 2016
- *Stimulated emission depletion microscopy*, Refresher Course in Material Science University of Kerala on 5th December 2016
- *Physics teaching at higher secondary level* - Higher Secondary Teacher Empowerment Program, Govt. of Kerala, BOYS GHSS, Aluva on 24th November 2016
- *Optical fibre lasers* - National Seminar on New Trends in Chemistry, Annamalai University, Tamil Nadu on 21st October 2016

### **Prof. Pramod Gopinath**

- Invited talk on “Optical Sources and Detectors” on Modern Optical Engineering (27<sup>th</sup> June and 2<sup>nd</sup> July 2016) Indian Institute of Space Science and Technology, Thiruvananthapuram

### **Dr. Sheenu Thomas**

- 16<sup>th</sup> February 2017, International School of Photonics, CUSAT Invited talk on “Chalcogenide Glasses for Photonic Applications” in KSCSTE SPEED Programme for Pratibha Scholars

**Dr. Saji K J**

- National workshop on Nanophotonics, Department of Physics, CUSAT, "Two dimensional materials Field Effect Transistors", March 18, 2016,
- Invited Talk on "Excitonic Solar Cells" in National Workshop for Contemporary Advances in Materials for Energy (CAME-17-10<sup>th</sup> February 2017, Physics Department, CUSAT)

**Dr. Manu Vaishakh**

- "Analysis of optical imaging using the method of nonlinear dynamics", International conference on computing, communication and signal processing, College of Engineering, Karunagappally, July 8-9 2016
- "Developments in optical microscopy: A historical perspective", Optics 17: A conference on light, NIT Calicut, January

**Prof. V. P. N. Nampoori**

- 15<sup>th</sup> February 2017, International School of Photonics, CUSAT Lab (Hands on experience) for Pratibha Scholars

**Prof. P. Radhakrishnan**

- 16th February 2017, International School of Photonics, CUSAT Invited talk on "Introduction to Lasers and their Applications" in KSCSTE SPEED Programme for Pratibha Scholars

**Prof. C. P. Girijavallabhan**

- 15th February 2017, International School of Photonics, CUSAT Invited talk on "Brief History of Science and Technology" in KSCSTE SPEED Programme for Pratibha Scholars

**Dr. T. R. Ananthkrishnan**

- 16<sup>th</sup> February 2017, International School of Photonics, CUSAT "Physics Theatre" (Demonstration of Physics Experiments) for Pratibha Scholars 9-11 2017

**24. International Collaborations – MOUs signed**

- 1 University of Gothenburg, Sweden
- 2 Multimedia University, Malaysia
- 3 University of Bari, Aldo Moro, Italy



### Collaborations

Robert Gordon University, UK(UGC – UKIERI)

Tampere University of Technology, Finland (DST – Academy of Finland)

University of Texas, USA

### 25. Research Programmes and Activities

SI.No.	Problem/Topic	Investigator(s)
1	NanoPhotonics, Speckle Interferometry	Dr. A Mujeeb
2	Investigation of Doped Copper Oxide	Dr. Saji K.J
3	Chalcogenide Glasses	Dr. Sheenu Thomas



## COCHIN UNIVERSITY COLLEGE OF ENGINEERING KUTTANAD (CUCEK)

### 1. Brief History of the Department

Looking back to the eventful history of the Cochin University College of Engineering Kuttanad (CUCEK), Pulincunnu would invoke a mixed feeling in the mind of a CUCEK lover. The only one of its kind in the locality around, it has the capacity to grow beyond a mere Engineering College or a University Department. Offering four engineering under-graduate courses, it has been initiated under the aegis of the CUSAT on 21st October 1999 as a University own department outside its main campus, in the picturesque piece of land in Pulincunnu, Alappuzha district. Being formally inaugurated on 25th of October 1999 in the presence of Syndicate members including Dr. K C Joseph, the then MLA of Kuttanad and the visionary behind it and Sri. James K. J., the Special Officer of CUCEK, the College began its academic activities in rented buildings which belonged to the St. Mary's ITC, Pulincunnu and the St. Joseph's HSS, Pulincunnu. There were 192 students in four B.Tech branches, Computer Science and Engineering, Electronics and Communication Engineering, Information Technology and Mechanical Engineering in the first batch (1999- 2003). The faculty members were deputed from the Centre for Undergraduate Studies in Engineering (now, the School of Engineering), CUSAT and recruited on contract basis. The experience and guidance from many of the senior faculty members benefitted the student and junior faculty community of the College.

The College flourished into an institution offering six undergraduate (B.Tech) programs in Engineering (Civil, Computer Science, Electrical and Electronics, Electronics and Communication, Information Technology and Mechanical Engineering) and a post graduate program, Master of Computer Applications (MCA), within four years of its inception. An educational institution of this kind offering many technical and professional courses and admitting students from all parts of the country and initiated in a place remote from the main transportation system and townships had to face many hardships, in the recent past. But, if it is viewed from a global perspective, it could be noticed that the best educational institutions were groomed up in rural areas which are away from distractions and pollution which are part of urbanization. Kuttanad has been a place which is surrounded by many water bodies, like lakes and rivers and with limited land transportation network. It could not offer much to education including schooling,



in the past. But, given the agriculture-based living of people, pollution-less atmosphere, availability of abundance of land, encouragement and enthusiasm of the people around, possibility of research elements, like soil, water, environment, structures, appropriate technologies, etc. a catalytic development of the institution is very much promising. The institute is standing tall in the middle of the historical rice bowl of Kerala in spite of minor elements of pulling down.

The University procured nearly 40 acres of land in Pulincunnu and constructed semi-permanent buildings for the conduct of classes and administration by 2000-2001. The College was shifted to own place by the academic year 2002-2003. Initiatives to construct a permanent building became fruitful when the first five storied building of Kuttanad having 4000 square metre habitable space was opened as the main building of CUCEK by the then Chief minister of Kerala, Sri. V S Achuthanandan, on 9th January 2010. A series of laboratory buildings, a library building and limited sporting facilities are housed by a mini-campus of CUCEK in nearly 3.5 acres apart from the main campus of academic and administrative infrastructure facilities.

Sri. James K J was the Special Officer and in charge of the Principal, CUCEK for the initial five formative years of the College. Under his vision and guidance the College had been developed into a full-fledged institution. Dr. M I Thampan, Smt. Preetha Mathew, Sri. Oomman Samuel, Dr. Job P A, Dr. Josephkutty Jacob, Dr. Mathew Cherian and Prof. (Dr.) P.S. Sreejith were the formal Principals of the College. All the permanent faculty members of the College have either secured their doctorate degree in their respective disciplines or pursuing for the same and have experience of more than 15 years. The model set and guidance imparted by them lead the young faculty members and the students in the right path. The students have achieved many milestones, including academic ranks in the University, selection in competitive examinations, like the GATE and other UPSC examinations, Civil Service examinations, sporting goals, etc., under the constant inspiration and motivation of the faculty, in the past. Apart from the eight academic divisions (Civil Engineering, Computer Science and Engineering, Electrical and Electronics Engineering, Electronics and Communication Engineering, Information Technology, Mechanical Engineering, Applied Science & Humanities and Computer Applications) there are two units of National Service Scheme, Placement and Guidance cell, Arts Club, etc., working to the benefit of the community in and around the campus. The College can play a vital role in the upliftment of the society around in terms of education, living standards, solving social and environmental issues, etc. If driven in the right path, the institution has the capacity to excel not only in regular academics and research, but as a role model for community education to the country as a whole.





## 2. Programmes of Study/Research

- a. B.Tech : Civil Engineering, Electrical & Electronics Engineering, Electronics & Communication Engineering, Mechanical Engineering, Computer Science & Engineering, Information Technology
- b. MCA
- c. Ph.D

## 3. Faculty Members

### a. Permanent

Sl. No	Name	Designation	Qualification	Specialization
1	Dr. Sunilkumar N	Principal	Ph.D	Computational Mechanics, Structural Engineering
2	Dr. Job P A	Professor	Ph.D	Mechanical & Management
3	Dr. Mathew Cherian	Associate Professor	Ph.D	Mechanical & Management
4	Dr. Josephkutty Jacob	Associate Professor	Ph.D	Power Systems
5	Dr. Senthil Prakash M N	Associate Professor	Ph.D	Marine Hydrodynamics
6	Dr. Shiyas C R	Associate Professor	Ph.D	Industrial Engineering
7	Dr. Manoj V J	Associate Professor	Ph.D	Electronics & Communication Engineering
8	Dr. Preetha Mathew K	Associate Professor	Ph.D	Cryptography
9	Dr. Asaletha R	Associate Professor	Ph.D	Chemistry
10	Salaji S	Associate Professor	M.Tech	Mechanical Engineering
11	Thomas T	Associate Professor	M.Tech	Thermal Engineering
12	Priya R Krishnan	Assistant Professor	M.Tech	Drives and control
13	Sajan Joseph	Associate Professor	M.Tech	Circuits Signals and systems
14	Shiny Paul	Associate Professor	M.Tech	Drives and control



15	Anilkumar K K	Assistant Professor	M.Tech	Electronics & Communication Engineering
16	Manoj Kumar P	Assistant Professor	M.Tech	Software Engineering
17	Bindu P Kalakkalparambil	Associate Professor	M.Tech	Computer & Information System
18	Meera A R (LWA)	Assistant Professor	M.Tech	Computer Science & Engineering
19	Jayaprabha P	Associate Professor	M.Tech	Information Technology
20	Jabir K V T	Assistant Professor	M.Tech	Information Technology
21	Harikrishnan D	Associate Professor	M.S	Information Technology
22	Mini Mole A	Associate Professor	M.Tech	Civil Engineering

#### b. Contract

Sl. No	Name	Designation	Qualification	Specialization
1	Sreeja Nair M P	Assistant Professor	M.Tech	Computer & Information Technology
2	Vineetha G R	Assistant Professor	M.Tech	Computer Science & Engineering
3	Alice Joseph	Assistant Professor	M.Tech	Computer Science & Engineering
4	Sajin K	Assistant Professor	M.Tech	CAD/CAM
5	Harikrishnan T K	Assistant Professor	M.Tech	CAD/CAM
6	Raju V Kuttickal	Assistant Professor	M.Phil	Mathematics
7	Nishanth R	Assistant Professor	M.Tech	Electronics & Communication Engineering
8	Kumary V Y Vidhu	Assistant Professor	M.Tech	Electronics & Communication Engineering
9	Akhila L	Assistant Professor	M.Tech	Electronics & Communication Engineering



10	Abin John Joseph	Assistant Professor	M.Tech	Electronics & Communication Engineering
11	Divya B Panicker	Assistant Professor	M.Tech	Electronics & Communication Engineering
12	Naveen S	Assistant Professor	M.Tech	Electronics & Communication Engineering
13	Sam Varghese	Assistant Professor	M.Tech	Electronics & Communication Engineering
14	Manu Krishna V R	Assistant Professor	M.Tech	Electronics & Communication Engineering
15	Metilda Poullose N	Assistant Professor	M.Tech	Integrated Resource Management
16	Sreekala S	Assistant Professor	M.Tech	Structural Engineering
17	Neethu Lukose	Assistant Professor	M.Tech	Infrastructure Engineering
18	Aparna Raj M	Assistant Professor	ME	Control and Instrumentation
19	Deepa Nair	Assistant Professor	MCA	Computer Applications
20	Soumya V R	Assistant Professor	MCA	Computer Applications
21	Blessy Paul	Assistant Professor	MSc	Computer Science
22	Radhika B	Assistant Professor	MCA	Computer Applications
23	Shibu V	Assistant Professor	MCA	Computer Applications
24	Divya G	Assistant Professor	MCA	Computer Applications

In addition to the above, Guest Lecturers were also engaged during the year.

#### 4. Emeritus Professor/Scientist (if any)

Nil

#### 5. Visiting Faculty (If any)

Nil



## 6. Research/Project Staff

Nil

## 7. Research Scholars

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Shiny Paul	Nil	Dr. Sunilkumar N	Analysis of Power quality issues at the distribution side of power system
2	Anilkumar K K	Nil	Dr. Manoj V J	Automated Detection of Leukemia using Image Processing
3	Malini Mohan	Nil	Dr. Manoj V J	Low Complexity Digital Filter Design
4	Minimole A	Nil	Dr. Sunilkumar N	Crack Propagation analysis in Engineering structures by numerical methods
5	Priya R Krishnan	Nil	Dr. Sunilkumar N	Multi physical Analysis of Electrical System using mesh based and mesh less method
6	V Anjali	Nil	Dr. Sunilkumar N	Solution to an Eigen value problem through a mesh-free method
7	Chery A Menamparamban	Nil	Dr. Sunilkumar N	Analysis of amorphous materials through FEM and mesh-free methods
8	Harikrishnan D	Nil	Dr. Sunilkumar N	An effective framework for addressing security issues in Biometric Fingerprint Identification System.
9	Kunjumon Job	Nil	Dr. Sunilkumar N	Sustainable foundation practice in Kuttanad area- Analytical and Experimental study
10	Remya Gopalakrishnan	Nil	Dr. Manoj V J	Design of low complexity digital filters
11	Sunil C Behanan	Nil	Dr. Sunilkumar N	Response analysis of a two tier OHSR under dynamic force
12	Anju Roy	Nil	Dr. Josephkutty Jacob	Analysis of photovoltaic Fed BLDC Motor for irrigation and electric vehicle application



13	Dennis Thomas	Nil	Dr. Manoj V J	Electromagnetic Interferometry Techniques for the analysis of selected dynamic phenomena for electrical engineering applications
14	Sarika E P	KSCSTE	Dr. Josephkuttu Jacob	Mitigation of Grid side harmonics in Hybrid PV-Wind renewable energy system with hybrid active self tuning filter

### 9. Administrative Personnel (Permanent)

Sl. No.	Designation	No. of Posts
1	Assistant Registrar	1
2	Section Officer	1
3	Assistant	5
4	Computer Assistant	1
5	Office Attendant	2
6	Sweeper cum cleaner	1

### 10. Technical Personnel (Permanent)

Sl. No.	Designation	No. of Posts
1	Technician Grade I	1
2	Lab Assistant	1

### 13. Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1	B.Tech	194	39	233
2	MCA	8	24	32
3	Ph.D	1	2	3

### 15. Research Facilities

#### a. Laboratories

Sl No	Division	Laboratory
1	Computer Science & Engineering	Programming Lab Microprocessor Lab System Software Lab Network Lab



2	Civil Engineering	Strength of Materials Laboratory Concrete Lab Geotechnical Engineering Laboratory Environmental Engineering Laboratory Non-destructive Testing Laboratory Survey Lab Civil Engineering Workshop
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**b. Major equipments**

SI No.	Division	Equipments
1	Computer Science & Engineering	Wifi
2	Civil Engineering	Compression Testing Machine Hardness Testing Machines Torsion Testing Machine Spring Testing Machine Impact Tester Vicat's apparatus Slump tester Compaction factor tester Concrete vibrator Hydrometer Proctor compactor Dumpy Levels Theodolites Prismatic Compasses Plane Tables Minor Survey Instruments Jar test apparatus pH meter

**d. Library**

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
12625	

**f. Others Nil****16. Distinguished visitors**

SI.No.	Name	Affiliation	Remarks
1	Prof. J Latha	Vice Chancellor, CUSAT	To deliver a talk on Research Innovation in Civil Engineering in the anniversary of Civil Engineering Association of students (Federation of Remarkable Civil Engineers- FORCE) on 01.03.2017.

**17. Ph.Ds Awarded Nil****18. Publications****a. Papers**



Sl. No.	Name of Paper	Journal Year-2016	Impact Factor, if any
1	Implementation of a Model for Web Mining Based on Web Usage	IOSR Journal of Computer Engineering (IOSR-JCE)	
2	Firewall Based Signature Enhancement for flooding Attack in MANET	International Journal of Advanced Research in Computer and Communication Engineering	
3	A Study of DDoS Attack in Data Plane Network	International Journal of Science Technology & Engineering	
4	Stabilization of Subsoil under Typical Roads in Kuttanad Using Coir Geotextiles	Proceedings of the International Conference on Recent Advances in Civil Engineering, CUSAT, Kochi, India. pp.434-441.	
5	Validation of the 2D-DMS-FEM with a few Benchmark Boundary Value Problems	Proceedings of the International Conference on Recent Advances in Civil Engineering, CUSAT, Kochi, India. Pp.315-322.	
6	Planning and Design of a Floating Bridge Across the River Pampa at Kavalam	Proceedings of the International Conference on Recent Advances in Civil Engineering, CUSAT, Kochi, India. pp.348-354	
7	A Modified Formulation of the Reproducing Kernel Particle Method Applied to 2D Solid Mechanics Problems	Proceedings of the International Conference in Emerging Trends in Mechanical Engineering, School of Engineering, CUSAT, Kochi, India. pp.251-260.	
8	"Torque ripple comparison of direct torque control of two level inverter fed three phase induction motor,"	IJSER vol. 8, no. 4 pp. 1206-1210, April 2017	3.8

### c. Books Nil



### 19. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Alice Joseph	Workshop on gaining useful insights from data by CUSAT	Participant
Alice Joseph	Workshop on Smart India Hackathon 2017 by AICTE	Participant
Sreeja Nair M P	Short term course on Teaching and Research: Effective, innovative and Motivation approach by CUSAT	Participant
Alice Joseph	Short term course on Teaching and Research: Effective, innovative and Motivation approach by CUSAT	Participant
Devika K S	Short term course on Teaching and Research: Effective, innovative and Motivation approach by CUSAT	Participant
Dr. Sunilkumar N	Pedagogical Tools and Techniques for Teaching Management, Centre for Continuing Education, Indian Institute of Science, Bangalore.	Participant
Dr. Sunilkumar N	Teaching and Research: Effective, Innovative and Motivational Approaches, Cochin University Colege of Engineering Kuttanad, Pulincunnu, CUSAT.	Co-ordinator, Resource person
Minimole A., Sreekala S., Metilda Paulose N., Nayana R.	Teaching and Research: Effective, Innovative and Motivational Approaches, Cochin University Colege of Engineering Kuttanad, Pulincunnu, CUSAT.	Participants
Sajan Joseph	STTP on "Control of Power Converters and Drives" during 04 <sup>th</sup> to 09 <sup>th</sup> of January 2016 at RIT Kottayam conducted by EEE department	Participant
Priya R Krishnan	Workshop on "Electrical Machine Design Using Ansys" during 28 <sup>th</sup> to 30 <sup>th</sup> of June 2016 at RIT Kottayam conducted by EEE department	Participant
Dr Josephkutty Jacob, Shiny Paul, Sajan Joseph, Priya R Krishnan, Aparna Raj M, Cheeru G Suresh	Teaching and research : Effective, innovative and motivational approaches	Participant





Sarika E P, Neetha S Sali Reshma K Jayan	Workshop on Design of electrical infrastructure of a complex of multistory buildings.	Participant
Dr Josephkutty Jacob Sarika E P	Workshop on trends in hybrid renewable energy harvesting held at ANERT	Participant

### 21. Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
Dr. Preetha Mathew K	CUSAT	Member, Board of Studies
Dr. Sunilkumar N.	International conference conducted in College of Engineering, Bartonhill, Thiruvananthapuram, Kerala, February 2016	Reviewer
Dr. Sunilkumar N.	International conference conducted at Govt. Engineering College, Kannur, 2016.	Co-Chair of Technical Session, Feedback speaker (valedictory function)

### 23. Awards/ Honours/ Fellowships etc. received

Nil

### 24. Sponsored Research Projects

Nil

### 25. Research Programmes and Activities:

Sl.No.	Problem / Topic	Investigator (s)
1	Cryptography Security	Dr. Preetha Mathew K

### 27. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl No.	Title	Duration	Coordinator	Funding Agency
1	Teaching and Research: Effective, Innovative and Motivational Approaches	Two Weeks	Dr. Sunilkumar N.	PTA, Cochin University College of Engineering Kuttanad, Pulincunnu, CUSAT.



## 29. Consultancy Work

SI No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
1	Verifying the structural and architectural drawings of Academic block of Idukki Medical College, Painav (Aug-Sep 2016)	KITCO	
2	Verifying the structural and architectural drawings of Hospital building of Idukki Medical College (Sep-Oct 2016)	KITCO	
3	Verifying the structural and architectural drawings of Hospital building of Kasaragod Medical College (Dec 2016 – Jan 2017)	KITCO	
4	Verifying the machine foundation details of an electrical sub-station in Naval Base, Kochi (Jan-Feb 2017)	KITCO	
5	Verifying the structural and architectural drawings of Residential Facilities of Idukki Medical College (Jan 2017 – July 2017)	KITCO	



## CENTRAL OFFICE FOR UNIVERSITY HOSTELS

### 1. Brief History

The following 13 hostels have been functioning under the supervision of the Central Office for University Hostels:

Sl. No.	Name of Hostel	
For Boys		
1	Sanathana	I year Hostel
2	Siberia	Hostel for senior students
3	Sarovar	Hostel for senior students and Research students
4	Sagar	Post Matric Hostel of SC/ST/OEC students
5	Swaraj	Post Matric Hostel for OBC students
6	CUMS	Research students Hostel for Marine Campus
7	Sahara	B.Tech Hostel for SOE students
For Girls		
8	Aiswarya	I year Hostel
9	Athulya	Research Hostel
10	Anaswara	Hostel for senior students
11	Anagha	Post Matric Hostel of SC/ST/OEC students
12	Ananya	Post Matric Hostel for OBC
13	Alakananda	B.Tech Hostel for SOE students

Of the 13 hostels mentioned above Sagar, Anagha, Swaraj and Ananya were Post Matric Hostels constructed and handed over to the University by the SC/ST Welfare Department, Government of Kerala.

100% seats of Athulya girls hostel and 60 seats of Sarovar boys hostel were earmarked for M.Phil. and Ph.D. students. Students of the School of Engineering belonging to SC/ST/OEC and OBC communities have been given admission in Sagar (Boys), Swaraj (Boys), Anagha (Girls) and Ananya(Girls) hostels as per the following directions of the SC/ST Welfare Department as follows:

Hostel No. VIII - Sagar :        60% seats for SC/ST/OEC students and 40% seats as per University rules



Hostel No. IX - Anagha : 60% seats for SC/ST/OEC students and 40% seats as per University rules

Hostel No. X - Ananya : 60% seats for OBC students, 20% seats for SC/ST/OEC students and 20% seats as per University rules

Hostel No. XI – Swaraj: 60% seats for OBC students, 20% seats for SC/ST/OEC students and 20% seats as per University rules

Further, the Standing Committee for the Welfare of SC/ST in its meeting held on 31.7.2008 resolved to give preference in the 40% seats to SC/ST/OEC students in the Sagar and Anagha hostels, if there were additional applications.

Students who wish to take admission in the University hostels may register their names online in the web site of the Central Office for University Hostels (<http://hostels.cusat.ac.in>) and submit the print out of the application in their respective Departments. The Head of the Department will forward the application to the Hostel Office after fixing priority of allotment (Rules attached).

Priority first in allotments have been given for SC/ST/OEC and physically handicapped students.

In the 2016-17 academic year, admission to the above 13 hostels has been given as detailed below:

Sl. No.	Name of Hostel	Student strength
1	Sanathana	160
2	Siberia	100
3	Sarovar	188+68
4	Sagar	80
5	Swaraj	96
6	CUMS	48
7	Sahara	280
8	Aiswarya	160
9	Athulya	164
10	Anaswara	447
11	Anagha	69
12	Ananya	86
13	Alakananda	50

The Hostel Office was working with 42 staff members including Chief Warden(1), Assistant Wardens(13), Office Superintendent(1)(HG), Computer Assistants Typist/



Steno)(2)(one permanent and one daily wage), Office Attendant(1), Matron(1), Assistant Matrons (2), Hostel Managers (7) (On contract), Assistant Matrons 4 (On contract) and 19 Sweepers (on daily wages). The budget allocation for the year is Rs. 5758000/-.

The staff position in the 2016-17 academic year was as follows:

I.	Chief Warden:	
	Dr. Job Thomas, Associate Professor, School of Engineering Studies upto 18.12.2016. Dr. V. Sivanandan Achari, Associate Professor, School of Environmental Studies upto 19.12.2016 onwards.	
II.	Assistant Wardens:	
	1.	Dr. V. Sivanandan Achari, Associate Professor, School of Environmental Studies (Sanathana) Phone No.9495383342, E-mail - <a href="mailto:vsachari@gmail.com">vsachari@gmail.com</a>
	2.	Dr. Preetha.S, Associate Professor, School Of Engineering (Anagha)
	3.	Dr. G. Santhoshkumar, Assistant Professor, Department of Computer Science (Siberia)
	4.	Dr. P. Arunachalam, Professor, Department of Applied Economics (Sarovar)
	5.	Dr. K. Ajitha, Professor, Department of Hindi (Athulya)
	6.	Ms. Malalathi S., Assistant Professor, Department of Computer Applications (Anaswara)
	7.	Mr. Arunkumar T., Assistant Professor, School of Engineering (Sagar and OBC Boys)
	8.	Ms. K.M. Sheena, Associate Professor, Division of Electrical Engineering, School of Engineering (Anagha)
	9.	Dr. Mythili.P, Associate Professor, School of Engineering (Ananya)
	10.	Dr. M.Harikrishnan, Associate Professor School of Industrial Fisheries (CUMS)
	11.	Dr. Binsu C.Kovoor, Associate Professor School of Engineering (Alakananda)
	12.	Prasanth Raghavan, Associate Professor Polymer Science and Rubber Technology (Sarovar)
	13.	Dr. Noufal.A, Assistant Professor Department of Mathematics (Swaraj)



14.	Dr. Moly P. Koshy, Professor (Ananya) School of Management Studies.
15.	Dr. B Lakshmy, Associate Professor (Aiswarya) Department of Mathematics.

A Hostel Advisory Committee with the following members had been constituted for the monitoring of the functioning of hostels:

- (i) The Registrar (Convener)
- (ii) The Chief Warden (Member)
- (iii) Assistant Wardens (Members)
- (iv) The University Engineer (Member)
- (v) The University Union Chairman (Member)

The other hostel in the University under the direct supervision of Departments is as mentioned below:

Marine Engg. Hostel - Kunjali Marakkar School of Marine Engineering

**2. Administrative Personnel**

Sl.No.	Designation	No. of Sanctioned Posts	No. of non-sanctioned posts
1.	Chief Warden	1	-
2.	Office Superintendent (HG)	1	-
3.	Computer Assistant/Typist-Steno	2	-
4.	Matron	1	-
5.	Assistant Matron	2	
6.	Office Attendant	1	-
7.	Sweeper-cum-cleaners	5 (daily wage)	14 (daily wage)



## CENTRE FOR INFORMATION RESOURCE MANGEMENT

### 1. Brief History:

The Centre for Information Resource Management (CIRM) conceived by the Department of Computer Science was established in 1998 with the help of the MHO-INFOCUS project of the Netherlands Government. CIRM has been functioning as an Independent Centre with full fledged Office under the umbrella of the School of Computer Science Studies.

The main objective of CIRM is to act as the nodal centre for all the information technology resources of the university. It involves design, installation and maintenance of the IT infrastructure including the network, software resources and IT enabled services and facilities. CIRM also provide staff training, user support and specialized consulting services to user departments and external clients on demand.

The campus network is seamlessly integrated to the internet through broad band connectivity available to the user community on 24x7 basis. The internet connectivity in the Main Campus has been upgraded to 100 Mbps during the year 2014-15. With this new connectivity the users in the main campus and lake side campus can experience much higher band width.

The domain name [csat.ac.in](http://csat.ac.in) is registered with the National Centre for Software Technology (NCST) India. The portal [www.cusat.ac.in](http://www.cusat.ac.in) serves as the single window access point to all the information resources and IT enabled services of CUSAT which is managed by CIRM.

CIRM manages the University's central information technology infrastructure and provides many services and applications for use in academic and administrative activities. Support is provided in the following layers:

- A communications and collaboration infrastructure robust enough to support advanced network, voice, and web-based services.
- Applications and services for departments and end-users including email, calendaring, wireless connectivity, web authentication, and server hosting. These services are supported by a help desk, contract-support staff, online self-help, and training.
- Applications and services that support administration including recruitment, e-tendering, public relations, and general administration.



- Training to the students, faculty and staff in most modern technologies and applications on demand.

### **1.1 Network Infrastructure**

University has a strong campus wide Gigabit Ethernet backbone offering an aggregate bandwidth of 10 Gbps between switches using single and multi-mode fibre. Currently the university owns 155 Mbps (1:1) leased line from the ISP (BSNL) sharing 30 Mbps to Lake side campus and Kuttanad campus. University is also part of high speed data communication network with 1 Gbps shared connectivity provided by National Knowledge Network (NKN). The network security has been provided through UTM appliance which also handles user authentication for client browsing. The internet connection is shared through core switches that are deployed at the centre and in the other departments. The logical structure of the campus network is designed in-house and maintained by the system administrator. The block of IP addresses obtained from the ISP is used to host various services of the university. Web servers and allied servers are in DMZ and the intranet has been designed as a hierarchical network with private Ips.

### **1.2 Server Infrastructure**

The server infrastructure include a handful number of hardware servers upon which most of the university service run. Virtualisation has been used extensively to accommodate number of individual hosted website requests from various departments.

### **1.3 Voice Infrastructure**

#### **1.3 (1) Analog Intercom facility**

The campus has intercom facility connecting all the departments in the main campus and the lake side campus. Direct Inward Dialling facility has been also provided.

#### **1.3 (2) 1 IP based intercom facility**

Considering the cost in maintaining traditional analog intercom facility, IP based intercoms are installed on locations devoid of this facility. This will be extended further to all new connections aiming a total conversion to full IP based intercom facility in the campus.

#### **1.3 (3) Wifi Services**

##### **1.3 (3.1) CUSAT WiFi**

As an attempt to convert the campus a WiFi campus, Access Points were installed in all the departments and administrative building and access to Internet is provided through authentication.





### **1.3 (3.2) CUSAT Hotspot**

A separate hotspot facility is available at student hostels. Currently there are four hotspots available in the campus. 2Mbps sharable internet facility is available in the hostels.

### **1.4 Applications and Software Services**

Our policy is to use FOSS for running the software services to the university community. All servers use Linux flavours as server operating system. Websites and other services fully run on LAMP stack. Virtualisation is achieved through KVM.

#### **1.4 (1) CUSAT Website**

CUSAT.AC.IN is the official domain of the university and is developed and maintained by the center. The website is designed in such a way to reflect the information changes as quickly as possible. This has been achieved by developing individual portals so as the changes in the webpages will be done at the information originating point itself. Most of the departments run and manage their own websites but, all are hosted internally.

#### **1.4 (2) CUSAT Web Mail**

Google offers to educational institutions a core suite of services, email, calendars, and other productivity tools, through G Suite, an Integrated communication and collaboration solution. University has entered into agreement with Google to provide the G Suite of services to University students, faculty, and staff members. This solution enables the university to provide CUSAT-branded, advertising-free access to a variety of popular cloud-based tools at no cost to the university.

#### **1.4 (3) Authentication Service**

All users need to authenticate before accessing the Internet facility in the campus. LDAP.CUSAT.AC.IN is the authentication point. WiFi services provided in the campus has also go through this. Hotspots installed in the University hostels use mobile number based authentication.

#### **1.4 (4) Learning**

Portal Page 5 of 5 To promote technology enabled teaching learning process, the center hosts and maintains moodle platform catering the need of faculty members and students.

#### **1.4 (5) DigitalLibrary@CUSAT**

The center has deployed dspace software,an open source repository package to create an open access repository for scholarly and published digital content generated in the university.



### 1.5 Maintenance Services

The center looks at the sustenance of Universities critical infrastructure which includes data center, communication services both voice and data. Software service and video recording and post production is also supported from the center.

### 1.6 Training Center

Conducts many trainings for students, staff and teachers of the university. Extension activities like ICT training to the school children are also done through the center.

## 2. Current Year Activities:

The center has completed many land mark activities this year. The Internet bandwidth of the campus wide LAN has enhanced from 100 Mbps to 155 Mbps. IP based intercom facility has been implemented successfully in the campus. WiFi hotspots to the student hostels were implemented. As of now 4 hot spot connectivity caters to the student hostels The campus is now WiFi ready. All the departments have given WiFi access points covering the entire building and access is given through authentication. Authentication based LAN access is ready for the use. The old UPS system has been replaced with a new UPS system Routine software updates and other software related services were rendered.

## 3. Looking into Future:

CIRM has been amping up its efforts to offer the best possible services to the CUSAT community.

Following activities are planned for this year

1. Campus wide procurement of MATLAB and SPSS software
2. Procurement and installation of state-of-the-art data center for the center
3. Video conferencing facility for the students to attend online interviews
4. SMS based service for the entire CUSAT community
5. Upgradation of the network infrastructure
6. IVRS system to deliver automated messages to the stake holders of the university.

## 4. Administrative Personnel

Sl. No.	Designation	No. of Posts
1	Hon. Director	1
2	Sweeper (D/W)	1



## 5. Technical Personnel:

3 Nos. (On working arrangement from Department of Computer Science)

## 6. Research Facilities

### a. Computing Labs (List out Major equipments available)

#### i) Computers, Servers, Printers & Network Components

S/N	Item	Qty
	Server	
01	IBM X3650	2
02	HPDL580G5, HP proliant	1
03	Keltron Q9550	3
04	Keltron Xeon E5405	5
05	Keltron Xeon E5520	5
06	DELL Rack mountable server	8
07	PC	25
08	Laserjet Printer	2
09	Managed switches for networking	75
10	Digital paper copier Toshiba e-studio 165	2
11	IBM server	1
12	UPS 40kva	2

#### ii) Voice Communication Systems (Upgraded)

EPABX System – Hipath 4000 (1000 Lines at the Main Campus And 96 Lines at the Lake side Campus)

## CENTRE FOR SCIENCE IN SOCIETY

### 1. Brief History

The Centre for Science in Society was established in 1991 under the UGC VIIIth Plan Development Assistance with financial aid from Cochin Refineries Limited. It is instituted as endowment CRL Chair in the University. The Centre conducts various programmes about science with the view to popularize Science and Technology among children. The centre has its own facilities like Library, Workshop, Computer lab, Science labs, Science-Park, Herbal Garden, Science Pavilion, IEEE E-Scientia Exhibit, and ISRO space pavilion etc. Some of the programmes offered by C-SiS are as follows: One Day Attachment Programme (ODAP) is for batches of students from a school. Science Talent And Total Capacity Development Programme (STDP) is an intensive programme meant for children with special aptitude for science, This programme starts on first week of April and May every year and will continue for 4/5 weeks till the end of the month. In addition to these C-SiS undertakes various training programmes with financial aid from Government bodies.

### 2. Programmes of Study/Research – School level/ undergraduate level

### 3. Faculty Members

Sl. No.	Name	Designation	Qualification	Specialisation
1	Dr. K.G. Nair	Hon. Director	M.Sc., Ph.D	Electronics, Microwave Antennas
2	Dr. V.P.N. Nampoori	Hon. Addl. Director	M.Sc., Ph.D	Optoelectronics
3	Dr. M. Bhasi	Hon. Asst. Director	B.Tech. (Production) M.Tech. (IE & OR) Ph.D.(Industrial Management)	Operations, Systems and Supply chain

### 4. Emeritus Professor/Scientist (if any)

Sl. No.	Name	Designation	Qualification	Specialisation
1.	Dr. V.P.N. Nampoori	Hon. Addl. Director	M.Sc., Ph.D	Optoelectronics



## 5. Administrative Personnel

Sl. No.	Designation	No. of Posts
1.	Sr. Gr. Assistant	1
2.	Computer Assistant Gr. II	1
3.	Office Attendant (HG)	1
4.	Sweeper-cum-Cleaner	1 (Vacant)

## 6. Technical Personnel

Sl. No.	Designation	No. of Posts
1.	Technical Assistant (Electronics)	1 (Contract basis)

## 7. Student Enrollment

Sl. No.	Programme of Study	Men	Women	Total
1.	One Day Attachment Programme (ODAP)			2,08,000
2.	Science Talent and Total Capacity Development Programme (STDP)			6,786

## Research Facilities

### a. Laboratories :

Maths lab, Electronics lab, Working models

### b. Major equipments :

Fibre optics experiments kits, Electronics kits

### c.

### d. Library

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
Books – 11161, Journals - 3	Books - 13

## 9. Distinguished visitors

Sl. No.	Name	Affiliation	Remarks
1.	Karen Bartleson	2016 IEEE President (Elect)	Visited on 23/08/2016

**10. Awards/Honours/Fellowships etc. received**

Name of Recipient	Name of Fellowship/ Honour/ Award	Awarding Agency
Prof. K.G. Nair	1. Fellow, National Academy of Sciences, Allahabad, India. 2. Swadeshi Science Award 3. UGC Hari OM Trust Homi J. Baba Award (UGC best teacher Award) 4. IEEE Academic Award	1. National Academy of Sciences, Allahabad, India. 2. Swadeshi Science Movement. 3. UGC 4. IEEE

**Sponsored Research Projects**

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
1.	"Inter University Centre for Studies in Kerala Legacy in Astronomy and Mathematics"	Govt. of Kerala	Rs.25,000,00/-	Prof. V.P.N. Nampoori, Prof. K.G. Nair

**Research Programmes and Activities:**

Sl. No.	Problem/ Topic	Investigator(s)
1.	Science Education in School level	Prof. K.G. Nair Prof. V.P.N. Nampoori Dr. M. Bhasi
2.	Centre: " <i>Inter University Centre for Studies in Kerala Legacy in Astronomy and Mathematics</i> " sanctioned by Govt. of Kerala. <i>Activities of the Centre is in progress.</i>	Prof. K.G. Nair Prof. V.P.N. Nampoori
3.	Project: " <i>A 'Two-in-one' project for the benefit of School Children and their teachers to develop scientific awareness and passion for knowledge through impressive and innovative learning processes</i> ".	Prof. K.G. Nair Prof. V.P.N. Nampoori

**13. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department**

Sl. No.	Title	Duration	Coordinator	Funding Agency
1.	" <i>One – Day Science Orientation Programme "Sastra Sameeksha" for High School Students</i> "	3 <sup>rd</sup> , 4 <sup>th</sup> , 5 <sup>th</sup> , 6 <sup>th</sup> & 7 <sup>th</sup> May 2016	Dr. K.G. Nair	KSCSTE



2.	“A One-day training programme on experimental optics for teachers in schools and colleges”	12 <sup>th</sup> November 2016	Dr. K.G. Nair Prof.V.P.N. Nampoori	KSCSTE
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## UNIVERSITY EMPLOYMENT INFORMATION AND GUIDANCE BUREAU

### 1. Brief History

University Employment Information and Guidance Bureau is a Joint Venture of Cochin University of Science and Technology & National Employment Department, Government of Kerala. The scheme of University Employment Information and Guidance Bureau initiated from January 10, 1973.

### 2. Programmes of Study /Research

Vocational Guidance, Collection of Occupational Information, Organizing Refresher Courses/ Training.

### 3. Faculty Members

Sl. No.	Name	Designation	Qualification	Specialisation
1	Dr. Sam Thomas	Chief of the Bureau & Professor, SMS, CUSAT.	B.Tech, M.B.A. Ph.D.	

### 4. Visiting Faculty (If any)

Sl. No.	Name	Designation	Qualification	Specialisation
1.	Edwin Tomson V T	Asst. Professor	M.Sc. Mathematics	Calculus
2.	Dr. P.T.Baburaj	Asst. Professor	M.A.Sociology, M.Sc. Psychology, M.Ed, PhD.	Teaching & Research Aptitude
3.	Raju David C	Regional Deputy Director of Employment (Rtd)	M.Sc Statistics, MBA (HRM), Basic Counselling Course	Reasoning
4.	Dr.Vineeth.K.M	Asst. Professor	MCom, MBA, PhD	Marketing
5.	Madhusoodanan Kartha N.V.	Asst. Professor	M.Com	Vedic Mathematics





## 5. Administrative Personnel

Sl. No.	Designation	No. of Posts
1.	Chief.	1
2.	Deputy Chief.	1
3.	Clerks	2
4.	Typist	1
5.	Peon	1

## 6. Facilities

### Library :

No. of Books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
910	NIL

## 7. Seminar/ Refresher Course conducted by the Department:

Sl. No	Title	Duration	Coordinator	Funding Agency
1.	Coaching Class for UGC-NET Humanities Paper – I	15 Days	U E I & G B	U E I & G B
2.	Coaching Class for SBI PO	15 Days	U E I & G B	U E I & G B
3.	Coaching Class for IBPS PO	15 Days	U E I & G B	U E I & G B
4.	Coaching Class for IBPS PO (Holiday)	15 Days	U E I & G B	U E I & G B
5.	Coaching Class for IBPS Clerk/ PO	30 Days	U E I & G B	Govt. of Kerala VG Strengthening Fund 2016-17
6.	Career Seminar at Thrikkakkara Municipal Town Hall, Kakkanad – LDC Munnorukkam	One Day	U E I & G B	U E I & G B
7.	Coaching Class for UGC-NET Humanities Paper – I	15 Days	U E I & G B	U E I & G B
8.	Coaching Class for SBI PO	15 Days	U E I & G B	U E I & G B
9.	Coaching Class for IBPS Clerk/ PO	30 Days	U E I & G B	Govt. of Kerala VG Strengthening Fund 2016-17



10.	Coaching Class for LDC	30 Days	U E I & G B	Govt. of Kerala VG Strengthening Fund 2016-17
11.	Vision Engineering 2016	One Day	U E I & G B	U E I & G B
12.	Interaction with Entrance Topper	One Day	U E I & G B	U E I & G B
13.	Face to Face interactive session with Entrance topper	One Day	U E I & G B	U E I & G B
14.	How to improve learning skills in Mathematics			
15.	Change yourself			
16.	Softskill Training at Department of Legal Studies, Department of Ship Technology (1 Induction Training and 1 Placement Training), Department of Instrumentation, Department of Electronics, Department of Computer Science	One day	U E I & G B	Departments of CUSAT



## UNIVERSITY LIBRARY

### 1. Brief History:

The Cochin University Library was established in 1977 as a central agency for meeting the information requirements of the academic community of the University. The University Library is fully automated and is one of the best scientific and technical libraries in the country. Being the information centre of the Technological University in the state, the library has built up a balanced and rich collection on all branches of sciences and technology. At the same time books of general interest in various subject fields are not neglected either.

Since the Library has to cater to the needs of a variety of users- Graduates, Post Graduates, Research Students, Administrative Staff, Teachers, Scientists working in Industries, R& D Institutions, wide range of subject fields are represented in our collection in the prime areas of Science and Technology.

### About us:

As in any world class university Library, services in Cochin University of Science and Technology are the core of its academic services and the Central Library of CUSAT finds a unique place in Academic service centres. Besides Central Library, every academic department has its own departmental library which contains the core collection required by the students and faculty of the department.

The Central Library of CUSAT has a collection of more than 1,35,000 documents specially for Science and Technology. Besides conventional services, library offers e-services such as Institutional Repository-e-thesis ([dyuthi.cusat.ac.in](http://dyuthi.cusat.ac.in)), online databases and journals, media repository ([media.cusat.ac.in](http://media.cusat.ac.in)), bibliographic repository ([yuj.cusat.ac.in](http://yuj.cusat.ac.in)) etc. The collection is strong in Science & Technology, however substantial quantity of information sources on humanitics and social sciences are also available. The Library is open for bonafide members but non members are also welcome to utilize its resources. Databases are available through the campus wide networks to all users in the University. CUSAT Library is a member of various e-journal consortia such as E-Shodh Sindhu consortium, DELNET consortium etc.

The main emphasis of the Central Library is in providing digital information support which is carried out through 4 servers and more than 500 terminals. More than 1300 electronic journals are available through the campus wide network. The



University Library has completed the digitization process of all thesis produced by CUSAT and made available online through the institutional repository-DYUTHI and the UGC national repository – SHODHGANGA.

All the housekeeping and information management systems in the University Library are powered by open source software such as KOHA, DSpace, Bibapp and Media core.

University Library is conducting various sponsored research projects and workshops for knowledge discovery and knowledge management to meet the contemporary information needs of its clients.

## 2. Administrative Personnel

Sl. No.	Designation	No. of Posts
1	Section Officer	1
2	Assistant	2
3	Typist	3
4	Peon	4
5	Sweeper / Cleaner	2
6	Photocopier / duplicating operator	1

## Technical Personnel

Sl.No.	Designation	No. of Posts
1	University Librarian	1
2	Deputy Librarian	1
3	Assistant Librarian	12
4	Junior Librarian	4
5	Professional Assistants	9
6	Information Scientist	1

## Student Enrollment

Sl.No.	Programme of Study	Men	Women	Total
1.	Membership	2077	2179	4256



## Research Facilities

### a. Library

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
Books :116468 e-Books :624 Foreign Journals (Print) : 52 Foreign Journal (Online) : 32 Print + Online :12 Indian Journal (print) : 53 Online Database :12 News Papers :9	3009 274

## 6. Publications

### a. Books/Journal articles

1.	Liny Varghese, Supriya M.H., & Poullose Jacob, K.(2017). Improved spam Filter for obfuscated emails, International Journal of Data Mining And Emerging Technologies. International Journal of Data Mining And Emerging Technologies (Vol. May, No.2017)
2.	Liny Varghese, Supriya M.H., & Poullose Jacob, K.(2017). Spam : A Big Data Challenge. <i>International Journal of Advanced Research in Computer Science</i> , 8(1), 195–198.
3.	Liny Varghese, Supriya M.H., & Poullose Jacob, K.(2017). Pre-calculated spelling correction algorithm, Accepted by International Journal of Computer Science and Technology (IJCST) Vo I. 8, issue1, Jan- March 2017

## 7. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. Susan Mathew K.	National Seminar on Academic Inclusion of Librarians in Digital Era, Technology Exhibition during 04-05 November 2016, organised by Kerala Agricultural University's (KAU), College of Horticulture (CoH), and Central Library (KAUCL) and Academic Library Association (ALA).	Presented paper and Chaired a session on Web Technologies and Document Delivery Services in Libraries



Beena A.L	National workshop on Research report writing during 17-18 February 2017 conducted by the Kerala Library Association.	Participant
	National workshop on Moodle during 24-25 March 2017 conducted by the Department of Library & Information Science, University of Kerala	Participant
Liny Varghese	National Workshop on Content Management Systems using Joomla at KUFOS, held on 5-6 August 2016	Resource Person
	Advanced level workshop on Koha Library Software conducted by Kerala Library Association, Ernakulum Region, in association with CIRM-CUSAT held on 18-11-2016 to 19-11-2016 at Computer Centre, CUSAT	Resource Person
	Project Level Committee Meeting on E-Governance Project held at IIITMK, Thiruvananthapuram held on 20 <sup>th</sup> July 2016.	Participant
	Participated in Project Level Committee Meeting on E-Governance Project held at DCE, Vikasbhavan, Thiruvananthapuram held on 8 <sup>th</sup> February 2017.	Participant
	Participated in Project Level Committee Meeting on E-Governance Project held at University of Calicut, Thiruvananthapuram held on 28 <sup>th</sup> of February 2017.	Participant

**8. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department**

SI.No.	Title	Duration	Coordinator	Funding Agency
1.	National Library Week Celebrations & International Book Fair	6 <sup>th</sup> to 9 <sup>th</sup> December, 2016	University Librarian	Nil



## INTERNATIONAL RELATIONS AND ACADEMIC ADMISSIONS

- IRAA unit is handling the entire procedure of admission to the various courses offered by the University starting from issue of the notification, receipt of applications online, conducting the Common Admission Test (CAT) and counseling to all academic programmes except PDF, Ph.D, M.Phil and Short Term Programmes, In addition to this the IRAA Unit is dealing with international admissions and MoUs. Every year admissions to approximately 2600 seats in various courses are handled by IRAA Unit. The admission notification for CAT 2017 was issued on 08/2/2017. Total of 30331 Candidates submitted their applications online. CAT 2017 was held on 29/04/2017 and 30/04/2017 in different centres across the country and one centre in Dubai. The tests were conducted as CBT (Computer Based Tests). The results were published promptly and the admissions were carried out on time. Admissions to a new programme viz. B.Tech Part-Time programme was carried out separately. Exceptionally high demand was found for the academic programmes of CUSAT. A revenue of Rs.3,35,45,155/- was generated from application fees. Various external government agencies are making use of the expertise of IRAA Unit as a reliable and efficient agency for conducting their competitive/recruitment examinations. The revenue generated in this regard is Rs. 2,95,098/.

### MAJOR ACHIEVEMENTS

- One International Candidate was admitted to B.Tech Programme and two international scholars joined for Ph.D programme in Applied Economics and Computer Applications respectively.
- During the period an All Kerala International Students Meet was conducted. Around 50 International students from various Universities/ Institutes of Kerala participated in the programme.
- The following teams have visited CUSAT for various discussions including collaboration proposals.
  1. Representatives from Lincoln University and Ara Institute of Canterbury, New Zeland.
  2. Ostfalia University of Applied Sciences and Nexus Institute, Berlin, Germany.



3. Representatives from Japan including Shimane University, Matsue City Hall, HIDA, Monstar Lab Ltd, Indo Cosmo Systems etc.
  4. Representatives of Kochi committee of the Norfolk Sister City Association.
- CUSAT entered into International/ Domestic academic and research collaborations with the following Universities /Industries:

SI. No.	Name of the University/ Industry	Date of commencement
1	STEEL AND INDUSTRIAL FORGINGS LTD (SIFL), ATHANI, THRISSUR	30/03/2017
2	COCHIN SHIPYARD LIMITED (CSL)	20/01/2017
3	KERALA STATE INDUSTRIAL DEVELOPMENT CORPORATION LTD (KSIDC), THIRUVANANTHAPURAM	03/10/2016
4	SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES AND TECHNOLOGY (SCTIMST), THIRUVANANTHAPURAM	08/08/2016
5	SHIMANE UNIVERSITY, MATSUE, JAPAN	24/05/2016
6	SFO TECHNOLOGIES PVT LTD, NEST, KAKKANAD	25/04/2016
7	MULTIMEDIA UNIVERSITY, MALAYSIA	12/04/2016





## PLANNING AND DEVELOPMENT DIVISION

Planning and Development Division is one of the main branches of the University. It co-ordinates the overall development of the University under the assistance of various funding agencies like UGC, MHRD, CSIR, AICTE, DOD, DST, DBT, etc. It also helps the Principal Investigators of the University to get various projects implemented with the financial assistance of the above agencies. It helps the teaching departments and Central Library for the purchase of equipments, Books & Journal and consumables for the Lab/Library etc.

Planning division arranges National and International Conferences, Seminars, Symposia, etc. with financial assistance of external funding agencies. It co-ordinates the travel of teachers in and outside the country to attend National and International conferences. It helps the University to appoint Visiting Professors/Emeritus Fellow under various schemes. The Division also helps to provide financial assistance for the conduct of the UGC sponsored refresher courses and to the teacher fellows of the FIP scheme. It also looks after the functioning of the NODAL Centre and STIC as well as various centres under the University including 4 Inter University Centres established with a broad vision of providing ample facilities for research in its unique area of specialization. Apart from it, three Chairs have been established in the name of Justice V.R. Krishna Iyer, Dr. Sukumar Azhikode and Sri.L.M. Pylee to provide a platform for the student community that the contributions of these eminent personalities to the society are researched.

It also co-ordinates the ERUDITE programmes of Kerala State Higher Education council. The Planning division also maintains a data bank about the University for providing information to Government of India/ State Govt. Agencies as and when required.

The Planning & Development Division plays a key role in the implementation of the e-governance program as envisaged by the State Government as a prerequisite to increasing the efficiency in the University system, to bring about a radical change in the functioning of the Universities in the State and side by side streamlining their functioning. The Planning Division is also actively involved in the implementation and monitoring of the e-tendering procedures undertaken by the University.

The Planning division is headed by the Planning and Development Officer. The division has 1 Assistant Registrar, 3 Section Officers, 1 Statistical officer, 8 Assistants, 1 Computer Assistant and 2 supporting staff. In addition to the ongoing



projects, details of Seminars, Symposia and Refresher courses conducted during 2016-17 are provided.

Planning Division also prepares Annual Plan proposals to the State Government and Five Year Plan to UGC.

**Seminars/Conference/Workshops/Symposia conducted during 2016-17**

Sl. No.	Title & Department	Duration	Co-ordinator	Funding Agency
1	National Level 'Research Workshop on Analysis'. Department of Mathematics	25-28 July, 2016	Dr.V.B.Kiran Kumar and Dr.A.Noufal	UGC/ KSCSTE
2.	National Seminar on 'Muktibodh Ka Rachna Sansar' Department of Hindi	15-17 December 2016	Dr.R.Sasidharan,	UGC
3.	International Conference on "Biotechnology and Neuroscience" Department of Biotechnology	19-21 December 2016	Dr.Ajith Vengellur	UGC
4.	National Seminar on "Prevalence of Modern Slavery Among Marginalized Women and Children in India Causes and Consequences". Department of Applied Economics	15-16 December 2016.	Dr.Meera Bai.M.	UGC
5.	One day workshop "Arogyadharshanam" Centre for Science Communication	10 <sup>th</sup> January 2017	Dr.S.Anilkumar	UGC
6.	National Seminar on "Protection of Migrant Workers in India: Legal and Social Concerns" School of Legal Studies	19-21 January 2017	Dr.Vani Kesari and Dr. Binu Mole K.	UGC
7.	International Conference on "Data Science and Engineering (ICDSE 2016) Department of Computer Science	23-25 August 2016	Dr.Sumam Mary Idicula	UGC
8.	National Workshop on "Applied Statistical Techniques". Department of Statistics	19-21 January 2017	Dr.G.Rajesh	UGC/ KSCSTE



9.	National Workshop on "Advance Materials " Centre for Advanced Materials	3-4 February 2017	Dr.M.K.Jayaraj	UGC
10.	National Seminar on Current Trends in Chemistry (C-Tric-2017) Department of Applied Chemistry	3-4 February 2017	Dr.P.A.Unnikrishnan	UGC/ KSCSTE/ DST
11.	National Seminar on "Marine Ecosystem Health". Department of Marine Biology, Microbiology and Biochemistry	16-17 March 2017.	Dr.A.A.Muhamed Hatha	UGC
12.	National Conference on "Advances in Scientific and Industrial Instrumentation 2017" Department of Instrumentation	22-23 February 2017	Dr.K.N. Madhusoodanan	UGC
13.	National Seminar on "English as a Corporate Communication Medium" Department of English and Foreign Languages	2-4 March 2017	Dr.Brinda Bala Sreenivasan	UGC
14.	'National Photonics Symposium' International School of Photonics	27 <sup>th</sup> February 2017 to 1 <sup>st</sup> March 2017	Dr.Saji K.J.	UGC
15.	National Workshop on 'Dark Energy' Department of Physics	5-6 September 2016	Dr.Titus K. Mathew	UGC
16.	National Seminar titled "Tribal Protection and Welfare Issues and Challenges" School of Legal Studies	9-11 March 2017	Dr.Naveen S and Induraj V.R.	UGC
17.	National Conference on Indian Language Computing – NCILC 2017. Department of Computer Applications	17-18 February 2017	Dr.K.V.Pramod	UGC
18.	International Symposium on Antennas and Propagation (APSYM-2016) Department of Electronics	15-17 December 2016	Dr.Supriya M.H.	UGC/ KSCSTE/ DRDO



19.	International Training Workshop (ITW'01) Department of Marine Biology, Microbiology and Biochemistry	10-14 May 2016	Dr.S.Bijoy Nanadan	KSCSTE/ Kerala Biodiversity Board/ National Fisheries Development Board
20.	National Technology Day Celebrations. Department of Electronics	11th May 2016	Sri.Arun A.Balakrishnan	KSCSTE
21.	Regional Training Workshop on National Academic Depository Department of Statistics	26 September 2016	Dr.N.Balakrishna	CDSL (Convened by UGC)
22.	Theoretical Physics Seminar Circuit (TPSC) Programme Department of Physics	2016-17	Dr.Titus K.Mathew	Satyendra Nath Bose National Centre for Basic Sciences

### Achievements:

National in character and international in pursuit of excellence, Cochin University of Science and Technology (CUSAT) as its name indicates gives prime focuses on Science and Engineering in its academic portfolio, but has expanded its horizons notably over recent years. CUSAT has ten different faculties covering a broad range of subject areas, including various scientific disciplines along with Humanities and Law departments. In the Higher Education domain of our country, we perceive a distinct role by offering Graduate, Post Graduate and Research programs relevant to Science, Technology and allied fields which have wide acceptance.

**CUSAT has been accredited as 'A' grade by the NAAC Peer Team** recently and also bagged 30<sup>th</sup> place in the academic ranking in the country brought by the National Institutional Ranking Frame Work (NIRFW), under the Ministry of Human Resources Development. As another feather in its cap, Cochin University of Science and Technology has found a place among the best Universities in the world, in the Times Higher Education (THE) World University rankings 2016-17. CUSAT is one among the 31 institutions in the country and the only one in Kerala to be ranked in the global survey.

In addition, the **RADAR facility in CUSAT has been included in the 'Make in India'** program envisaged by the Prime Minister and was awarded a membership in the International project named Newton Fund GRP which is aimed to develop



science and innovation partnerships that promote the economic development and social welfare of partner countries.

As part of the State Government's policy of transforming University Centers in the State into Centers of Excellence, the proposal submitted by Cochin University of Science and Technology with a core plan for the development of a **laboratory of International Standards has been approved by the State Government and an amount of `240.90 crores has been sanctioned** in this regard. The investment for this purpose will be provided from KIIFB.

The **RUSA Directorate has sanctioned of `6.00 crore for CUSAT** under the project as first instalment of the grant. The allotment is in the ratio of 60:40 by which each University will get `10.00 crore. The amount will be disbursed to the University when the State Share of 40% will be added to the fund.

Located amidst the industrial belt of Kerala, CUSAT is now in its path to join hands with the industry to share the technology developed with the society and common good of the mankind. This is possible only with the correlation of the developments of Science and Technology. The association with the major firms like Cochin Shipyard, KINFRA, Central Institute for Plastic Engineering and Technology are stepping stones in the direction of this Technology – Industry linkages.

The infrastructural facilities in the research laboratories are being augmented so as to encourage cutting edge research. As part of encouraging multidisciplinary and interdisciplinary learning, development of quality online content is given prime importance. Well-equipped studios for **developing content and a portal for hosting the content development are being established**. We intend to expand and upgrade its network and shift towards virtualized infrastructure.

Cochin University of Science and Technology (CUSAT), **had organized an open house programme, SHASTHRAYAN**, for higher secondary school and college students as well as the people's representatives of the Ernakulam District on 20<sup>th</sup> and 21<sup>st</sup> January, 2016 to showcase the research activities going on in the University. In this open house, the existing research facilities of social relevance under different faculties such as Engineering, Science, Marine Science, Social Science etc. were highlighted. This was the first of its kind conducted in the State and won appreciation from all corners of the society.

The **Centre for Innovation, Technology Transfer & Industrial Consultancy (CITTIC)** which has been established with a view to serve as an Incubator for potential entrepreneurs is proposed to be strengthened as a focal point for entrepreneur development, patent support etc. A Technology Business Incubator (TBI) has been set up with support from the Government of Kerala, and its activities have received wide appreciation by the NAAC PEER team.



For effective implementation of the **UGC sponsored programme ‘PURSE’ (Promotion of University Research in Science and Engineering), the Department of Science and Technology (DST), GOI, rated CUSAT as “EXCELLENT’**. During the first phase of the program CUSAT received `9.00 crore and in the second phase an amount of `17.00 crores has been sanctioned of which we have already received the first instalment of `6.35 crores.

### **Deen Dayal Upadhyay Kaushal Kendra**

Cochin University of Science and Technology had submitted a proposal for starting vocational courses under the scheme of Deen Dayal Upadhyay Kaushal Kendra and the University Grants Commission approved the establishment of “DDU KAUSHAL KENDRA” in CUSAT as per the following.

Name of the Programs Approved	B.Voc., M.Voc. & Ph.D
Sector/Trades Approved	i. Mobile Phone Application Development ii. Technology & Management Consultancy
Intake	50 (Each Programme)

The University Grants commission has also approved a grant of `4.00 crores (Rupees four crore only).The classes for two batches of students have already been commenced.

### **New Schemes / Programmes introduced for the up gradation of Faculty / Institution:**

#### **Faculty Recharge Programme**

Faculty Recharge programme is a novel scheme launched by the UGC, which offers an effective mechanism to address the problem of stagnation of faculty and infrastructure in which University can get talented Teachers at different levels with full financial support from UGC. The University has submitted a proposal to include the University in the Faculty Recharge Programme for the recruitment of Faculties under UGC – FRP in Engineering Science with Department of Electronics.

#### **Inspire Faculty Award Scheme**

The Inspire Faculty Award Scheme of the Department of Science and Technology, is designed to provide contractual research positions to young achievers for independent research and emerge as a leader in future Science and Technology. A compensation matching cost equivalent to that of Assistant Professor of an IIT at the time of entry, along with ₹ 35,00,000/- (@ ₹ 7,00,000/- per year) of research grant will be granted for a period of 5 years. At present there are 5 such faculties working in CUSAT.



## UGC Research Award

The UGC Research award is a novel scheme launched by the UGC which is given for those lecturers, senior lecturers and selection grade lecturers, readers and professors who are in continuous regular service in a recognized institution on permanent posts and are under 45 years of age at the time of submission of their application. The objective of the scheme is to provide opportunities to regularly appoint permanent teachers of Universities/ Institutions to pursue research in their area(s) of specialization for a period of two years without undertaking any research guidance.

PROJECTS IMPLEMENTED DURING 2016-17								
Sl. No.	Department	Principal Investigator	Designation	Title of the Project	Funding Agency	Duration	Total Grant Sanctioned in Rs.	Start Date
1	Applied Chemistry	Dr. K. Sreekumar	Professor	SAP at the level of DRS-III	UGC	5 years	1,32,00,000	01-04-16
2	Marine Biology, MicroBiology and BioChemistry	Dr. N.R. Nisha	Assistant Professor	A high resolution study of Benthic foraminifera and pteropods of southern arabian Sea Oxygen Minimum Zone	UGC	2 years	6,00,000	03-05-16
3	Statistics	Dr. N. Balakrishna	Professor	UGC-SAP at the level of DRS-III	UGC	5 years	37,00,000	01-04-16
4	Physics	Dr. Pradeep V.S.	DST Inspire Faculty	DST-INSPIRE FACULTY AWARD	DST	5 years	86,00,000	13-05-16
5	Bio technology	Dr. Anusha Ashokan	Inspire Faculty	DST-INSPIRE FACULTY AWARD	DST	5 years	86,00,000	02-05-16



6	Physics	Dr. M.R. Anantharaman	Professor	Core-shell nanostructure based on ferrites by plasma polymerization for enhanced magnetization and giant dielectric permittivity	DST-DAAD	2 years	6,82,000	05-07-16
7	Statistics	The Head	-	DST-FIST Program	DST	5 years	52,50,000	22-06-16
8	International School of Photonics	Dr. Saji K.J.	Assistant Professor	Investigation of doped copperoxide for p-channel thin film transistor application	DST	3 years	27,60,000	29-08-16
9	Polymer Science & Rubber Technology	Dr. Honey John	Professor	Development of green polymer systems as adhesive and coating for space applications	ISRO-respond	3 years	25,23,000	03-10-16
10	Electronics	Dr. Bijoy A. Jose	Assistant Professor	Optimizations for virtualized mobile computing	DST-SERB	3 years	17,12,350	21-09-16
11	Electronics	Dr. P. Mohanan	Prof (Rtd)	UGC BSR Faculty Fellowship	UGC	3 years	25,74,000	01-06-16
12	ACARR	Dr. K. Mohankumar	Project Director	Impact of the Indian Monsoon Convection on the tropical tropopause layer and climate	IFCPAR	3 years	46,95,305	01-11-16





13	Polymer Science & Rubber Technology	Dr.Sailaja G.S	Associate Professor	Development of magnetically modulated therapeutically active layered double hydroxide (LDH) as a Nanomedicine with hyperthermia potential for cancer theranostics	DST-SERB	3 years	28,29,893	28-12-16
14	CSSEIP	Dr.Bijith George	Assistant Professor (contract)	Dynamics of Community based Ecotourism:an inclusive development option for kerala	ICSSR	18 MONTHS	7,00,000	01-01-17
15	Polymer Science & Rubber Technology	Dr. C.P. Reghunadhan Nair	Emeritus Scientist	KSCSTE Emeritus Fellowship	KSCSTE	3 years	18,44,400	18-11-16
16	Department of Electronics	Dr.Tessamma Thomas	Prof (Rtd)	KSCSTE Emeritus Fellowship	KSCSTE	3 years	18,44,400	14-11-16
17	Atmospheric Science	Dr.Abhilash S	Assistant Professor	Understanding the physical process associated with Tropical Intra-seasonal Oscillations and Cyclogenesis over Indian Ocean region using SCATSAT-1 Data	Space Application Centre (SAC)	3 years	32,43,000	01-01-17



18	NCAAH	Dhaneesha M	Research scholar	Analysis of apoptotic pathway induced by a cytotoxic polycyclic tetramate macrolactam (PTM) antibiotic ikarugamycine produced by marine streptomyces sp MCCB 267	KSCSTE Best Paper Award	2 years	1,00,000	07-07-16
19	Atmospheric Science	Dr.C.A.Babu	Professor	Features of Indian Ocean SST during the recent decades and their impact on Indian summer monsoon rainfall and circulation pattern	DST-SERB	3 years	24,80,200	20-02-17
20	Applied Chemistry	Dr. K. Sreekumar	Professor	Energetic Propellant Binders based on Polyphosphazenes	ISRO-respond	3 years	21,28,000	10-03-17
21	Atmospheric Science	Dr. K. Satheesan	Associate Professor	Diurnal Variation of Deep Convective clouds over Indian Region and its association with monsoon Rainfall	DST-SERB	3 years	36,91,400	18-03-17



22	Polymer Science & Rubber Technology	Smt. Praseetha R Nair	Research scholar	Preparation and Characterization of Cissus Quadrangularis Linn plant extract incorporated chitosan-collagen scaffold for bone regeneration	KSCSTE	3 years	20,07,655	07-03-17
23	Atmospheric Science	Dr.C.A.Babu	Professor	Radiative Impact of clouds: Assessment of intra seasonal and interannual variability during Indian Summer monsoon season	ISRO-respond	3 years	25,85,000	31-03-17
24	School of Engineering (Division of civil Engg)	Dr.K.S.Beena	Professor	Liquefaction Studies on sand deposits in Kerala	KSCSTE	3 years	26,74,000	30-03-17
25	Bio-technology	Dr.Ajith Vengallur	Assistant Professor	Investigating the role of Hypoxia Inducible Factors Alpha in Neuronal Hhomeostasis under Normoxia using Primary Cortical Neuronal culture	UGC-BSR	2 years	10,00,000	16-02-17



26	Atmospheric Science	Dr.Abhilash S	Assistant Professor	Development of an improved Cyclogenesis using a multi model Ensemble Prediction System	UGC-BSR	2 years	10,00,000	16-02-17
27	Mathematics	Dr.Kiran Kumar V B	Assistant Professor	Study of spectral properties of infinite dimensional using linear algebra techniques	UGC-BSR	2 years	10,00,000	16-02-17
28	Polymer Science & Rubber Technology	Dr.Honey John	Professor	Development of Super hydrophilic graphene/ semiconductor oxide Nanohybrids for self-cleaning Applications	DST-SERB	3 years	30,38,420	17-03-17
29	Physics	Dr.M.K.Jayaraj	Professor	Nanophosphors for security printing and bio sensing applications	UGC-BSR	2 years	10,00,000	16-02-17
30	School of Management Studies	Dr.Sangeetha K Prathap	Assistant Professor	Evaluation of Post GI Registration Status of handloom products in Central Kerala	IUCIPRS	1 year	1,00,000	20-02-17



31	Bio-technology	Dr.K.P.Joy	INSA Senior Scientist	Characterization of gonadotropin - releasing hormone and Kisspeptin systems in the cat fish, Heteropneustes fossils: Crosstalks and interactions in the control of gonadotropin secretion	DST-SERB	3 years	49,85,000	30-03-17
32	Environmental Studies	Dr.V.Sivanandan Achari	Associate Professor	Fireworks accident at Puttingal Devi Temple, Paravur, Kollam, Kerala on 10 <sup>th</sup> April, 2016 and subsequent ground water contamination: A study of Groundwater Quality, Abatement and Mitigation	DOECC- Directorate of Environment & Climate Change	3 years	25,00,000	18-03-17
33	Physics	Dr.Ramesh Babu T	Prof (Rtd)	KSCSTE Emeritus scientist scheme	KSCSTE	3 years	18,44,400	09-12-16
34	Atmospheric Science	Dr.K. Mohankumar	Prof (Rtd)	UGC-BSR Faculty Fellowship	UGC-BSR	3 years	25,74,000	06-06-16



35	NCAAH	Dr.Jayesh P	External Principal Investigatorship	Development of Induced Pluripotent Stem Cells(iPSC) from Daphnia pulex and neural tissue engineering for the identification of genetic and epigenetic factors responsible for differentiation and neural degeneration	DBT-IYBA	3 years	69,23,200	06-03-17
36	C-SiS	Dr.K.G.Nair	Hon Director	Sasthra Sameeksha 2016-Science Orientation programme for School Children	KSCSTE	5 days	1,50,000	03-05-16



## DIRECTORATE OF PUBLIC RELATIONS AND PUBLICATIONS

The Directorate of Public Relations and Publications, has done a commendable work during the period 2016-2017 and its activities has contributed the University to boost its image as a public organization committed to the cause of higher learning. During the period of report, Directorate took all efforts to provide up-to-date information to other academic institutions, research scholars, students and to the general public regarding higher education and related opportunities. It also assisted various departments in organizing seminars, workshops and symposia by ensuring an excellent media coverage. Timely and effective briefing of the media by the Directorate of Public Relations provided a sustainable source of authentic information for all who were in pursuit of excellence in learning.

The staff of the Directorate took all efforts in clearing the doubts of the general public regarding various academic programmes of Cusat directly and over phone besides propagating the message of science and technology awareness/scientific temper among the public, as Science Communication is one of the thrust areas of the Directorate. Many of the dignitaries from India and abroad, who visited the University during the year were welcomed by the Directorate of Public Relations and Publications.

The Directorate was able to give wide publicity to the Common Admission Test 2017 through the media for which an overwhelming response was received. It took all efforts to bring out the University Diary 2017 in time with up-to-date information of the University and circulated to all concerned, besides the collection, compilation and publication of Annual Report of the University. Around 850 press releases (both English and Malayalam) and relevant notifications and advertisements were issued through the Directorate to dailies in both Malayalam and English as well as the Electronic Media. The Directorate was able to give wide coverage of the national and international seminars conducted by the various departments. The Directorate won appreciation from all quarters for the excellent coverage it ensured for all University activities through the print and Electronic Media.

July – August 2016 and November – December 2016 issues of the University Newsletter Tejus were successfully released and distributed by the Directorate. All issues received good feedback from the readers.

The Directorate of Public Relations and Publications successfully organised the 13<sup>th</sup>



National Workshop on Science Popularisation Projects with the support of Kerala State Council for Science Technology and Environment (KSCSTE), Government of Kerala. Cusat Vice Chancellor Dr. J. Letha inaugurated the workshop. Prof. S. Sivadas, chairman, Science Popularization Committee, KSCSTE and Science Writer delivered the key note address. The workshop provides training for the preparation and execution of popular science projects of KSCSTE to representatives of NGO's and Govt. organisations, researchers and teachers.

The National Technology Day was also celebrated on 11<sup>th</sup> May 2016 with the support of Centre for Science Communication and Kunjali Marakkar School of Marine Engineering.

The Books published by the Directorate during 2016-17 are listed below:-

1. Training Manual of 1<sup>st</sup> International training Workshop on Taxonomy of Bivalve Molluscs (ITW'01, 2016) Authors : Prof. Dr. S. Bijoy Nandan, Dr. P. Graham Oliver, Dr. Biju Kumar A, Mr. Jayachandran P R ISBN No. 978-93-80095-79-0
2. International Conference on Semi groups Algebras and Applications ICsAA – 2015 Author P.G. Romeo ISBN No. 978-93-80095-80-6
3. Residential Segregation and Social Exclusion among the Scheduled Casts and Scheduled Tribes of Kerala Author : Dr. D. Rajasenan ISBN No. 978-93-80095-81-3
4. Proceeding of International Conference on Recent Trends in Engineering & Technology (ICORTET '16') Authors: Prof. Saju. K.K., Prof. Jayadas. N. H, Dr. James Varghese ISBN No. 978-93-80095-82-0
5. Oceans in the Outer Solar System : Emerging Perspectives Author: C.A. Babu ISBN No. 978-93-80095-83-7
6. തണ്ണീർത്തടങ്ങളും ജൈവ വൈവിധ്യവും Author: Dr. S. Anil Kumar ISBN No. 978-93-80095-84-4
7. Proceedings of International seminar on “Marine Biodiversity and Bio prospecting for Sustainable Livelihood” Author: Dr. Aneykutty Joseph, Dr. Rosamma Philip ISBN No. 978-93-80095-85-1
8. Proceedings of APSYM 2016 Authors: Dr. K. G. Nair, Dr. K. Vasudevan, Dr. P. Mohanan, Dr. C. K. Anandan ISBN No. 978-93-80095-86-8
9. Proceedings of CUSAT-NUS Joint International Conference on Biotechnology and Neuroscience (CUSBAN – 2016) Author: Dr. Ajith Venghellur ISBN No. 978-93-80095-87-5
10. Protection of Migrant Workers in India: Legal and Social Concusses Authors :





Dr. Vani Kersari A, Dr. Binumole K ISBN No. 978-93-80095-89-9

11. കേരള നിയമസഭയിലെ ബഡ്ജറ്റ് പ്രസംഗങ്ങൾ ചരിത്രത്താളുകളിലൂടെ  
Author : Dr. Sabu Thomas ISBN No. 978-93-80095-90-5
12. Poverty Eradication in Kerala through Society for Assistance to Fisher Women  
Author : Dr. P. K. Baby ISBN No. 978-93-80095-91-2
13. National Photonics Symposium 2017 – Proceedings Author: Dr. A. Mujeeb, Dr. Saji. K. J, Dr. Sheenu Thomas ISBN No. 978-93-80095-92-9
14. NCILC – 2017 Proceedings from the Department of Computer Application  
Author: Dr. K. Kannan, Dr. K. V. Pramod ISBN No. 978-93-80095-93-6
15. Travel Ban and Employment of the Fisher Folks in Kerala Author: Dr. D. Rajasenan ISBN No. 978-93-80095-94-3
16. മുലകങ്ങൾക്ക് ഒരാമുഖം Author: Dr. Shaiju. P ISBN No. 978-93-80095-95-0
17. Proceedings of the International..... of Safety and Fire Engineering (SAFE '17) Author: Dr. V. R. Renjith ISBN No. 978-93-80095-96-7
18. Proceedings of “National Seminar on English as a Corporate Communication Medium” Author : Smt. Brinda Bala Sreenivasan. ISBN No. 978-93-80095-97-4
19. Proceedings of National Seminar on “Seafood Safety, Trade and Management. Authors: Dr. Ramachandran A,, Dr. Harikrishnan M,, Dr. Shibu, A. V, Dr. Mini Seksharan, Dr. S. Sabu ISBN No. 978-93-80095-98-1



## CENTRE FOR SCIENCE COMMUNICATION

Cochin University of Science and Technology launched the Centre for Science Communication in early 2007 with specific aim of popularizing science and technology among the masses of the country. Its fundamental task is to create scientific temper and the 'spirit of inquiry and reform' among the fellow citizens, as encoded in the constitution of India under "Fundamental duties".

The Centre for Science Communication is an independent academic entity of CUSAT with an interdisciplinary frame-work. Its main focus is on the acquisition and propagation of scientific and technological research output and to translate the same to the layman's level with a view to making use of it for the overall development of the society. Special attention is being given to the development of Science Communication in the regional languages, especially in Malayalam. Providing an academic framework to the realm of science communication and science journalism is another area of interest.

The Centre regularly conducts Science Orations, National Science Day programmes and Technology Day celebrations besides round-table conferences and competitions aimed at popularization of science among students, media-persons as well as the general public. It also publishes popular science books and is actively engages in empowering science writers/journals through various National workshops/programmes in association with reputed Government agencies like Vigyan Prasar, Govt. of India, IGCAR and Kerala State Council for Science Communicators and journals for collection of data and suggestions for the improvement of project.

The Centre and DPR&P jointly organized National Technology Day celebrations with the active support of K M School of Marine Engineering on 11<sup>th</sup> May 2016 inaugurated by Cusat Vice Chancellor Dr. J. Letha. The programme was sponsored by the Kerala State Council for Science, Technology and Environment, Government of Kerala and Department of Science and Technology, Government of India.

The Centre for Science Communication collaborated with the Department of Applied Chemistry and Directorate of Public Relations and Publications in organizing "Arogyadarshanam" at the Applied Chemistry Department Auditorium on 10<sup>th</sup> January 2017. Vice Chancellor Dr. J. Letha inaugurated the programme

Hon'ble Chief Minister of Kerala Sri. Pinarayi Vijayan released a book edited by Dr. S. Anil Kumar, Director, DPR&P and Co-ordinator of the Centre for Science



Communication named തണ്ണീർത്തടങ്ങളും ജൈവ വൈവിധ്യവും during the period of report.

Centre for Science Communication was attached with Directorate of Public Relations and Publications vide U.O.No. PL.(UGC)1/20589/2000-2001(Vol.II) dated 11.07.2016 as the area handled by the Centre is in tune with communication and Public relations.

## SOPHISTICATED TEST AND INSTRUMENTATION CENTRE

### 1. Brief History

The Sophisticated Test and Instrumentation Centre (STIC) is an autonomous institution (estd. 1995) sponsored jointly by the Kerala State Council for Science, Technology and Environment (KSCSTE) of the Government of Kerala and Cochin University of Science and Technology (CUSAT)

### 2. Programmes of Study/ Research : Objectives of STIC are:

- (1) Undertake research and development activities in the field of instrumentation and related areas, which are of relevance to industries in the state,
- (2) Provide advanced instrument facilities for analysis, testing, measurement and calibration to users from industries, R&D establishments and academic institutions,
- (3) Design and develop trainer kits, demonstration sets and scientific instruments needed for Engineering/ Science Colleges,
- (4) Encourage taking up projects, which will motivate younger scientists for undertaking hardware generation in experimental research,
- (5) Co-operative with professionals and academic staff in frontier areas of instrumentation,
- (6) Undertake training and services for personnel from industries, R&D establishments and academic institutions.

STIC has established highly sophisticated test, measurement, analysis and research laboratories in the areas of instrumentation, quality evaluation/ calibration, chemical analysis and testing. A good number of industrial organizations, academic institutions and research establishments have recognised STIC as a potential centre for the calibration of their instruments, product testing and chemical analysis. In addition to regular calibration, testing and analysis activities, the scientific personnel are also involved in research and development activities in instrumentation and allied areas. Regular training programmes are also offered in the relevant fields.



### 3. Faculty Members

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. Jagannath Bhat	Director i/c. & Scientist E2	M.Sc, Ph.D	Calibration, Testing
2	Mr. Paul V. John	Scientist E1	M.Tech	Calibration, Testing
3	Ms. Sreeja V.	Scientist E1	M.Tech	Calibration, Testing
4	Dr. Shibu M. Eappen	Scientist E1	M.Sc, Ph.D	Analytical Instrumentation
5	Mr. Adarsh K.J.	Scientist E1	B.Tech, M.E.	Analytical Instrumentation

### 4. Administrative Personnel

Sl. No.	Designation	No. of Posts
1	Section Officer	1
2	Personal Assistants	2
3	Office Assistants	2
4	Helpers	2
5	Driver	1

### 5. Technical Personnel

Sl. No.	Designation	No. of Posts
1	Technical Officers	6
2	Technical Assistants	2

### 6. Research Facilities

#### a. Laboratories

STIC has set up the following facilities to carry out its activities.

#### A. Calibration laboratories

(i) Electro-Technical

(ii) Thermal

(iii) Mechanical

#### B. Testing laboratories

#### C. Sophisticated Analytical Instrument Facility (SAIF)



D. Incubation, Research and Development laboratory (IRDL)

b. **Major equipment available are:**

**Instruments in Calibration/ Test laboratories**

1. 500 MHz Digital Storage Oscilloscope
2. 150 MHz Digital Storage Oscilloscope
3. 8 ½ digit Digital Multimeter
4. True RMS 4 ½ digit Multimeter
5. Portable Pneumatic Pressure Source
6. Portable Hydraulic Pressure Source
7. High Temperature Bath
8. 7-Dial Decade Resistance Box
9. 5-Dial Decade Resistance Box
10. Data Logger
11. Universal Testing Machine
12. Standard Platinum Resistance Thermometer
13. Standard S-type thermocouple
14. Low Temperature Bath
15. Decade Capacitance Box
16. Decade Inductance Box
17. Temperature/ humidity cyclic chamber
18. High Voltage Probes
19. High Temperature Furnace
20. N Type Thermocouple
21. Long Gauge blocks and Surface plate
22. Dead Weight Test Calibrator
23. Thermocouples
24. Portable Calibrator
25. Multifunction Calibrator
26. Scale and Tape Calibration Unit



27. High Voltage Tester
28. LCR Meter
29. Microbalance
30. Impedance Analyzer
31. Desktop Temperature and Humidity Calibrator
32. Plastics Testing equipment
33. High Temperature Furnace 1400°C
34. Teraohm Meter
35. 3 $\phi$  Power Analyser
36. Multiproduct Calibrator
37. Low Temperature Furnace
38. Digital Pressure Gauge

#### **Instruments in SAIF**

1. GC Mass Spectrometer
2. ICP-AES Spectrometer
3. Thermal Analyser DSC
4. Thermal Analyser DTA/TGA
5. UV-VIS-NIR Spectrophotometer
6. FT-IR Spectrometer
7. X-ray powder Diffractometer
8. CHN Analyser
9. 200 KV Transmission Electron Microscope
10. Ultramicrotome (Leica EMUC7)
11. Dimple Grinder (Gatan 656)
12. Ultrapure Water Distillation unit
13. 400 MHz FT-NMR Spectrometer
14. Single Crystal X-ray Diffractometer
15. SAXS Attachment for XRD
16. Mercury Analyzer



17. Scanning Electron Microscope with EDS

18. TG/DTA with Autosampler

19. Logic State Analyser

In addition, a wide variety of minor instruments and facilities are available in STIC.

**c. Library : 1206 Books**

No. of books and journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
1154	52

**d. Others**

**(i) NABL Accreditation:**

Calibration laboratories of STIC are accredited by NABL (National Accreditation Board for Calibration and Test Laboratories, Government of India) in the following areas

(i) Electro-Technical

(ii) Thermal

(iii) Mechanical

(iv) In the chemical testing area, heavy metal detection in water is also accredited by NABL

**7. Distinguished visitors:**

A group of 30 Industries Officers from Department of Industries and Commerce visited STIC on 7<sup>th</sup> April 2016 as a part of their job induction training conducted by Kerala Institute for Entrepreneurship Development (KIED)

The Chairman of the NAAC peer team to CUSAT, Dr. Subbanna Ayyappan (former Director General of ICAR) visited STIC on 29<sup>th</sup> August 2016 and shown keen interest in various activities of STIC.

A group of participants from Srilanka visited STIC to see the various facilities available in Analytical division and Calibration & Testing division of STIC on 30 September 2016.

Another batch of technologists from Non-Tyre Rubber based Industries from Srilanka visited STIC on 15.12.2016 and shown keen interest in various facilities available in STIC.

As a part of job induction training conducted by Kerala Institute for Entrepreneurship





Development (KIED), 30 Industries Extension Officers from Department of Industries and Commerce visited STIC on 16.01.2017.

Around 250 students from different colleges visited STIC on 18.02.2017, in connection with Open House conducted to celebrate National Science Day 2017.

### **8. Publications during the year (2016-17)**

In SAIF, last year alone around 26000 samples received from research community were analyzed and around 190 publications were brought out using the results obtained from the analysis carried out.

### **9. Participation in Seminars/ Conferences/ Refresher courses etc. by Faculty/ Students**

- (i) Dr. Jagannath Bhat, Director, i/c. was Lead/Technical Assessor in connection with NABL Accreditation of M/s. Beltronics, Bangalore on 11.07.2016.
- (ii) Dr. J. Jagannath Bhat, Director i/c., Dr. Shibu M. Eappen & Mr. Adarsh K.J., Scientists were visited College of Agriculture, Vellayani, Trivandrum on 27.04.2016 in connection with discussions regarding setting up of Pesticide Residue Testing facility in STIC.
- (iii) On 18.05.2016 Dr. Shibu M. Eappen and Mr. Adarsh K.J., Scientists visited NIIST, Trivandrum.
- (iv) Dr. Shibu M. Eapen, Scientist E1 has delivered a talk on “Electron Microscopy, Thermal Analysis, Fourier Spectroscopy” in connection with one week training programme for technologists from non-tyre Rubber based Industries from Srilanka, organized by Indian Rubber Institute in Collaboration with Dept. of Polymer Science and Rubber Technology, CUSAT on 29 September 2016.
- (v) Mr. K.J. Adarsh, Scientist E1 has delivered a talk on “Electron Microscopy” on 14 December 2016 for participants from Non-tyre rubber based industries Srilanka, in connection with a training programme organized by Indian Rubber Institute in collaboration with Dept. of Polymer Science and Rubber Technology, CUSAT.
- (vi) Dr. J. Jagannath Bhat, Director-in-charge had attended the SAIF Steering Committee meeting at New Delhi on 20.12.2016 convened by Department of Science and Technology (DST), Govt. of India to present the performance of SAIF, STIC for the F.Y. 2015-16 and the proposal for 2016-17 to the Committee.
- (vii) Dr. Jagannath Bhat, Director i/c. has delivered a lecture on “Activities of STIC for the development of Entrepreneurs in Kerala” on 16.01.2017 for the participants of a Seminar at KIED.



(viii) Mr. K.J. Adarsh, Scientist – E1 has presented a paper entitled “Preconcentration of heavy metals from aqueous solution using chitosan coated polypropylene filter unit coupled with ICP AES” in the Kerala Science Congress 2017 at Marthoma College, Thiruvalla.

#### 10. Role of Faculty in International/ National organizations/ institutions/ Editorial Boards:

Name of Faculty	Name of Organization	Role
Dr. J. Jagannath Bhat	NABL, QCI, New Delhi	Lead/ Technical Assessor
Dr. J. Jagannath Bhat	CUSAT	Member, Board of Studies in Instrumentation

#### 11. Research Programmes and Activities:

Sl. No.	Problem/ Topic	Investigator(s)
1.	Enhancing Calibration measurement capability	J. Jagannath Bhat, Paul V. John and V. Sreeja
2.	Value added services extended by SAIF to researchers	J. Jagannath Bhat, Shibu M. Eappen and Adarsh K.J.

#### 12. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl. No.	Title	Duration	Coordinator	Funding Agency
1.	Training Programme on ‘Calibration of Glassware and Glass Thermometers’	26 – 28/05/2016	Mr. Paul V. John	Self
2.	L2L series-1 Fourier Transform Infrared Spectroscopy	18.11.2016	Dr. Shibu M. Eappen	Self
3.	L2L series-2 X-ray Diffraction	25.11.2016	Dr. Shibu M. Eappen	Self
4.	Calibration Of Pressure And Temperature Parameters	13 – 14/2/2017	Ms. Sreeja V.	Self
5.	National Science Day	18/2/2017	Dr. J. Jagannath Bhat	Self

#### 13. Consultancy Work:

No. of Calibration and testing work done	: 4085
No. of Users (most are industries)	: 428
No. of Sample analysis done	: 25835
No. of users (most are researchers)	: 4087



## DEPARTMENT OF PHYSICAL EDUCATION

### Brief History

The Department of Physical Education, Cochin University of Science and Technology is promoting Physical Education and sports on par with regular academics. The University has well recognized the value of sports and physical activities as a means of developing personality promoting social harmony and discipline. The department provides ample opportunity to the students to utilize their leisure time with physical activities to reduce their stress in their day-to-day education system. At this esteemed University, we believe in all round development of students and hence, apart from our success stories in the field of education, the University provides encouragement and support to sports in a big way. With this unconditional support, the sports department went on to bring glory to the University in several disciplines of sports. The department has evolved into a team, which is committed to producing sports persons of very high standards.

Sports & Games activities in the University Campus were very much active and alive during the year 2016-2017. The University is slowly but surely making a name for itself in the sports filed. This year Department has organized Cochin University of Science and Technology Intercollegiate Track & Field and Games Meet and Senior State Chess Championship under the joint venture of State chess Association.

### 1. Play Field Facilities

- Multipurpose Track and Field (outdoor), Football, Cricket.
- Indoor Stadium for Shuttle Badminton and Table Tennis.
- Basket ball court (out door-2 NOS)
- Volley ball court (out door-2 NOS)
- Health and Fitness center

### 2. Programmes of the Department

- 1) Sending various teams for the South Zone/ All India championship.
- 2) Conducting Adventure sports.
- 3) Conducting Cochin University of Science and Technology Intercollegiate Track and Field and Games Meet.



- 4) Conducting Coaching camps for various teams.
- 5) Organizing various championships, with the joint venture between university and Other associations.

### **South Zone Inter University Competitions**

- 1) Foot Ball tournament held at Gulbarga University, Karnataka
- 2) Cricket held at Hindustan University, Chennai
- 3) Volley Ball held at M.G University, Kottayam.
- 4) Shuttle Badminton held at Madurai Kamaraja University, Tamilnadu
- 5) Table Tennis held at Anna University, Chennai.
- 6) Chess Tournament held at VEE TECH University, Chennai

### **All India Inter University Competitions**

- 1) CUSAT Fencing team participated in the All India Inter University Fencing Championship held at Guru Nanak University, Amritsar, Punjab.
- 2) CUSAT Boxing team participated in the All India Inter University Boxing Championship held at Lovely Professional University, Jalandhar, Punjab.

### **34<sup>th</sup> CUSAT Inter-Collegiate Track & Field and Games MEET-2016-17**

The 34<sup>th</sup> CUSAT Inter-Collegiate Track & Field and Games MEET-2016-17 of University for the academic year 2016-17 was conducted with pomp and show from 14<sup>th</sup> to 27<sup>th</sup> January 2017. The vibrant and kaleidoscopic Meet was successfully organized with the active participation 3500 students from 27 affiliated colleges and various departments.

CUSAT Athletics meet was conducted with 17 events for boys, 12 events for girls and intercollegiate games in the following discipline.

- |                          |                             |
|--------------------------|-----------------------------|
| 1. Football (Men)        | 2. Cricket (Men)            |
| 3. Volleyball (Men)      | 4. Basketball (Men/Women)   |
| 5. Badminton (Men/Women) | 6. Table Tennis (Men/Women) |
| 7. Chess (Men/Women)     | 8. Throwball (Women)        |

Prize distribution was done by Pro-Vice Chancellor Dr.K. Paulose Jacob with the presence of Dr.N. Chandramohanakumar, Syndicate Member, Sri.Sebastian Ouseph, Finance Officer, Dr.Supriya M, Dr. Prathapachandra Kurup and Dr.M. Radhakrishna Panicker, Principal, SOE on 27<sup>th</sup> January 2017 at Main Play Ground, CUSAT.



The sportsmen of the University have done the University proud and with every passing year, we aim to reach closer to sporting excellence. Their efforts have not gone in vain as the University has always recognized them as invaluable assets and an integral part of this premier University. The success of all the ventures of the Department of Physical Education owes its credit largely to the unparalleled support rendered by the team of dedicated coaches and support staff.

### 3. Coaches on assignment:

1. **Sri. Renosh James**- Badminton Coach (Kerala State Sports Council)- Shuttle Badminton team.
2. **Sri. Jith J Bhatt** (Technical Official and Coach) - Kerala Cricket Association- Cricket team.
3. **Sri. Xaviour Loise** - Ernakulum District Volley Ball Association- Volley Ball team
4. **Sri. Justin Francis** - Basket ball team
5. **Sri. Murukaraj** (Kerala State Sports Council) **and Sri. Vipin Anto** – Foot Ball team.
6. **Sri. Lalu M** - Boxing team.
7. **Sri. Shoaib P O** - Fencing-Kerala State Sports Council

### 4. Faculty Members

Sl.No.	Name	Designation	Qualification	Specilisation
1	Dr.Ajith Mohan.K.R	Assistant Director and Head	Ph.D	

### 5. Visiting Faculty (If any)

Sl.No.	Name	Designation	Qualification	Specilisation
1	Shri.Renosh James	Badminton Coach,KSSC	NIS in Shuttle Badminton	Shuttle Badminton
2	Shri.Murukaraj	Foot Ball Coach,KSSC	M.Phil and NIS in Foot Ball	Foot Ball
3	Shri.Vipin Anto	Foot Ball Asst. Coach,		Foot Ball
4	Shri. Shoaib P.O	Fencing Coach,KSSC	NIS in Fencing	Fencing
5	Shri. Xaviour Loius	Volley Ball Coach	NIS in Volley Ball	Volley Ball



6	Shri.Justin Francis	Basket Ball Coach		Basket Ball
7	Shri.Jith J Bhatt	Cricket Coach	M.Phil in Physical Education	Cricket
8	Shri.Arun Raj	Asst.Coach		Cricket
9.	Shri.Sujith.S	Team Manager for Shuttle Badminton (Asst.Prof in Phy.Edn NUALS, Kochi)	M.Phil in Physical Education	Shuttle Badminton
10	Shri.Kannan.K	Team Manager for Volley Ball(Asst.Prof in KVM College of Engg,Cherthala)	M.Phil in Physical Education	Volley Ball
11	Shri.Saju Manjaly	Team Manager for Chess (Asst.Prof. in COE,Thrikkaripur)	M.Ped	Chess
12	Shri.Sharath Raj	Team Manager for Table Tennis (Asst.Prof. in COE,Vadakkara)	M.Ped	Table Tennis

### 6. Administrative Personnel

SI.No.	Designation	No. of Posts
1	Sri.Prakash	(One) Section Officer
2	Shri.Shameer.C.M	(One) Office Assistant

### 7. Technical Personnel

SI.No.	Designation	No. of Posts
1	Play Ground Marker	One
2	Health Club Instructor cum Care taker	One

### 8. Student Enrollment

SI.No.	Programme of Study	Men	Women	Total
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## 9. Publications

### a. Papers

Sl.No.	Name of Paper	Impact Factor, if any
1	<b>“Comparative Study of Job satisfaction and job stress among Kerala Secondary School Physical Education Teachers”</b> - Quarterly International Engineering Research & Sports-ISSN-2348-1404, Vol:1, Issue No; 1-Jan - 2016	
2	<b>“The Importance of Sports Medicine”</b> - Quarterly International Engineering Research & Sports-ISSN-2348-1404, Vol:3, No; 3-March- 2016	

## 10. Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
Dr.Ajith Mohan.K.R	Kerala State Sports Council	Member, Governing Body as per G.O(P)No.38/2015/S&YA Dtd:01.12.2015
Dr.Ajith Mohan.K.R	Tvpm Judo Association	Vice President
Dr.Ajith Mohan.K.R	Kerala Cricket Association –International Match	Organizing Committee member
Dr.Ajith Mohan.K.R	National Games	Technical Committee member
Dr.Ajith Mohan K.R.	Expert committee member for the promotion of sports in Govt. Poly Technique College	No.C2/43952/16/D.T.E dated 07/16/2017



## DEPARTMENT OF YOUTH WELFARE

### 1. Brief History

Department of Youth Welfare is a formal platform in the University to design and implement youth policy which includes the issues related to motivation, participation, promotion and socio-economic and cultural settings within which young people grow up. The Department is acting as a supporting force for the students and youth community to epitomize their academic excellence through doing and learning.

The Department was established with an aim to promote cultural and social life among the university community from the beginning of the University, under the headship of the Director. A full-time Director, Students Welfare was appointed in 1990 with independent charge of the Department of Youth Welfare. The present Director, Dr. P.K Baby assumed charge in 09th July, 2009.

### Vision

To create sense of values and social life among students of the University through doing and learning and inculcate positive thinking for physical and mental health.

### Mission

1. Organizing training / orientation programmes / motivation sessions / camps.
2. Conducting extension / outreach services.
3. Provide advocacy services for students.
4. Coordinate students' cultural / recreational / art and literature activities.
5. Facilitate both tangible and intangible welfare programmes and procedures.

### 2. Programmes of Study/Research

The Department is conducting short-term training programmes in the areas of arts, soft skills and personality development with an objective of achieving 5 C's – Competence, Creativity, Confidence and Compassion and Communication.

### 3. Faculty Members

Sl.No.	Name	Designation	Qualification	Specilisation
01.	Dr. P.K Baby	Director, Students Welfare	M.A (Economics); M.B.A; M.Phil; Ph.D	





#### 4. Administrative Personnel

SI.No.	Designation	No. of Posts
1.	Office Superintendent HG	1
2.	Computer Operator HG	1
3.	Office Attendant	1

#### 5. Distinguished visitors

SI.No.	Name	Affiliation	Remarks
1.	Sri. N Anilkumar,	Principal Dist. Judge	Anti Ragging Classes
2.	Sri. P Unniraja IPS	Superintendent of Police	Anti Ragging Classes
3.	Rajesh surendran IFS	Chief Forest Conservator	Nature Camp
4.	Adv. Harish Vasudevan	Environmental Activist	Nature Camp
5.	Dr. Vaisakhan Thampi	Asst. Professor	Science Lecture
6.	C. Ravichandran	Science Orator	Science Lecture
7.	Dr. Sreejith Remanan	Asst. Professor in Theatre	Trainer in Green Room
8.	Mr. Rajesh Sharma	Film Actor	Trainer in Acting Workshop
9.	N. K Desam	Poet	Literature Camp
10.	Rafeeq Ahammed	Poet	Literature Camp
11.	P.P Ramachandran	Poet	Literature Camp
12.	P. Raman	Poet	Literature Camp
13.	S. Joseph	Poet	Literature Camp
14.	K.R Tony	Poet	Literature Camp
15.	Kalpatta Narayanan	Writer	Literature Camp
16.	Dr. M Thomas Mathew	Writer	Literature Camp
17.	Dr. A Sreekumar	Scientist	Science Lecture
18.	Dr. Manoj Komath	Scientist	Science Lecture
19.	Mr. Kiran Chandra	Software Engg.	Seminar
20.	Y. Muhammed Safarulla	District Collector	Youth programme
21.	Sri. Amal Rj Dev	Actor	Trainer in Acting Workshop



## 6. Publications

### a. Books

Sl.No.	Name of Book	ISSN
1.	Poverty Eradication in Kerala through Society for Assistance to Fisherwomen	978-93-80095-91-2

## 7. Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
Dr. P.K Baby	Kerala State Youth Welfare Board	Jury Memembr
Dr. P.K Baby	Bharathiar University, Coimbatore	Approved Research Guide (External)


## 7. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1.	CUSAT SCIENCE LECTURE SERIES Lecture I & II	1 Day, 28.08.2016	Dr. P.K Baby	CUSAT
2.	CUSAT SCIENCE LECTURE SERIES Lecture III	1 day 06.11.2016	Dr. P.K Baby	CUSAT
3.	Green Room VII: Cultivating Creativity	2 days: 25 <sup>th</sup> to 26 <sup>th</sup> March 2017	Dr. P.K Baby	CUSAT
4.	Sound of the Music: Music Workshop	4 days: 04 <sup>th</sup> to 08 <sup>th</sup> October 2016.	Dr. P.K Baby	CUSAT



## 9. Other Programmes / Activities

Sl. No.	Name of the Programme	Details
01.	Tree Care Day 14 <sup>th</sup> July 2016.	<p>The Department of Youth Welfare observed July 14<sup>th</sup> as Tree Care Day under the Swachh Bharat Abhiyan Scheme at various parts of CUSAT. The objective of the programme was to create awareness among the students about the importance of tree care. Many groups, departments and organizations have been planting trees in the campus and different parts of the state every year. However, the trees planted were not checked or taken care of after the much celebrated planting. Against this backdrop the Department planned to observe a day for caring the trees in the campus. The slogan of the programme was 'no more plants; rather we care what we planted'. The programme started at 10 am in the morning. The students checked the saplings planted last year, removed the impediments and ensured that the trees will grow properly by removing climbers, adding manure, cleaning the area and to build a culture of caring trees with students' participation. The participants sat together in the afternoon and discussed about the importance of tree care in the campus.</p> <p>In continuance of the discussion the students suggested some proposals for implementation in the University. Formation of committee for environmental management including staff, teachers and students of the University and construction of cement benches in the courtyard of Students Amenity Centre and in front of the open air Auditorium were among them. The group cleaned the area in front of the Department of Computer Applications and protected the trees which were planted last year. They also planted trees in front of the Environmental Science Department. Hence we request to construct a round boundary wall in the area. The flowering trees were planted in the premises of Department of Ship Technology, Inter University Centre for IPR studies and statistics too by the group. The team also suggested fencing of open area between Students Amenity Centre and Coffee House.</p> <p>The event was a learning experience for the students of the University at practical as well as at policy level regarding the importance of tree care, environmental protection and keeping the nature clean. The team learned the lessons of leadership, team spirit and the importance of value of work. The programme concluded with the famous quote of Maggie Stiefvater, that 'If I were a tree, I would have no reason to love a human'. The programme concluded by 6.30 pm. Dr.P.K Baby, Director, Students Welfare and Smt. Malathi S Assistant Professor, Department of Computer Applications coordinated the programme.</p>

<p>02.</p>	<p><b>Anti Ragging Awareness Programme - 22<sup>nd</sup> July onwards.</b></p>	<p>Cochin University has decided to take stringent actions against students involved in ragging based on the recommendations made by the honorable Supreme Court, UGC and Governments. A meeting convened by Vice Chancellor, Pro-Vice Chancellor and Registrar on 13<sup>th</sup> June 2016 has decided to strengthen monitoring at hostels and classrooms to check incidents of ragging and entrusted the Director, Department of Youth Welfare to co-ordinate the anti-ragging awareness activities in the campus. It is further decided to provide enough publicity in the campus against such barbarism through awareness programmes, posters and flex boards. The University has made wide arrangements to prevent ragging in the Campuses of the University before the commencement of classes of new batch. In this view University has formed a University level monitoring cell, Anti-ragging committee and Anti ragging squads at Department level. A combined meeting of committees has discussed various actions to be taken to prevent the menace of ragging from the campus and decided to start the awareness programme for seniors from 22<sup>nd</sup> July, 2016 onwards.</p> <p>Sri. N Anilkumar, Principal District and Sessions Judge inaugurated the University level anti-ragging campaign at SMS Auditorium on 22.07.2016. Sri. P. Unnirajan IPS, Superintendent of Police (Ernakulam Rural) delivered key note address. Dr. J. Letha, Vice chancellor presided over the meeting. Dr. A. B Bhasi, Controller of Examinations, in charge of Registrar welcomed the gathering and Sri. C.S. Mohit, Sub Judge and Secretary, DLSA proposed vote of thanks.</p> <p>At Kuttanad campus, The National Service Scheme of Cochin University College of Engineering Kuttanad in association with Kuttanadu Legal Service Committee has conducted anti-ragging awareness classes on 29.07.2016. The programme was presided over by Dr. P S Sreejith, Principal CUCEK. The programme was inaugurated by Sri Anil Kumar, Circle inspector of Police, Pulincunnu. Adv. Chacko, Secretary to Kuttanad Legal service Society and Adv. Azeem Mohammed talked on legal and criminal procedures of ragging. The session ended with a pledge taken by the students that they will not directly or indirectly involve in any activity that may hurt the feelings of the fresher's.</p> 
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		<p>This year, University had conducted various sessions among students and made conscious effort to aware each and every senior student of the University regarding the consequences of ragging. A written and signed affidavit was collected from every student at the time of admission mentioning that they will not engage in any ragging related activities. Various committees, i.e., University level monitoring committee, anti ragging committee and anti ragging squads at department level were also formed as per the directions of the Honorable Supreme court and UGC. Wide publicity has given in the various places of campuses, hostels, cafeteria and common amenity centers with anti ragging helpline numbers.</p>
03.	<p>Monsoon Madnes - 01<sup>st</sup> to 03<sup>rd</sup> September 2016 at Chimmony Wildlife sanctuary.</p>	<p>Not all madness, madness towards nature. CUSAT students are lucky enough to feel and share the beauty of nature through Monsoon madness a camp organized by Department of Youth Welfare in association with Department of Forest and Wildlife, Government of Kerala. The primary aim behind the camp was to get the students immerse themselves into nature and enable them to feel the sense of understanding about the value, graciousness and love for nature.</p> <p>Monsoon madness, 2016 started on 1<sup>st</sup> September 2016 at Chimmony wildlife sanctuary with 40 selected students from different departments of CUSAT along with Dr. P.K Baby, Director Department of Youth Welfare and Dr. Mythili School of Engineering. The placid and beautiful Chimmony wild life sanctuary is located in the Western Ghats and which is one among the 25 bio-diversity spots in the world with numerous endangering species of plants and animals. The campers were welcomed by Mr. Dharmarajan, an environmental activist. The camp activities started with a small walk to the dam side. The campers got a golden opportunity to listen and interact with the Chief forest conservator (central circle) Mr. Rajesh Surendran IFS and Chief Wildlife Warden A.O Sunny, IFS. The motivational session handled by Mr. Rajesh Surendran IFS discussed about manmade disasters and the importance of preserving the forest.</p> <p>The second day programs of Mansoon madness started with a morning walk to dam along with yoga program. The camp instructor Mr. Dharmarajan explained the importance of experiencing the nature with five senses. Campers experienced forest with eyes and ears and got opportunity to see many birds, snakes, insects, monkeys, elephants, many animal foot prints and they enjoyed the pleasure of walking in rain through the forest and waterfall. The afternoon sessions started with a debate on different environmental issues led by Dr. Mythili. Students actively participated in the discussions on reducing the usage of plastics, waste management, sapling plants, educating the importance of environmental protection at schools. The other highlight of the program was dam site visit. The second day programs ended with student discussions and their cultural programs.</p>



		<p>After a short morning walk, the third day started with a talk by Mr. Hareesh Vasudevan, noted environmental activist in the state. The discussion topic for the session was 'man and manmade disasters'. Along with Mr. Hareesh Vasudevan, Seema Suresh, wildlife photographer had a small discussion about wild life photography and instructions to be followed by photographers or trekkers while entering into the forest. After the sessions, all the plastic wastes of the entire dam site were removed by students as a part of their responsibility towards Mother Nature. Dr. P.K Baby and Dr. Mythili led the programme. The camp culminated very successfully with a small meeting and experience sharing. It added values of environmental concern, team spirit and personality development among the students.</p>
04.	CUSAT Science Lecture Series I & II 28 <sup>th</sup> August 2016.	<p>The Department of Youth Welfare, Cochin University of Science and Technology in association with Kerala Freethinkers Forum has organized a science lecture series in the campus. The objective of the series was to inculcate scientific temper among the students and youth community. The inaugural presentation and one day seminar was conducted on 28.08.2016, 9.30AM at SMS Auditorium, Cochin University of Science and Technology. The series provided opportunity for the students to develop their own arguments, discuss with the experts and learn the logic of doing science. Outcome of the seminar included, conveying the dynamic nature of scientific knowledge that underlie the academic curriculum followed in the country.</p> <p>The programme was officially inaugurated by smt. Priya A.S noted writer and winner of Kendra Sahithya academy award at 09.30 am on Sunday, the 28<sup>th</sup> August 2016. Dr. K Babu Joseph, Former Vice Chancellor of the University presided over the function. Dr. P.K Baby, Director, Department of Youth Welfare welcomed the gathering and sri anu vinod proposed vote of thanks. Two lectures were arranged on the first day. In the morning session, Sri. Ravichandran C, noted rationalist and freethinker delivered a presentation on 'Tell Tale Brain'. Dr. K Babu Joseph chaired the session and Dr. Augustus Morris was the key discussant. In the afternoon session, Mr. Vaisakhan Thampi, popular science orator spoke on 'Aham Dravyaasmi: Matter Ingredients of Visible Universe'. Dr. Shaiju P chaired the session and Dr. R Prasant was the key discussant. Around 170 people participated in the seminar. The programme ended by 4.30 P.M.</p>



05.	<p>N.V Virth centenary Poetry Camp 16<sup>th</sup> to 18<sup>th</sup> September 2016.</p>	<p>Department of Youth Welfare, Cochin University of Science and Technology in association with V T Memorial Trust and Aakashavani FM organized a three day poetry camp for selected youth who love to write, in connection with the birth centenary of N.V Krishna Warriar during 16<sup>th</sup> to 18<sup>th</sup> September 2016. The objective of the programme was to teach the language of poetry and to cultivate creative writing consents among the participants. The camp was officially inaugurated by Dr. M. Leelavathi, noted writer and literary critic. Prof. M Thomas Mathew presided over the function. Prof. R. Sasidharan Member, Syndicate, Sri. T.T Prabhakaran, Assistant Director, Aakaashavaani, Dr. P.K Baby, Director, Department of Youth Welfare, Dr. Sangameshan, Coordinator of the camp spoke on the occasion.</p> <p>The second session started after the formal acquaint and lunch. The session Kavitha Enthinu was handled by S.K. Vasanthan who discussed diminution of poems and the importance of reading the inherit foot prints of poets like Kumaranashan. The third session titled 'kavitha rachana thanthram' by P.Raman was about creative construction of poems. In this session he explained various strategies and methods of writing poems adopted by different writers all over the world.</p> <p>The last session of the first day camp was 'Kavi samvadham' a poetic meet and consultation of campers and poets. Well known poets N.K. Desham, Rafeeq Ahammed, P P.Ramachandran, P.Raman, S. Joseph, K.R.Tony, Sree Kumar Mukhathala, and VM Girija actively involved and interacted with the campers. The first session of the second day was by Prof. M. Thomas Mathew 'Kavya Anubhavam' was about the methods and ways of enjoying the poem reading. He discussed about various genre of reading for enjoyment. The second session was 'Kavya Bhashsa' by Dr. K.P Mohanan, Secretary, Kerala Saahitya Academy who emphatically spoke about the significance of reading other writers by a poet. The third session was by Suresh Mookkannur 'Class Room Kavithakal' was a joyful experience by active participation by campers. In the evening session 'Kavya Vishakalanam' was on critical analysis of the poems written by the participants by J. Hiran, Suresh Mookkannur, Prof. Thomas Mathew and V.M. Girija. Poems of campers were deeply evaluated and serious discussion was held on each poems by the panel members.</p> <p>The third day program started by Dr. Sajay K.V on 'Puthiya Kalam Puthiya Kavitha' deeply discussed the writing pattern and expressive ways of new writers. The next session of the camp was 'Kavitha Darshanam' by known poet Kalpatta Naryanan. The valedictory session was at 1 PM. Prof. M. Thomas Mathew presided over the function. Dr. K Vanaja, Dean and member of Syndicate offered valedictory message. Balakrishnan Koyyal, Director Aakashavani Cochin distributed certificates to campers. Sreekumar Mukhathala welcomed the gathering and Sri. K.K Ravi expressed vote of thanks.</p>
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<p>06.</p>	<p><b>Back to Village – 01<sup>st</sup> to 03<sup>rd</sup> October 2016.</b></p>	<p>The first "Back to Village: Education through Experience" organised by Department of Youth Welfare, CUSAT was a unique attempt to understand village life and experience education through field learning. Forty eight students from various departments of CUSAT along with Director of Department of Youth Welfare Dr. P.K Baby and Dr. Mythili, Associate Professor in Engineering visited Muthalamada, a tribal village during 01<sup>st</sup> to 03<sup>rd</sup> October in connection with Gandhi jayanthi celebrations. Gandhiji's life, ideas and work are of crucial importance to all those who want a better life for humankind. Gandhiji firmly believed that self-reliant villages form a sound basis for a just, equitable and non-violent order. This can be a guiding principle for all citizens, constructive workers and policy makers in India. The younger generation in the present campus is not aware about the importance of villages and knowledge base existing there. This camp was an attempt to strengthen the gap between the modern and traditional knowledge.</p> <p>Then the group in the refreshing environment visited the Palakkad Coconut Producers Company Limited where they had an exhaustive practical learning about the processing of coconut to produce various products like edible and non-edible coconut oil, neera, honey etc. They also got to know about the market condition and about the adulteration even in the other trusted products. After having 'Neera', the group went on to 'Karadikunnu', a hilly area in Muthalamada Gramapanchayat. The strong breeze, the mountains, the far away lakes, the setting sun and the lilac horizon only added to the mesmerising effects of nature had on us already. The aesthetic evening spend at Karadikkunnu was an unforgettable experience for each camper. It was almost dark by the time the campers were back to the dormitory. Then some great singers from the group and local tribal people stole the moment with spellbound performance. The first day of the camp ended at 10.30 with the dinner, discussion about next day's program and an entertainment musical programme by the tribal singers.</p> <p>The second day program set on foot with a morning walk. Around 8 kilometre distance was covered by the campers. After having a delicious breakfast they met a group of farmers who shared their knowledge about agriculture and its practices. After the informative session everyone started to feel more connected to the food they eat. And then there was Mr. Vinod Kumar, he kept the crowd in a trance with his talks. Seldom have many of us had a conversation like that. We learnt so many things about life and many of us must have had a paradigm shift in their thought processes and analytical spectrum. He graced the campers by allowing to visit his house and his valuable collections of books, archaeological findings and fossils. Then it was time to meet the village people around and there the campers tried to understand their lives and their challenges by building their Capital Pentagon. The meeting with the local people changed their perspective about the lives and made ponder upon the happiness and sorrows, our privileges and the challenges. Then they walked silently to the nearby hill and sat in silence while the breeze brought flashbacks of the day. By the time the sun moved from yellow to crimson, they had already collected firewood for the bonfire and enjoyed the night by singing and dancing.</p> <p>The third day of the camp started with morning walk at 6.15 am. Through Govindapuram the campers walked around 12 kilometres through village up to Tamilnadu border. After morning walk and breakfast all gathered for the two sessions with Mr. Vinod kumar and with Dr. Baby on Gandhian thoughts and Gandhi's philosophy, focusing on the importance of political agenda of Gndhian entry in Indian society. The last program of the day was group discussion regarding the previous day's house visit. One person from each group shared their experience. Many of the new members were very enthusiastic with their experiences and expressed the need of arranging such camps. The main outcome of the camp was the learning on the spread of poverty even in the midst of land richness. It is observed that natural capital, especially availability of water is directly connected to the spread of poverty. The train journey has always been a nice experience. Everybody bid a short-lived good-byes and reached home safely. With a reminiscence of the experience of the last three days, it's sure that they will never get over it.</p>
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07.	<p>Sound of Music: Music Workshop 04<sup>th</sup> to 08<sup>th</sup> October 2016.</p>	<p>Department of Youth Welfare, Cochin University of Science and Technology has organized a Music Workshop: 'The sound of the Music' at CUSAT during 04<sup>th</sup> to 08<sup>th</sup> October 2016. The objective of the workshop was to bring the students who love music to a common platform and provide basic lessons on how to sing. The workshop was officially inaugurated by the noted music director Dr. Suresh Manimala at 05.00 p.m on 04<sup>th</sup> October 2016. Dr. P.K Baby, Director Department of Youth Welfare welcomed the students who attended the camp. The workshop was scheduled after 5 o'clock, everyday without affecting regular classes from 04<sup>th</sup> to 08<sup>th</sup> October. On the first day, Dr. Suresh briefly explained about the workshop. The evening of the first day of the music workshop, he talked about various types and composition of music including ragas. He also explained few technical terms in music such as, timber of a song, major scale and minor scale for a song etc.</p> <p>The session in the coming days extended up to 08.30 p.m, with full of energy and enthusiasm. Dr. Suresh explained about the essentials to keep in daily life as a singer. He explained some of the relaxation techniques that he used to do and suggested some medicines. Then he showed different kinds of microphone and explained that each person have to select a unique microphone which suites them the most. In the third and fourth day, he explained the basic understanding about music and during the session he asked everyone to sing in front of the audience and explained the mistakes that they made while singing. The participants were given opportunity to give feedbacks about the workshop. The participants found to be extremely happy with their experience with the workshop. The whole workshop ended on 08.10.2016 by 08.30 p.m.</p>
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08.	Reel Earth: Environmental Film Festival of CUSAT 2016. 18 <sup>th</sup> to 21 <sup>st</sup> October 2016.	<p>To create awareness on key environmental issues the Department of Youth Welfare, Cochin University of Science and Technology, organised 'Reel Earth: Environmental Film Festival of CUSAT 2016' (Reel Earth: EFFC-2016), a festival of environment related documentary films from October 18 to 21. The Festival started at 04.30 p.m on 18th October 2016. Noted media critic Dr. Sebastian Paul inaugurated the series at Hindi Auditorium. Dr. Poornima Narayanan, Member of syndicate presided over the function. Sri. D Dhanasumodh, director of the opening film, jalasamadhi and Dr. P.K Baby Director, Department of Youth Welfare spoke on the occasion. Sri. Dhanasumod was honoured on the occasion.</p> <p>Following the inauguration on 18th October, Malayalam documentary film, 'Jalasmaadhi, (Vanishing Island) directed by D. Dhanasumod was screened at 5.00 P.M at the Department of Hindi Auditorium. Vanishing island is a documentary film based on environmental real life happening in an Island called Monroe, Kollam District, in Kerala. The documentary depicts the life of people who live in a village vanishing very fast into sea. The classic saga, Last Lions, directed by Dereck Joubert was screened at 05.00 P.M on 19th October. The film focuses on a lioness named Ma di Tau as she battles to protect her cubs against the daunting onslaught of enemies to ensure their survival. The underlying message of the film is on the low population of large cats in the world and whether or not Ma-di-Tau and her cubs are among the last lions. The story behind big dams and displaced people around the world, Damocracy, Directed by Todd South gate and Tolga Temuge was screened at 05.00 P.M on 20th October. It was a story of resistance by the thousands of people who will be displaced, and a call to the world to support their struggle. The documentary is an excellent documentation on the problems posed by mega-dam projects anywhere in the world, from their environmental and social impacts to the way they are forced through over widespread opposition by affected communities, often by means of shady legal tactics. The great migration story by the National Geographic Team, 'The Greatest Animal Migations' was screened at 05.00 P.M on 21<sup>st</sup> October 2016. The documentary depicts the single greatest mass movement of land mammals on the planet. The film took us along on the greatest animal migration in the world, when millions of wildebeest make their long journey from Tanzania to Kenya. It is observed that the nature documentaries are more effective in the development of environmental concern among the students. The festival ended on 21<sup>st</sup> evening.</p>
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09.	CUSAT Science Lecture Series III 06 <sup>th</sup> November 2016.	<p>The 3<sup>rd</sup> Lecture of CUSAT Popular Science Lecture Series organized by the Department of Youth Welfare in association with Kerala Freethinkers Forum was held on November 06, 2016 at SMS Auditorium. The Lecture was on 'The Other Side of Organic Farming'. Dr. K. M Sreekumar, Professor, Kerala Agriculture University delivered the keynote address. He emphasized the relevance of modern methods of cultivation to ensure food security and also the need to follow scientific methods in agriculture. With the advent of agriculture man became culturally rich and modern.</p> <p>Famine in all over the world was sort out by two outputs of modernity - science and democracy. From 1930 onwards fertilizers has been in use worldwide. The average life span in India at the time of Independence was 37 which reached to 69 now, because of the widespread modern agriculture practices in our country.</p> <p>The seminar called for scientific farming, applying scientific practices and emphasizing on productivity. Dr. A. Sabu, Member of Syndicate chaired the session. Dr. Manoj Komath, Scientist from Sree Chithira Tirunal Institute of Medical Sciences and Technology was the key discussant. Dr. P K Baby introduced the theme of the seminar. The active participation from the audience made the session lively. The seminar concluded by 2.30 pm.</p>
10.	32 <sup>nd</sup> South Zone Inter University Youth Festival at Bangalore University, Bangalore. 16 <sup>th</sup> to 20 <sup>th</sup> December 2016	<p>The cultural team from Cochin University of Science and Technology has participated in the 32<sup>nd</sup> South Zone Inter University Youth Festival jointly organized by the Association of Indian Universities and the Ministry of Youth affairs and Sports, Government of India, held at Bangalore University, Karnataka from 16<sup>th</sup> to 20<sup>th</sup> December 2016. The team participated in Theatre, Literary, Fine Arts, Dance and Music Events and secured second prize in quiz. The quiz team, including Adithya Menon and Nitin S. from School of Legal Studies and Edwin Muriyedan Wilson from School of Engineering were selected to participate in the All India Inter University Youth Festival held at Sivaji University, Kolhapur Maharashtra during 10<sup>th</sup> to 15<sup>th</sup> February 2017.</p>



11.	Prelude to 29 <sup>th</sup> Kerala Science Congress (KSC) 11 <sup>th</sup> January 2017	Kerala State Council for Science, Technology and Environment (KSCSTE) organized the Kerala Science Congress (KSC), an annual event for promoting research and education in the field of Science and Technology. It also provides a platform for the researchers, academia and students to interact with eminent scientists, technocrats and industry. The 29 <sup>th</sup> edition of the Kerala Science Congress held during 28 <sup>th</sup> –30 <sup>th</sup> January 2017 at Mar Thoma College, Thiruvalla. The Department of Youth Welfare has organized a curtain raiser programme as a prelude to 29 <sup>th</sup> Kerala Science Congress (KSC) on 11 <sup>th</sup> January 2017 at 10.30 a.m at the Electronics Department Auditorium of the University. Sri. P.K Raveendran, noted scientist and Smt. Sherin B.M., Scientist, KSCSTE interacted with the students. The programme enabled the students to directly interact with KSC officials and encouraged them to participate / present papers in the Kerala Science Congress. Dr. Supriya M.H, Head of the Department, Department of Electronics welcomed the gathering and Dr. Sreekumar, Scientist, KFRI proposed vote of thanks.
12.	Seminar of Debugging Digital India. 20 <sup>th</sup> January 2017	Department of Youth welfare, Cochin University of Science and Technology in association with Democratic Alliance for Knowledge Freedom (DAKF) Kerala Chapter organized a one day work shop on 'Debugging Digital India on 20 <sup>th</sup> January 2017 at Department of Hindi Auditorium. Sri. Kiran Chandra, General Secretary, Free Software Foundation of India, Hyderabad and Director SWETCHA and Sri. K.T Kunhikannan, Director, Keluvettan Padana Kendram delivered key note addresses on Re-Enginnering Digital India and Social Impacts of demonetization respectively. Sri. Thomas Joseph, President Free Software Foundation of India presided over the function. Dr. Ignatius Kunjumon, Dr. A Sabu spoke on the occasion. The objective of the seminar was to create awareness among the students and public regarding the possibilities of open source software in digital India. The seminar concluded that issues in digitalization must be addressed with local technical solutions based on open source software and students have greater role in spreading such innovative concepts which will strengthen the local economy.



13.	All india Inter University Youth Festival held at Sivaji University, Kolhapur Maharashtra 10 <sup>th</sup> to 15 <sup>th</sup> February 2017	The cultural team from Cochin University of Science and Technology has participated in the 32 <sup>nd</sup> South Zone Inter University Youth Festival jointly organized by the Association of Indian Universities and the Ministry of Youth affairs and Sports, Government of India, held at Bangalore University, Karnataka from 16 <sup>th</sup> to 20 <sup>th</sup> December 2016. The team participated in Theatre, Literary, Fine Arts, Dance and Music Events and secured second prize in quiz. The quiz team, including Adithya Menon and Nitin S. from School of Legal Studies and Edwin Muriyeddan Wilson from School of Engineering were selected to participate in the All india Inter University Youth Festival held at Sivaji University, Kolhapur Maharashtra during 10 <sup>th</sup> to 15 <sup>th</sup> February 2017 for the event Quiz. The team started from the campus on 07.02.2017 FN and reached back on 17.02.2017 FN. The team cleared preliminary rounds and did not win any positions in final.
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14.	Haritha Koottam, Padanaththinide kampus Krishi. 18 <sup>th</sup> March 2017	<p>Department of Youth Welfare, Cochin university of Science and Technology in association with CUSAT Coffee House, Cochin University Union and National Service Scheme has initiated a programme, haritha koottam, padanaththinide kampus krishi, to promote sustainable agriculture practices in the campus. The ambitious plan, started this year is aimed to start sustainable organic farming at various places of the University. The coffeehouse will purchase the products at market price and use them in their kitchen. As a University of Science and technology, CUSAT attempts to propagate scientific farming, with the help of state agriculture department, which promotes responsible agriculture. Given the nature of this green venture, the involvement of various students and staffs groups were inevitable to promote a new culture of green farming in the University. Sri. Mohammed Y. Safirulla K. District Collector, Ernakulam has inaugurated the scheme by planting saplings in the campus. Sri. Jessi Peter, Chair-person, Kalamassery Municipality, Dr. N Chandramohanakumar, Member Syndicate, Sri. Sasi Ayyanchira, Flim Producer, Sri. Gokulan M.S, Film actor, Smt. Rose Mary, Assistant Director of Agriculture, Sri. Rajendran, Agriculture Officer, Dr. P.K Baby, Director, Department of Youth Welfare, Sri. Sreejesh B Panicker, Chairman University Union and individual winners of Sargam 2017, the inter collegiate youth festival also planted saplings in the field.</p>
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15.	GREEN ROOM VII: Cultivating Creativity. 25 <sup>th</sup> to 26 <sup>th</sup> March 2017.	<p>It is observed that many students in the current era have low self-esteem and they are facing intrapersonal and interpersonal problems related to academic, family, peer or career and they need to be encouraged towards the improvement of employability and social development. Working environment in the modern world is different from what they learn in the class room because of global competition, cultural diversity, latest technologies and lack of critical thinking.</p> <p>In this context, The Department of Youth Welfare has organised “GREEN ROOM VII: Cultivating Creativity” with an objective of improving team work, skill development, communication, body language and personality traits through theatre among selected students of the University from 25<sup>th</sup> to 26<sup>th</sup> March 2017. Forty students from various departments participated in the programme. Dr. K Paulose Jacob, Pro Vice Chancellor of the University inaugurated the programme. Dr. R Sasidharan, Member, Syndicate honored Dr. K Paulose Jacob, who is completing 34 years of service in the university. Dr. P.K Baby, Director, department of Youth Welfare, Sreejith Remanan, School of Drama Trissur and Aiswaraya C.K spoke on the occasion.</p> <p>Various sessions were handled by Sri. Sreejith Remanan, School of Drama Thrissur, Sri. Rajesh Sharma, Film Actor, Sri. Devendranath Sankara Narayanan, Mind Screen, Chennai, Saran SS, Theatre Artist, Midhun Lal, Theatre Artist, Little Earth, Malappuram, Sajas Rehman, Actor, Little Earth, Malappuram, Arun Lal, Drama Director, Little Earth, Malappuram, Suresh K, Actor, Little Earth, Malappuram, Abid P.T, Little Earth, Malappuram, Jishnu K, Little Earth, Malappuram, Sunitha V, School of Drama, Thrissur and Rasheed, Actor, Little Earth, Malappuram handled various sessions. A short play, chillara samaram was performed as part of class room theater at evening on 25.03.2017.</p> <p>The programme was a huge success and stood up to its purpose. The students not only enjoyed the sessions but also got experience and exposure. Green Room VII truly developed various skills in students and could be termed as a life time opportunity in their campus life.</p>
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## CENTRE FOR THE STUDY OF SOCIAL EXCLUSION AND INCLUSIVE POLICY

### 1. Brief History

The Centre for the Study of Social Exclusion and Inclusive Policy (CSSEIP) has, since the commencement of its formal work in February 2009, engaged itself in building the intellectual infrastructure required for furthering research in the broad agenda of social exclusion. Following the general approach to social exclusion research, the Centre examines social exclusion as both '*a Process and a Status*'. Developing on this scheme of examining social exclusion, the Centre advocates the inclusion of the 'Process-Status-Process' approach in its research which incorporates identification and examination of the process that has led to social exclusion, evaluation of the present status/ magnitude of social exclusion and charting out of processes to achieve the desired level of social inclusion.

### 2. Programmes of Study/Research:

The topics which the Centre has identified as its core 'research themes' are a) Educational and Digital Exclusion b) Housing and Basic Amenities Exclusion c) Socio-cultural and Structural Determinants of Exclusion, d) Spatial Exclusion and e) Demographic dimensions of exclusion. The primary 'contexts' of the Centre's research are a) Tribal Communities in Kerala b) Resource Based Industries in Kerala c) Rural Population in Kerala d) Workers in Unorganized Sectors in Kerala e) Exclusion of the Elderly in Kerala etc.

### 3. Faculty Members

Sl.No.	Name	Designation	Qualification	Specilisation
1.	Dr. D Rajasenan	Hon. Director	Ph. D Economics	Economics (Fisheries Economics)
2.	Dr. Bijith George Abraham	Assistant Professor (Contract)	Ph. D Economics	Economics (Social Exclusion)
3.	Dr. Rajeev B	Assistant Professor (Contract)	Ph. D Economics	Economics (Social Exclusion)





#### 4. Research Facilities

##### Library

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
680	50

#### 5. Distinguished visitors

SI.No.	Name	Affiliation	Remarks
	Dr. Saji Thomas	Senior Fiscal Economist, IMF, Washington	Research discussions
	Dr. Varghese Manaloor	John P. Tandberg Chair in Economics and Management and Associate Professor at, University of Alberta, Canada	Research discussions
	Dr. Soorjith I K	Associate Professor, IIM, Udaipur	Research discussions

#### 6. Publications

##### a. Papers

SI. No.	Name of Paper	Impact Factor, if any
	D Rajasenan (2016) Trawl Ban Related Change in Livelihood and Employment in Kerala in the Context of Fishery Globalisation, Inclusive Development – International Journal of Social Sciences and Humanities, Cochin University of Science and Technology (CUSAT); Vol. 3, Nos.1 and 2, 2016.	
	Bijith G. A. (2016) Income, Poverty and Living Standard of the Community Members in the Ecotourism Destinations of Kerala, Inclusive Development – International Journal of Social Sciences and Humanities, Cochin University of Science and Technology (CUSAT); Vol. 3, Nos.1 and 2, 2016.	
	Rajeev B (2016) SHG-Cooperative Linkages in the Fishing Sector of Kerala: A Perception Evaluation, Inclusive Development – International Journal of Social Sciences and Humanities, Cochin University of Science and Technology (CUSAT); Vol. 3, Nos.1 and 2, 2016.	
	D Rajasenan and Bijith G. A. (2016) Profile cum Perception of Ecotourists of Kerala: An Empirical Analysis, CSSEIP Working Paper Series Volume 3 No. 9, 2016.	
	D Rajasenan (2016) Impact of Trawl Ban on the Livelihood Security of the Fisher folks in Kerala: An Analysis in the context of Globalisation”, CSSEIP Working Paper Series Volume 3 No. 8, 2016.	



	D Rajasenana and Rajeev B (2016) Standard of Living and Employment of the Marine Fisher folks in Kerala, CSSEIP Working Paper Series Vol. 3, No. 7, CUSAT, 2016.	
	Bijith G. A. and Rajasenana, D (2016) Community Participation and Inclusive Development of Ecotourism in Kerala”, CSSEIP Working Paper Series Volume 3 No. 10, 2016.	
	D Rajasenana (2016), “Employment and Livelihood of Workers in Natural Rubber, Black Pepper and Cardamom”, in ‘Globalisation, Development and Plantation Labour in India’ (ed.), Routledge.	
	D Rajasenana, Sunitha A. S. and Rajeev B (2016) Intra-Tribal Differences in Social Progress of the Tribes in Kerala: Realities and the Need for Inclusive Actions, Journal of Economics and Sustainable Development, The International Institute for Science, Technology and Education; Vol. 7, No. 11, 2016.	
	D Rajasenana, Jayakumar, M.S. and Bijith George Abraham (2016) Socio-Economic and Psychological Dimensions of Migration-Induced Exclusion of the Elderly in Kerala, India: An Empirical Analysis, International Journal of Migration, Health and Social Care, Emerald Publications, Volume 12, Issue 1, 2016.	
	D Rajasenana, Bijith G. A. and Rajeev B (2016) Education Exclusion in a Social-Class Framework: An Inquiry into the Major Sub-Sectors of the Professional Self-Financing Sector in Kerala, Higher Education for the Future, Sage Publication with Kerala State Higher Education Council; Vol.3, No.1, 2016.	
	D Rajasenana and Bijith G. A. (2016) Stakeholders Perception in the Major Ecotourism Sites of Kerala: an Econometric Estimation, Asian African Journal of Economics and Econometrics, Vol. 16, No. 1, 2016.	
	D Rajasenana and Suja Pradeep (2016) Policy Impacts on FDI in India: an Analysis among the Southern States of India, Journal of Economic Policy and Research, Institute of Public Enterprises, Vol.11 No.2 April-September, 2016.	
	D Rajasenana and Rajeev B (2016) Role of Formal Institutional Linkages in Reducing Poverty and Income Inequality of the Small-Scale Marine Fishers of Kerala, accepted by Journal of Indian Fisheries Association, Indian Fisheries Association, Mumbai, Vol. 43 (2), 2016.	
	Bijith G. A. and D Rajasenana (2016) Socio-Economic Profile and Standard of Living Aspects of the Ecotourism Communities of Kerala, South Asian Journal of Socio-Political Studies (SAJOSPS), Vol. XVI, No. 2, 2016.	
	D Rajasenana, Bijith G. A. and Rajeev B (2016) Paradox of Education Inclusion: Inferences from the SC-ST Students in the Self-Financing Engineering Colleges in Kerala, sent for publication to Social Scientist.	
	D Rajasenana, Rajeev B and Bijith G. A. (2016) An Inter-Temporal Analysis of Poverty and Poverty Correlates of the Marginalised Social Groups in the Rural Belts of Wayanad, sent for publication to Journal of Land and Rural Studies, Sage Publication with Centre for Rural Studies, Lal Bahadur Shastri National Academy of Administration.	



D Rajasenan, Bijith G. A. and Rajeev B (2016) Development Triggered Displacement vis-à-vis Livelihood Deprivation of the Scheduled Castes and Scheduled Tribes in Kerala, accepted by Journal of Land and Rural Studies, Sage Publication with Centre for Rural Studies, Lal Bahadur Shastri National Academy of Administration.	
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## b. Books

Sl.No.	Name of Book
	Trawl Ban and Employment of the Fisher folks in Kerala- D. Rajasenan (2016), Directorate of Publications and Public Relations, CUSAT.
	Residential Segregation and Social Exclusion: The Scheduled Castes and Scheduled Tribes of Kerala - D. Rajasenan (2016), Directorate of Publications and Public Relations, CUSAT.
	Policy Aspects of Household Economic Development in Wayanad: A Social Class Analysis - D. Rajasenan (2016), Directorate of Publications and Public Relations, CUSAT.

## 7. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Dr. D. Rajasenan	International Conference on Education and Workforce Development 2017 (ICEWD'17), Higher Colleges of Technology, Abu Dhabi, scheduled during March-April 2017.	Co-Author
Dr. Rajeev B	International Conference on Development Economics, Post Graduate and Research Department of Economics & Department of Business Economics, Ethiraj College, Chennai, February 16-17, 2017	Co-Author
Dr. D. Rajasenan/ Dr. Rajeev B	Workshop on Subjective Survey Data in Labour Market Research, organised by the Institute for Labour Law and Industrial Relations in the European Union (IAAEU), University of Trier, Germany, October 7-8, 2016	Co-Author/Paper Presenter



Dr. D. Rajasenan/ Dr. Rajeev B	Third International Conference on Social Sciences, organised by the Research Centre for Social Sciences, Faculty of Social Sciences, University of Kelaniya, Sri Lanka, September 30 to October 1, 2016	Co-Author/Paper Presenter
Dr. Bijith George Abraham	Research Methodology Workshop on Understanding Social Exclusion and Discrimination: Methodological Issues, jointly organised by the Indian Institute of Dalit Studies (IIDS), New Delhi and Dr. B. R. Ambedkar University of Social Sciences, Mhow, Madhya Pradesh, September 5-7 2016	Paper Presenter
Dr. Rajeev B	Research Methodology Workshop on Understanding Social Exclusion and Discrimination: Methodological Issues, jointly organised by the Indian Institute of Dalit Studies (IIDS), New Delhi and Dr. B. R. Ambedkar University of Social Sciences, Mhow, Madhya Pradesh, September 5-7 2016	Paper Presenter

### Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount	Investigator(s)
	Dynamics of Community based Ecotourism: An Inclusive Development Option for Kerala (ongoing)	ICSSR	Rs. 7,00,000/-	Dr. Bijith George Abraham (Principal Investigator) Dr. D Rajasenan (Co-investigator)
	Socio-Economic Exclusion: An Investigation into the Inter-Community Vicissitudes among the Tribes of Kerala based on Social Progress Index (ongoing)	ICSSR	Rs. 6,40,000/-	Dr. D Rajasenan (Co-investigator)



## DEEN DAYAL UPADHYAY KAUSHAL KENDRA (DDUKK)

### 1. Brief History:

UGC has sanctioned DDU KAUSHAL KENDRA (DDUKK) to Cochin University of Science and Technology and sanctioned rupees four crores as financial assistance to establish the same in CUSAT. CUSAT started offering the following two M.Voc programmes from the academic year 2015-16.

1. M.Voc. in Mobile Phone Application Development
2. M.Voc. in Technology and Management Consultancy

The programmes are four semester masters programmes with multiple entry and exit options as instructed by the UGC in the guidelines of the DDUKK scheme. That is, the proposed M.Voc. Courses are designed in such a way that students who successfully complete first two semesters can discontinue the programme if they wish and can get a Post-graduate Diploma in the respective trades. Those who continue the course further and finish four semesters successfully will be eligible for M.Voc. Degree. Students who discontinue after second semester with P.G. Diploma can come back and take a lateral entry to third semester on a later time if they wish to do so and can finish their M.Voc Degree.

### 2. Programmes of Study/Research:

- 1) M.Voc in Technology and Management Consulting.
- 2) M.Voc in Mobile Phone Application Development.

### 3. Faculty Members:

Sl. No	Name	Designation	Qualification	Specialization
1	Dr.Renjini D	Associate Professor	Ph.D, MBA	Marketing Research. Strategic Marketing.
2	Dr.Sindhumul S	Associate Professor	Ph.D, M.Tech,	Image Processing, iOS App Development
3	Dr.George Joseph	Assistant Professor	Ph.D, MBA, B.Tech	Project Management, Operations Management



4	Sri.Vinod V Nair	Assistant Professor	MA, MBA, M.Tech	Technology Consulting, Management Systems, Operations Management, Communication Skills
5	Sri.Vinu Varghese V V	Assistant Professor	M.Tech, B.Tech	Internet Information Security Android App Development, Java
6	Smt. Smarty P Mukundan	Assistant Professor	MHRM,MBA	Human Resource Management

#### 4. Visiting Faculty :

SI. No	Name	Designation	Qualification	Specialization
1	Lekshmi H	Guest Faculty	MCA	Software Development
2	SarithaKrishnakumar	Guest Faculty	Ph D,LLM	Environment Law
3	Deepa Jawahar	Guest Faculty	MBA,M.Com	HR, Marketing, Finance
4	Unnikirishnan P	Guest Faculty	MCA	Design &Development of Software

#### 5. Administrative Personnel:

SI.No	Designation	No.of Posts
1	Director	1
2	Assistant Section Officer	1
3	Assistant (Contract)	1

#### 6. Technical Personnel:

SI.No	Designation	No.of Posts
1	Technical Assistant (Daily Wage)	1
2	Lab Attendant (Daily Wage)	1
3	Multi Task Staff (Contract)	1

#### 7. Student Enrollment:

SI. No	Programme of Study	Men	Women	Total
1	M.Voc in Technology and Management Consulting	3	6	9



2	M.Voc in Mobile Phone Application Development	1	5	6
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### 8. Research Facilities:

- a. **Laboratories** – A computer lab & mobile App development lab consisting of following machines is set up in the centre.

Desktop computers	Lenovo Think Center M93	25
Phone	I-Phone 6S	2
	Android Phone (Samsung Galaxy S7 Edge)	5
	Windows Phone Lumia 960	2
Tablets	Lenovo-PHAB PB1	3
	Apple I-pad	1
IoS Machines	Apple MacBook	2
	Apple Mac mini	4
	I-Mac-MK442HN/A	1

### b. Library:

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
-	221

### 9. Distinguished visitors:

Sl. No	Designation	Name	Organisation
1	Deputy Head, Government Projects, Government Grants Management, NSDC	Mrs Rekha Menon	National Skills Development Corporation



## 10. Publications:

### a. Papers

Sl. No	Name of Paper	Name of Author	Impact Factor,if any
1	“Distributed Energy Integration and Transactive Energy Framework for a Developing Economy”, Vinod V. Nair, Usha Nair in IEEE-ISTAS 2016, IEEE Xplore.		
2	Is Sustainability in Operations Just a question of Adopting Standards?”, Vinod V. Nair in Journal of SCM Systems, Vol.6, Issue 2, April 2017, ISSN: 2277 – 1387.		
3	“Revisiting a Traditional Approach to Post-qualification Skill Training in Technology “in Human Capital, Employability and Competence Building, Eds, Zakkariya K.A., Excel Publishers, 2016, ISBN 978 -93-85777-92- 9.	Mr.VinodV.Nair	SCOPUS Listed
4	“Apprenticeship as a Skill Development Tool and Perception Analysis Among Final Year Engineering Students” in merging Paradigms in Business: Marketing and HR Perspectives, Eds. Manoj Edward, Santhosh Kumar S. Directorate of Public Relations and Publications, CUSAT, 2017, ISBN 978-93- 80095-99- 8.		
5	“Residential Solar PV Systems – Safety Hazards and Risk Mitigation “, Vinod V. Nair, Babu, C.A and Usha Nair in SAFE’17, Directorate of Public Relations and Publications, CUSAT, ISBN 978-93- 80095-96- 7.		





6	“Learning Analytics to Identify Students at-risk in MOOCs”, Srilekshmi M., Sindhumol S., Shiffon Chatterjee, Kamal Bijlani, 2016 IEEE Eighth International Conference on Technology for Education (T4E), December 2016, India	Dr.Sindhumol S	
7	“Application of Predictive Analytics in Intelligent Course Recommendation”, Deepthi Upendran, Shiffon Chatterjee, Sindhumol S., Kamal Bijlani, Procedia Computer Science, Elsevier, Vol. 93, 2016, Pages 917-923		
8	“Usage Analytics in A-VIEW”, Parvathy P P, Sindhumol S, Kamal Bijlani, IEEE International Conference on Inventive Communication and Computational Technologies (ICICCT 2017), MARCH 2017, India		
9	Energy Management in Residential Electrical Installations with SPV Generation – A Simplified Approach:- Advances in Technology, Engineering and Computing A Multinational Colloquium, 2017	Vinu Varghese V.V	

#### b. Books:

Sl. No	Name of Books	Authors
1	Human Capital, Employability and Competency Building”, Excel India Publishers, 2016	Dr.Zakkariya K A, Dr.Renjini D, Dr.George Joseph



### 11 Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students:

Name of Participant	Name of Seminar/Conference/Workshop	Role
Smt. Smarty P. Mukundan (Assistant Professor) Smt. Smarty P. Mukundan (Assistant Professor)	Five day workshop on Multivariate Data Analysis: Basics & Advances (May 8-11, 2017), SMS, CUSAT.	Participant
	Five day Faculty Development Program on 'Effective and Innovative Teaching' (March 7-11, 2017, DDUKK, CUSAT)	Coordinator
	Two day Workshop on 'Writing Case Study And Developing Teaching Notes', January 12 & 13 2017, BRIM, Cochin.	Participant
	5 <sup>th</sup> International Conference on "Managing Human Resources at the Workplace" December 9 & 10, 2016, SDMIMD, Mysuru.	Paper Presenter
Mr. Vinod V. Nair (Assistant Professor)	IEEE International Symposium on Technology & Society-2016, 21-22 Oct. 2016, Thiruvananthapuram.	Paper presentation/ Delegate
	International Conference on HRD, DDUKK-CUSAT, 1 Sept. 2016, Kochi.	
	National Conference on Emerging Trends in Business & Management-2017, January 2017, organized by Bhavan's Royal Institute of Management, Kochi and adjudged the Best Paper in OM track.	
	National Conference on New Paradigms in Business & Management – 2017, 20-21 April 2017, Kochi organised by School of Management Studies, CUSAT.	
	International Conference on Safety and Fire Engineering-2017, April 27-28, 2017, organized by SOE, CUSAT.	
	Faculty Development Programme on Effective and Innovative Teaching, 7-11 March 2017, organised by DDUKK, CUSAT.	Coordinator
	Faculty Development Programme on Multivariate Data Analysis: Basics and Advances, SMS-CUSAT, May 8 – 12, 2017, Kochi.	Participant



Dr.Sindhumul S (Associate Professor)	Two day Workshop on 'Android Application Development', March 17 &182017, DDUKK, CUSAT.	Coordinator
	Five day Faculty Development Program on 'Effective and Innovative Teaching', March 7-11, 2017, DDUKK.	Participant
	International Conference on HRD, September 1 <sup>st</sup> 2016, DDUKK, CUSAT.	
Dr.Renjini D (Associate Professor)	International Conference on HRD, DDU KAUSHAL Kendra, CUSAT.	Coordinator
	Two-day Workshop on Case Study Method of Teaching, School of Management Studies, CUSAT.	Participant
	5-day Workshop on Multivariate Data Analysis, School of Management Studies, CUSAT.	
	Five day Faculty Development Program on 'Effective and Innovative Teaching', March 7-11, 2017, DDUKK.	
Dr.George Joseph (Assistant Professor)	International Conference on HRD, DDU KAUSHAL Kendra, CUSAT. (one day)	Coordinator
	Faculty Development Programme on Effective and Innovative Teaching. (5 days)	Participant
Vinu Varghese V.V (Assistant Professor)	Two day Workshop on 'Android Application Development', March 17 &18 2017, DDUKK, CUSAT.	Coordinator
	Five day Faculty Development Program on 'Effective and Innovative Teaching', March 7-11, 2017, DDUKK.	Participant
	International Conference on HRD, September 1 <sup>st</sup> 2016, DDUKK, CUSAT.	

## 12. Role of Faculty in International/National organizations/Institutions/ Editorial Boards:

Name of Faculty	Name of Organization	Role
Mr. Vinod V.Nair	Institute of Electrical & Electronics Engineers	Senior Member IEEE



### 13. Seminar/Conference/Workshop/Refresher Courses conducted by the Department

Sl. No	Title	Duration	Chairman/ Coordinator	Funding Agency
1	International Conference on HRD	1.09. 2016.	Dr.Zakkariya K.A Dr.Renjini D Dr. George Joseph	UGC
2	Faculty Development Programme on Effective and Innovative Teaching	7-11 <sup>th</sup> March 2017	Dr.Zakkariya K.A Smarty P Mukundan Vinod V Nair	UGC
3	Two day Workshop on 'Android Application Development'	17-18 <sup>th</sup> March 2017	Dr.Sindumol S Vinu Varghese V	UGC



## CENTRE FOR EXCELLENCE IN ADVANCED MATERIALS

### 1. Brief History

Centre of Excellence in Advanced Materials is a unique centre established in Cochin University of Science and Technology in the year 2011 with a single goal of promoting and coordinating research in the broad area of material science. The centre was formally inaugurated by Prof. C. N. R Rao, Chairman and Scientific Advisory to the Prime Minister on 15<sup>th</sup> January 2011. CAM is conceived to be an interdisciplinary centre coordinating and combining the research activities of Departments of Physics, Chemistry, Polymer and Rubber technology, Instrumentation and Electronics in order to better understand material properties and design and create new materials for optoelectronics, photonics and electronic applications.

### 2. Faculty Members:

Sl. No.	Name	Designation	Qualification	Specialisation
	Dr. M.K.Jayaraj	Professor	Ph.D	Optoelectronic materials and devices
	Dr. Honey John	Professor	Ph.D	Nanomaterials/Polymer nanocomposites
	Dr. C. K. Aanandan	Professor	Ph.D	Microwaves, Antennas, Electromagnetics, RCS, Imaging
	Dr. S. Jayalekshmi	Professor	Ph.D	Polymer Light emitting Diodes (PLED), Rechargeable Lithium-Ion cells, Nonlinear Optics (NLO), Nanophotonics, Bio-nanophotonics and Organic Electronics
1.	Dr. Sunil Narayanankutty	Professor	Ph.D	Conducting Polymers Nano Composites Short Fiber-Elastomer Composites Polymer Recycling Fracture Mechanics Novel Compounding Ingredients Low Formaldehyde PF Resins



	Dr. Rajeevkumar K	Professor	Ph.D	Vacuum Technology, Material Science, Atomic Layer Deposition
	Dr. Prathapan Sreedharan	Professor	Ph.D	Synthetic and Mechanistic Organic Chemistry, Photochemistry, Electron Transfer Reactions, Porphyrin Chemistry
	Dr. Sarita G. Bhat	Professor	Ph.D	Studies on endotoxins, Bioactive compounds from Marine organisms, Studies on exopolysaccharides Marine Metagenomics, Vibrio phages, Fish Metagenomics, Salmonella Phages, Biofilm metagenomics
	Dr. AjithVengellur	Asst. Professor	Ph.D	Cell Signaling, Pathways in Normal Physiology and Disease - Hypoxic Signaling, Mitochondrial Biology, Development of Biomaterials for Medical Devices and Diagnostics
	Dr.Saji K.J	Asst. Professor	Ph.D	Two dimensional materials for opto-electronic and nano-electronic applications, thin film solar cells, thin film transistors, electrical conduction mechanism in nano structures
	Dr. G. S. Sailaja	Associate Professor	Ph.D	Biomaterials, Nanotechnology, Cancer biology, Antibacterial Formulations
	Dr.Manoj N	Associate Professor	Ph.D	Bulk heterojunction solar cells, Photochemistry

## 0. Research/Project Staff

Sl. No.	Name	Designation	Qualification	Specialisation
	Pillai Aswathy Mohan	SERB - National PDF	Ph.D	Applied Super conductivity



### 3. Research Facilities

#### a. Laboratory

##### Major Equipments:

1. Spin Coater
2. Nanofibre Electrospinning Unit
3. UV-Vis Spectrophotometer
4. High Temperature Furnace
5. Multi dip Coating System
6. Refrigerator Centrifuge
7. Biosafety Cabinet – Class 2A II
8. Material Measurement System and Resonant Cavity
9. Keithley SMU

#### 4. Distinguished visitors

Sl.No.	Name	Affiliation	Remarks/delivered talk
1	Dr. Ramesh Chandra	Professor, IIT Roorkee	Spintronics
2	Dr. Narayanan Unni	Principal Scientist, NIIST, Trivandrum	Organic electronics, OLED
3	Dr. Manzoor Koyakkutty	Professor, Amrita Institute of nanoscience	Nano Bio materials
4	Dr. Bibin John	Scientist, VSSC, ISRO, Trivandrum	Energy materials
5	Dr. Pramanik	Scientist-E & Project Manager, CMET. Trissur	Super capacitors

#### 5. Publications

##### 0. Papers

Sl.No.	Name of Paper	Impact Factor
	Excitation-Wavelength Dependent Upconverting Surfactant Free MoS <sub>2</sub> Nanoflakes Grown by Hydrothermal Method, Levna Chacko, M. K. Jayaraj and P. M. Aneesh, Journal of Luminescence <b>192</b> , 6-10 (2017)	2.74
	Wasp-waisted magnetism in hydrothermally grown MoS <sub>2</sub> nanoflakes, Levna Chacko, A K Swetha, R Anjana, M K Jayaraj and P M Aneesh, Materials Research Express <b>3(11)</b> , 116102 (2016)	0.87



	Structural and optical studies of hydrothermally synthesized MoS <sub>2</sub> nanostructures, Levna Chacko, A. K. Swetha, R. Anjana, and P. M. Aneesh, AIP Conference Proceedings <b>1728</b> , 020620 (2016)	N/A
	Poly(ethylene oxide) (PEO) – Poly(vinyl pyrrolidone) (PVP) blend polymer based solid electrolyte membranes for developing solid state magnesium ion cells K.M. Anilkumara, B. Jinisha, M. Manoj, S. Jayalekshmi, European Polymer Journal <b>89</b> , 249–262 (2017)	3.531

## 6. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar /Conference/ Workshop	Role
Dr.R.Sreekumar	SPIE Optics & Photonics for sustainable Energy 2016, San Diego, California, USA, during 28 August – 1 <sup>st</sup> Sept 2016	Presented
Dr.R.Sreekumar	National workshop on Nano-photonics, During March 18-19, 2016, Dept. of Physics, Cusat, Kerala, India	Presented
Bini Jose	National workshop on Nano-photonics, During March 18-19, 2016, Dept. of Physics, Cusat, Kerala, India	Presented

## 7. Role of Faculty in International/National organizations/Institutions/ Editorial Boards

Name of Faculty	Name of Organization	Role
Prof. M.K. Jayaraj	College of Engineering Thalassery	Member Board of Governors
Prof. M.K. Jayaraj	St. Alberts College	Member Board of Studies
Prof. M.K. Jayaraj	Christ College	Member Board of Studies
Prof. M.K. Jayaraj	St. Joseph's College, Irinjalakuda	Member Board of Studies
Prof. M.K. Jayaraj	St.Therasas College, Ernakulam	Member Board of Studies
Prof. M.K. Jayaraj	Inter University Instrumentation Centre, M G University	Executive and Academic Committee member
Prof. M.K. Jayaraj	STIC	Faculty Management Committee





## 8. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour /Award	Awarding Agency
Dr.M.K.Jayaraj	The Mid Career Award	UGC

## 9. Research Programmes and Activities:

Sl.No.	Problem / Topic	Investigator (s)
1	Surface enhanced Raman Spectroscopy	Dr.M.K.Jayaraj
2	Up Conversion Phosphors	Dr.M.K.Jayaraj
3	Photovoltaics	Dr.M.K.Jayaraj, Dr.R. Sreekumar, Dr.Rajeev Kumar K
4	Transparent electronics	Dr.M.K.Jayaraj and Saji K.J
5	Energy storage materials and batteries	Dr.S.Jayalekshmi and Dr Pradeep Warriar
6	Bulk Heterojunction solar cells	Dr.Manoj.N
7	Two dimensional materials	Dr.K.Rajeev Kumar
8	Polymer composite films	Dr. Honey John

## 10. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department:

Sl. No.	Title	Duration	Coordinator	Funding agency
	National workshop on contemporary Advances in materials for energy CAME 2017	3-4 Feb, 2017	Prof. M. K. Jayaraj	UGC Unassigned grant
	Workshop on "Innovations in Research Awareness" and $\psi$ - Fest 2017	18-22 March 2017	Prof. S. Jayalekshmi	



## K.M. MANI CENTRE FOR BUDGET STUDIES

### 1. Brief History

Based on the proposal to undertake a study on 'Critical Evaluation of State Budgets from 1957-58 to 2012-13', the Government of Kerala has decided to establish a Centre for Budget Studies (CBS), at the Cochin University of Science and Technology (CUSAT). The University Syndicate resolved to start the Centre in the University and chose to name it the K.M. Mani Centre for Budget Studies. The University nominated Dr. Sabu Thomas as the Co-ordinator and the Syndicate appointed Professor M.A. Oommen as the first Honorary Director. Both have assumed on 4<sup>th</sup> June 2012 and 23<sup>rd</sup> August 2012 respectively. The Syndicate of the University held on 16.01.2016 has appointed Dr. D. Rajasenan, Professor, Department of Applied Economics as the Executive Director of the Centre, K.M. Mani Centre for Budget Studies (KMMCBS) was inaugurated by Shri. M. Hamid Ansari, Hon'ble Vice President of India on 17<sup>th</sup> February 2013 at the Old Assembly Hall, Thiruvananthapuram.

### Objectives

1. The major objective of the Centre will be to contribute to the theory and practice of Public Budget and Budget making as well as to the classification, analysis, accountability and management of budget in democratic countries with special focus on India's fiscal federation.
2. In due course it will be the endeavour of the Centre to start a Post Graduate Course in Budget and Budget Management. Initially a six months Diploma Course with an intake of 10 students may be launched. Depending on demand it can be converted into a Masters Programme. There will also be a Ph.D programme, related to public finance and fiscal management.
3. To promote inter-departmental teaching and research by having collaborative ventures with the School of Management Studies and Department of Applied Economics. Needless to the focus will be on public finance.
4. To conduct round the year training for the officials of Budget Section in the Secretariat, Public Sector Undertakings, Universities, Local Fund Department, Panchayat Raj Institutions, Municipalities etc.

### 2. Thrust Areas of the Centre

- i. Local government budgeting with focus on Kerala



- ii. State, sub-state level fiscal relations
- iii. Establishing an archive of Travancore, Cochin, Travancore-Cochin and Kerala Budgets
- iv. To institute a long term ongoing project on the political economy of budgets and budget making in Kerala from the days of the princely states till date and publish papers and books based on that
- v. To create a cadre of experts on Budget and public budget making
- vi. Study on the public debt of Kerala
- vii. Establishment of a State Budget Observatory which provides the findings of the studies, research and detailed information concerning the state and local finance of Kerala. In particular the Centre would focus on developing a web-based architecture with the help of domain experts so that the programmes and schemes envisaged in the annual budgets can be effectively and efficiently executed on the field. This part would also include an effective monitoring mechanism so that the transparency of implementation, the reduction in corruption while the budget schemes and programmes are implemented with the use of modern IT tools and techniques. It is expected to develop a modern web-enabled e-architecture for the State of Kerala to show-case Government of Kerala as a modern government which works for its citizens.
- viii. To organize various programmes/seminars and public lectures to create public awareness about the various dimensions of the annual budget of the governments particularly that of the Union and Kerala State.
- ix. Publication (Books, reports, Working Papers, Occasional papers, News Letter etc.)

### 3. Programmes of Study/Research:

- i. The following three Projects are under way.
  - a. 'Political Economy and Process of budget-making in Travancore, Cochin and Kerala: from Historical and Theoretical perspectives'
  - b. 'Budget process in the Local Governments of Kerala (PRIs, Municipalities and Corporations)'
  - c. 'Social Security and Kerala Budget from 1957 through 2012-13'
- ii. The proposal to start the Post Graduate Diploma Course, titled "**Public Policy and Budgeting**" is well under way

**4. Faculty Members**

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. D. Rajasenan	Professor & the Executive Director	Ph.D	Mathematical Economics

**5. Emeritus Professor/ Scientis/ Honorary Director/ Co-ordinator**

Sl. No.	Name	Designation	Qualification	Specialization
1	Prof. (Dr.) M.A.Oommen	Honorary Director	Ph.D	Public Finance
2.	Dr. Sabu Thomas	Co-ordinator	Ph.D	Labour Economics Manpower Planning & Budgeting

**6. Research Facilities****a. Major Equipments:**

Computer, Printer and one Executive table and chair

**b. Library**

No. of books and Journals as on 31 <sup>st</sup> March of the Previous year	Additions during the current year
27	Nil

**7. Distinguished visitors:**

Sl. No.	Name	Affiliation	Remarks
1	Dr. Saji Thomas	Senior Fiscal Economist IMF, Washington, DC	Special lecture on "Goods and Service Tax: Mechanism, Design and Policy Challenges" on 04/01/2017

**8. Publications****a. Books**

Sl. No.	Name of Book	Author/Editor
1	"Kerala Niyamasabhyayile Budget prasangangal, Charithra Thalukalilude"	Dr. Sabu Thomas



### 9. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl. No.	Title	Duration	Co-ordinator	Funding Agency
1	Discussion on "Union Budget 2017-18" on February 07, 2017	One day	Dr. Sabu Thomas	Own fund

### 10. New PG Diploma Course

Sl. No.	Course	Duration	Funding Agency
1	P.G Diploma in Public Policy and Budgeting (PGDPP & B) in the Centre for Budget Studies	One Year	Government of Kerala



## COCHIN UNIVERSITY UNION

### 1. Brief History

The Cochin university Union is the umbrella student organization, constituted under the Cochin University of Science and Technology Act in 1986 by the Government of Kerala State. The objective of the Union shall be to promote the corporate, social and cultural life of the students of the University and to incorporate in them the duties and rights of citizenship. All students studying for a full-time course of the duration of at least one academic year in the Departments/ Colleges/ Institutions of the Cochin University shall be members of the Cochin University Union. The office bearers of the Cochin University Union are:

The Vice Chancellor as the Patron

The Hon. Treasurer

The Members of the Executive Committee.

#### **The present Office Bearers are**

The Patron : Dr. J. Letha, Vice-Chancellor

The Hon. Treasurer : Dr. P.K. Baby, Director, Students Welfare.

#### **The Members of the Executive Committee:**

Chairman : Sreejesh B. Panicker

Vice Chairman : Anju Muralidharan

General Secretary : Sreejith A.Y.

Secretary : Gigi Sonia

#### **Other members of the Executive Committee:**

Balram S.A.

Nasreen C.A.

Susanth Shaji

Siraj Salim

Nikhil Raj P.



### Other major activities:

1. Conducting election to the General Council of Cochin University Union and election of the Office bearers of Cochin University Union.
2. To organize cultural/Arts/Sports/Academic welfare programmes for the benefit of students registered in the University and to the University community. It also acts as a liaison between students and University authorities.

### 2. Faculty Members/ Head

Sl. No.	Name	Designation	Qualification	Specialization
01	Dr. P.K. Baby	Director, Students Welfare	M.A (Economics); M.B.A; M.Phil; Ph.D	Finance/ General Management

### 3. Other Programmes/ Activities

1. Union Inauguration on 24.10.2016
2. Sargam 2016 from 16<sup>th</sup> March to 20<sup>th</sup> March 2016
3. Literature Camp from 13.01.2017 to 15.01.2017



## NATIONAL CENTRE FOR AQUATIC ANIMAL HEALTH

### 1. Brief history

The National Centre for Aquatic Animal Health (NCAAH) (formerly Centre for Fish Disease Diagnosis and Management) established on 18<sup>th</sup> January 2000 has been substantially contributing to the realms of aquaculture and marine biotechnology in the country through its research, education and extension activities. In recognition of, the Department of Biotechnology, Government of India through its National network programme in human resource development in biotechnology instituted M.Tech. programme in Marine Biotechnology at this Centre (NCAAH), Cochin University of Science and Technology on 2008, an unique programme of its kind in India. In support of this programme University Grants Commission provided two Faculty positions during the 10th plan period and two more during the 11th plan period. The programme is supported presently with five Faculty members. In Marine Biotechnology, in general, principles and practices of Biotechnology are introduced to understand marine environment and to preserve and achieve sustainable and enhanced production of marine bio-resources.

The research and development activities of the Centre use cutting edge technology to bring in novel innovations for the development of sustainable aquaculture in India. A unique feature of the Centre is its in-house production facility, the Aquaculture Health Products Division to meet the needs of the Indian Aquaculture Industry. It is well equipped to conduct field trials of the research outputs, and ensures a consistent and continuous supply. The Aquaculture Extension Cell (AEC) is the link of the farmer to technology. Apart from this, we provide a platform for the interaction between farmers, scientists and industry.

### 2. Programme of study/Research

1. M.Tech. in Marine Biotechnology (Sponsored by DBT – 4 semesters)
2. Ph.D. Programme in Marine Biotechnology and Aquatic Animal Health under the Faculties of Marine Science and Environmental Studies

### 3. Faculty Members:

Sl. No.	Name	Designation	Qualification	Specialization
1	Dr. Valsamma Joseph	Director, and Associate Professor	M.Sc., Ph. D.	Marine Biotechnology





2.	Dr. T.P.Sajeevan	Assistant Professor	M.Sc. Ph. D	Marine Biotechnology
3.	Prof. I.S. Bright Singh	UGC-BSR faculty	M.Sc, Ph.D	Environmental (Marine) Microbiology & Biotechnology and Aquatic Animal Health
4.	Ms. Limmy, T.P.	Assistant Professor on Contract	M.Tech.	Bioprocess Technology
5.	Dr. Jayesh P.	Fellow DBT-IYBA	M.Sc., Ph.D.	Cellular and Molecular Biology

#### 4. Emeritus Faculty

Sl. No.	Name	Designation	Qualification	Specialization
1.	Dr. A. Mohandas	Emeritus Professor	M.Sc. Ph.D.	Parasitology & Hematology

#### 5. Visiting Faculty:

Sl. No.	Name	Designation	Qualification	Specialization
1.	Dr. N. Nandini Menon	Scientist, Nansen Environmental Research Centre, India (NERCI) (Kochi)	M.Sc., Ph.D	Marine Biology
2.	Mr. S. Girishkumar	Managing Director, HMT International Ltd., Bangalore	MBA	Industry Management
3	Mr. H. Krishna Iyer	Retd. Scientist, Central Institute of Fisheries Technology, Kochi	MSc.	Biostatistics
4	Mr. K.C. Sivakumar	Technical Officer, Rajiv Gandhi Centre for Biotechnology, Trivandrum	M.Sc. MBA	Bioinformatics
5	Dr. Sujith, A	Assistant Professor Department of Chemistry National Institute of Technology Calicut, Kozhikode - 673801	M.Sc., Ph. D.	Nano biotechnology



6	Dr. A. Anas	Scientist 'C', National Institute of Oceanography, Cochin	M.Sc., Ph. D.	Nano biotechnology
7	Dr. Umesh P.	Assistant Professor and Head, Department of Applied Science, College of Engineering Aranmula	M.Sc., Ph.D.	Systems and Computational Biology

## 6. Research Staff:

- A) **Dr. Vrinda S.** UGC – Kothari Fellowship – Recombinant antimicrobial peptides and cell penetrating domains from Phylum Arthropoda and Mollusca as anticancer agents. 02.12.2013 to 1-12-2016.
- B) **Dr. Salini K.** DST-SERB National Postdoctoral Fellowship, Department of Science and Technology from 24<sup>th</sup> April, 2017. Topic: Establishment of stem cell lines from Mozambique tilapia (*Oreochromis mossambicus*) at its applications in developing a universal vector system for gene transfer in fishes; and in species conservation.

## Project Staff

1	Mr. Vijayendra	DBT- Junior Research Fellow	Prof. I.S. Bright Singh	Marine Biotechnology
2	Mr. S. Vinoth	Sea6 Energy- Project Fellow	Prof. I.S. Bright Singh	Marine Biotechnology
3	Ms. Vinusree K.P.	DST- Senior Research Fellow	Prof. I.S. Bright Singh	Marine Biotechnology

## 7. Research Scholars:

Sl. No	Name	Supporting agency	Guide	Area of Research
1	Ms. Ammu Thomas	CUSAT	Prof. I.S. Bright Singh	Environmental Biotechnology
2	Ms. Deepa G.D.	CUSAT	Prof. A. Mohandas & Prof. I.S. Bright Singh	Marine Biotechnology
3	Mr. Devassy Christo	UGC-BSR	Dr. Valsamma Joseph	Metagenomics
4	Ms. Ramya R. Nair	UGC –SRF	Dr. Valsamma Joseph	Metagenomics
5	Ms. Sanyo Sabu	CUSAT	Dr. Valsamma Joseph	Marine Algal Biotechnology
6	Ms. Jisha Kumaran	UGC-BSR	Dr. Valsamma Joseph	Marine Biotechnology



7	Ms. Dhaneesha, M.	KSCSTE	Dr. T.P. Sajeewan	Marine Biotechnology
8	Ms. Lekhmi, N	SC/ST Welfare Fellowship	Dr. T.P. Sajeewan	Marine Biotechnology
9	Ms. Sowmya P. Mohandas	MoES Project/ University Fellowship	Prof.I.S.Bright Singh	Marine Biotechnology
10	Mr. Linu Balan	MoES Project/ University Fellowship	Prof.I.S.Bright Singh	Marine Biotechnology
11	Mr.Boobal R	UGC-BSR fellowship	Prof.I.S.Bright Singh	Environmental Biotechnology
12	Mr.Anoop B.S.	UGC-BSR fellowship	Prof.I.S.Bright Singh	Cell culture technology
13	Ms.Vinusree K.P.	DST	Prof.I.S.Bright Singh	Aquaculture Biotechnology
14	Mr.Sivakumar K.C	Part time	Dr.Sajeewan T.P	Marine Biotechnology
15	Ms.Merlin T.S	KSCSTE	Dr.Sajeewan T.P	Marine Biotechnology
16	Ms.Deepa G	UGC-BSR fellowship	Dr.Sajeewan T.P	Marine Biotechnology
17	Ms.Krishnapriya R.	KSCSTE	Dr.Sajeewan T.P	Fish Immunology
18	Mr.Md Umar	KSCSTE Project fellow	Dr.Sajeewan T.P.	Marine Biotechnology
19	Ms. Indira K.	University Fellowship	Dr. Valsamma Joseph	Marine Biotechnology

### 8. Administrative Personnel:

Sl.No.	Designation	No. of posts
1	Assistant Section Officer	1

### 9. Technical Personnel

Aquatic Animal Health Assistants : 6 (Temporary)

### 10. Students enrollment

Sl.No.	Programme of study	Men	Women	Total
1	M.Tech. Marine Biotechnology	4	9	13
2	Ph.D.	6	13	19



## 11. Research facilities

### a. Laboratories

- (1) Animal tissue culture
- (2) Immunodiagnostics
- (3) Molecular diagnostics
- (4) Virology
- (5) Marine bioprospecting
- (6) Bioprocess and fermentation
- (7) Bacteriology
- (8) Marine Biotechnology
- (9) Aquatic animal health assessment
- (10) Aquaculture medicine production unit
- (11) Aquatic animal bioassay unit
- (12) Environmental chemical analyses

### b. Major Equipments:

1. Laminar Flow Hoods
2. Colony Counter
3. Vacuum Filtration system
4. Fermentors- 2L, 5L and 100L
5. Spectrophotometers-2
6. Sulphur Bacteria Cabinet
7. Tangential Flow filtration system
8. Balances
9. Water baths
10. Temperature controlled rotary shakers with light
11. Temperature controlled rotary shakers
12. Low temperature cabinets
13. Environmental Test Chamber
14. BOD Incubator
15. pH meters



16. FISKE Osmometer
17. Colorimeter - Systronics
18. PCR Machines
19. Fluorescent Microscope
20. Ultra Sonicator
21. Microscopes
22. Lyophilizer
23. Incubators
24. Refrigerated Centrifuges
25. Luminometer
26. Cyto centrifuge
27. Conductivity Meter
28. Photo colorimeter (Turbidometer)
29. Electrophoresis Systems with power pack
30. UV Transilluminator
31. Microcentrifuge
32. Amicon filtration system with magnetic stirrer and Nitrogen Cylinder
33. Inverted Microscope
34. Inverted Microscope
35. CO <sub>2</sub> Incubator, Sanyo
36. CO <sub>2</sub> Incubator, Heraeus with water bath
37. Low temperature Incubator
38. Gel Rocker/ Oscillator
39. Hot air Oven -2 nos
40. CO <sub>2</sub> Cylinders – 3nos
41. Histology Work Station
42. Computer Work Station
43. -80 Degree Freezer -2 nos
44. -20 Degree Freezer – C Horizontal
45. -20 Degree Freezer – C Vertical
46. Refrigerated Centrifuge - Sigma



47. Microfuge - Eppendorf
48. Milli Q Water Purification System
49. Water Bath - Julabo
50. Microplate Reader
51. Real Time PCR
52. Hybridization Oven
53. FISH Microscope
54. DGGE System
55. RNA Extraction Hood
56. Electroporator
57. Horizontal Gel Electrophoresis System – Large – 1No. with power Pack
58. Horizontal Gel Electrophoresis System – Small – 3 No. with power Pack
59. Pulsed Field Gel Electrophoresis System
60. Microwave Oven
61. Mini Spin – 2nos
62. Vacuum Pump
63. Water bath – Julabo
64. Vibrator – Remi
65. Vertical Electrophoresis System – Large with Power Pack
66. Vertical Electrophoresis System – Small with Power Pack
67. Low temperature Cabinet
68. 2D Gel Electrophoresis System
69. Column Chromatography system
70. HPLC
71. Solid Phase Extraction System
72. Ice Flaking Machine
73. White Light Transilluminator
74. Gel Rocker/Oscillator
75. Laminar Flow
76. Sealing Machine
77. Heavy Duty Centrifuge



78. 100 Litre Fermentor with boiler
79. 5 litre fermentor 2 nos with water circulating units and air compressors
80. Rotary Evaporator – 2nos
81. Ultrasonicator
82. Vacuum Pump
83. Heating Mantles – 3 nos
84. TLC Systems
85. Compressors -6 nos
86. Nitrifying Bioreactor (SBSBR and PBBR)
87. Nitrifying bacterial culture production system
88. Water Pumps and Pumping and distribution system
89. Power Generator
90. Photobioreactor

### c. Library

No. of books and journals s on 31st March of the previous year	Additions during the current Year
476	123

### 12. Distinguished Visitors:

Sl. No.	Name	Affiliation	Remarks/ Date of Visit
1.	Prof. William H Gerwick	Distinguished Professor of Oceanography and Pharmaceutical Sciences Director, Center for Marine Biotechnology and Biomedicine Scripps Institutions of Oceanography, University of California, San Diego, USA	1-2-2016 – 12-02-2016
2.	Prof. Michael Hans Schwarz	Virginia Agricultural Research and Extension Centers / Virginia Tech University	July 19-23 <sup>rd</sup> , 2016
3.	Dr. Ben Naman	Postdoctoral Researcher, Center for Marine Biotechnology and Biomedicine Scripps Institutions of Oceanography, University of California, San Diego, USA	July 21 <sup>st</sup> - Augst 6 <sup>th</sup> , 2017



4	Mr. Tiago Leao	Graduate Researcher Center for Marine Biotechnology and Biomedicine Scripps Institutions of Oceanography, University of California, San Diego, USA	July 21 <sup>st</sup> - August 6 <sup>th</sup> , 2017
5	Dr. Ira Levine	Professor of Natural and Applied Science, University of Southern Maine, USA	19-11-2016
6	Prof. E.G. Silas	Former Vice Chancellor, Kerala Agricultural University	03-08-2017

## 2. Ph.D. awarded

Sl. No.	Title of thesis	Research Scholar	Supervising Guide
1	Production optimization of the marine microalga <i>Picochlorum maculatum</i> MACC3 as source of polyunsaturated fatty acids	Mr. Arun Augustine	Dr. Valsamma Joseph
2	Molecular basis of community composition and function of nitrifying - denitrifying bacterial consortia used in bioaugmenting nitrification in aquaculture systems	Ms. P.G. Preena	Prof. I.S.Bright Singh
3	<i>Bacillus cereus</i> MCCB 101 as bioaugmentor for detritus degradation in simulated zero water exchange shrimp grow out system	Ms. Riya George	Prof. I.S.Bright Singh
4.	Novel cellulases through culture-dependent and metagenomics based approaches: Discovery and characterization	Ms. Asha P.	Prof. I.S.Bright Singh

## 14. Publications:

### (a) Papers

#### Peer Reviewed Journals

1. Dhaneesha M., C. Benjamin Naman, K. P. Krishnan, Rupesh Kumar Sinha<sup>3</sup>, P. Jayesh, Valsamma Joseph, I. S. Bright Singh, William H. Gerwick, T. P. Sajeevan (2017). *Streptomyces artemisiae* MCCB 248 isolated from Arctic fjord sediments has unique PKS and NRPS biosynthetic genes and produces potential new anticancer natural products, 3 Biotech 7(32) 1-10.





2. Sivakumar K.C., Sajeevan T.P, I.S. Bright Singh (2016). Marine-derived compounds as binders of the White spot syndrome virus VP28 envelope protein: In-silico insights from molecular dynamics and binding free energy calculations. *Computational Biology and Chemistry*. 64 (2016) 359–367.
3. Solly Solomon, Bhavya Kachiprath, G. Jayanath, T. P. Sajeevan, I. S. Bright Singh, Rosamma Philip (2016). High-quality metagenomic DNA from marine sediment samples for genomic studies through a preprocessing approach. *3 Biotech*, 6(2), 1-5.
4. Sabu, S., Bright Singh, I. & Joseph, V. Molecular Identification and Comparative Evaluation of Tropical Marine Microalgae for Biodiesel Production, *Mar Biotechnol* (2017). doi:10.1007/s10126-017-9754-8
5. Anas A, Vinothkumar, S., Gupta, S., Jasmin, C., Joseph, V., Paramaeswaran, P.S., Nair S. 2016-17. Evaluation of anti-oxidant and cytotoxic properties of cyanobacteria *Limnothrix* sp. and *Leptolyngbya* sp. from Arabian Sea. *Journal of Microbiology, Biotechnology and Food Sciences*. 6(3), 956-960
6. Arun Augustine, Jisha Kumaran, Jayesh Puthumana, Sanyo Sabu, I.S. Bright Singh, Valsamma Joseph, 2017. Multifactorial interactions and optimization in biomass harvesting of marine microalga *Picochlorum maculatum* MACC3 with different flocculants. *Aquaculture* 474, 18–25.
7. Asha, P., Divya Jose, I.S. Bright Singh. 2016. Purification and characterisation of processive-type endoglucanase and  $\beta$ -glucosidase from *Aspergillus ochraceus* MTCC 1810 through saccharification of delignified coir pith to glucose. *Bioresource Technology* (In Press). IF: 4.2
8. Kumaran, J., Jose, B., Joseph, V. and Bright Singh, I. S. (2016), Optimization of growth requirements of marine diatom *Chaetoceros muelleri* using Response Surface Methodology. *Aquaculture Research*. doi: 10.1111/are.12987 Impact factor : 1.606
9. Priyaja, P., P. Jayesh, Rosamma Philip, I. S. Bright Singh (2016). Pyocyanin induced in vitro oxidative damage and its toxicity level in human, fish and insect cell lines for its selective biological applications. *Cytotechnology* (2016) 68:143–155. DOI 10.1007/s10616-014-9765-5. IF. 1.8
10. Thomas A, Sudheer NS, Kiron V, Bright Singh IS, Narayanan RB, Expression profile of key immune-related genes in *Penaeus monodon* juveniles after oral administration of recombinant envelope protein VP28 of white spot syndrome virus, *Microbial Pathogenesis* (2016), doi:10.1016/j.micpath.2016.05.002. IF.1.2
11. S. Vrinda, C. Jasmin, K.C. Sivakumar, Blessy Jose, Rosamma Philip, I.S. Bright Singh. (2016). Moulting-inhibiting fusion protein augments while polyclonal antisera attenuate moulting stages and duration in *Penaeus monodon* *General Comparative Endocrinology*, 2016; 233; 32-42. IF-2.667.
12. Vrinda. S, Jasmin. C, Sivakumar. K.C, Seena Jose, Blessy Jose, Rosamma Philip, Bright Singh. I. S. (2016). Regulating gonad inhibition and vitellogenin/vitelin induction in *Penaeus monodon* using mature GIH fusion protein and polyclonal antisera. *Comparative Biochemistry and Physiology-Part A: Molecular and Integrative physiology* vol.203,167-178.



13. Vrinda.S, Seena Jose, Jasmin. C, Mohanlal. D.L, Sreelakshmi B.N, Devassy Christo, Vijayan K.K, Balasubramanian. C.P, Rosamma Philip, Bright Singh I.S. (2016). Vitellogenin/vitellin ELISA for detection of vitellogenin in the haemolymph of *Penaeus monodon*: indirect indicator of female maturity. Journal of Crustacean Biology. (In Press).
14. Aishwarya., Sruthy KS., Chaithanya ER., Sajeewan TP., Bright Singh., Philip R., 2017. Molecular Characterisation of a Novel Isoform of Hepatic Antimicrobial Peptide, Hepcidin (Le-Hepc), from *Leiognathus equulus* and Analysis of Its Functional Properties In Silico. Probiotics and Antimicrobial Proteins . doi: 10.1007/s12602-017-9294-6
15. Harisankar., Philip B., Philip R., Bright Singh., 2016. Effect of probiotics on digestive enzyme activities and growth of cichlids, *Etroplus suratensis* (Pearl spot) and *Oreochromis mossambicus* (Tilapia) Aquaculture Nutrition. doi: 10.1111/anu.12452
16. VV Afsal, SP Antony, R Philip, ISB Singh., 2016. Molecular Characterization of a Newly Identified Subfamily Member of Penaeidin from two Penaeid Shrimps, *Fenneropenaeus indicus* and *Metapenaeus monoceros*. Probiotics and antimicrobial proteins 8 (1), 46-52

**GenBank Submissions: ~250 entries**

**15. Participation in Seminar/Conference/Refresher Courses etc. by the Faculty of Members/ Students/Staff**

**Faculty**

Participant(s)	Programme	Role
Prof. I.S Bright Singh	National Consultation on Pharmaceuticals and Bio-fuel from Marine Biological Systems – Status, Constraints and the Way Forward - 1-3, February 2016	Convenor and Resource Person
	National Workshop on “Sustainable Aquaculture Production Systems (RAS,IMTA,ZWEAPS) – Towards Nutritional Security and Conservation of Oceans for Posterity” on July 22-24 2016	Convenor and Resource Person
	Indo-US Mini Symposium - Marine Biotechnology and Biomedicine on 1 <sup>st</sup> August, 2016	Convenor and Resource Person



Dr. Valsamma Joseph	National Consultation on Pharmaceuticals and Bio-fuel from Marine Biological Systems – Status, Constraints and the Way Forward - 1-3, February 2016	Resource person
	National Workshop on “Sustainable Aquaculture Production Systems (RAS,IMTA,ZWEAPS) – Towards Nutritional Security and Conservation of Oceans for Posterity” on July 22-24 2016	Resource person
	Indo-US Mini Symposium - Marine Biotechnology and Biomedicine on 1 <sup>st</sup> August, 2016	Participant
Dr. Sajeevan T.P.	National Consultation on Pharmaceuticals and Bio-fuel from Marine Biological Systems – Status, Constraints and the Way Forward - 1-3, February 2016	Participant
	National Workshop on “Sustainable Aquaculture Production Systems (RAS,IMTA,ZWEAPS) – Towards Nutritional Security and Conservation of Oceans for Posterity” on July 22-24 2016	Participant
	Indo-US Mini Symposium - Marine Biotechnology and Biomedicine on 1 <sup>st</sup> August, 2016	Participant
Lekshmi N.	National Workshop on “Sustainable Aquaculture Production Systems (RAS,IMTA,ZWEAPS) – Towards Nutritional Security and Conservation of Oceans for Posterity” on July 22-24 2016	Participant
	3 <sup>rd</sup> National Biodiversity Conference 2017 on 23-24 February 2017	Oral Presentation



Boopal	National Consultation Meet on “Pharmaceuticals and Bio-fuel from Marine Biological Systems- Status, Constraints and the Way forward” on 1 <sup>st</sup> – 3 <sup>rd</sup> February 2016	Participant
	National workshop – Sustainable Aquaculture Production Systems (RAS, IMTA, ZWEAPS) Towards Nutritional Security and Conservation of Oceans for Posterity on July 22-24, 2016	
	Indo-US Mini Symposium - Marine Biotechnology and Biomedicine on 1 <sup>st</sup> August, 2016	Participant
Dhaneesha M	UGC sponsored National Seminar on Marine Biodiversity and bioprospecting for sustainable livelihood applications’ held at CUSAT on 21-22 March 2016.	Oral presentation
	28 <sup>th</sup> Kerala Science congress held at university of calicut during 28-30 January 2016.	Oral presentation
	Hands-on Course on Basics of Flow Cytometry : Centre of Cellular and Molecular Platforms (C-CAMP), NCBS-TIFR, Bangalore 560 065 during 21 <sup>st</sup> to 24 <sup>th</sup> March, 2017	Training participant
	Workshop – Sustainable aquaculture production systems (RAS, IMTA, ZWEAPS) – Towards nutritional security and conservation of oceans for posterity: NCAAH, CUSAT during 22-24 July 2016.	Participant
Krishnapriya RS	National workshop on Sustainable Aquaculture Production Systems (RAS, IMTA, SWEAPS) - Towards Nutritional Security and Conservation of Oceans for Prosperity – organized by NCAAH CUSAT 22-24 July 2016	Delegate
	2016 Next Gen Genomics, Biology, Bioinformatics and Technologies (NGBT) conference, Cochin – 3- 5 October 2016	Delegate



Ramya R. Nair	Workshop on 'Statistical Tools for Marine Biologists' held during 27 <sup>th</sup> to 31 <sup>st</sup> March 2017 organised by the Department of Marine Biology, Microbiology and Biochemistry, School of Marine Sciences, Cochin University of Science and Technology.	Delegate
	2 <sup>nd</sup> Workshop under Obama-Singh Initiative, "Sustainable Aquaculture Production Systems (RAS, IMTA, ZWEAPS) with integrated disease management" during 22-24, July 2016 at School of Marine Sciences Auditorium, CUSAT, Kochi	Delegate
Linu Balan	International Conference on Nanomaterials and Nanotechnology ICNANO 2017, Allahabad, India during March 01-03-2017 at Vinoba Bhave Research Institute, Allahabad	Delegate
	2 <sup>nd</sup> National Workshop on "Sustainable Aquaculture Production Systems (RAS, IMTA, ZWEAPS) with integrated disease management" under Obama-Singh Initiative, during 22-24, July 2016 at School of Marine Sciences Auditorium, CUSAT, Kochi	Delegate
	Fourth International conference on Nanomedicine and Tissue <b>engineering (ICNT-2016) held at School of Chemical Science auditorium, M.G. University, Kottayam during 12-14 August 2016</b>	Delegate



Sowmya P Mohandas	National Conference on Frontiers in Genetics and Genomics organized by Dept. of Genomic Science, Central University of Kerala, Kasaragod during 7-8, April 2016	Delegate
	Fourth International conference on Nanomedicine and Tissue engineering (ICNT-2016) held at School of Chemical Science auditorium, M.G. University, Kottayam during 12-14 August 2016	Participant (Poster presentation)
	Workshop on 'Statistical Tools for Marine Biologists' held during 27 <sup>th</sup> to 31 <sup>st</sup> March 2017 organised by the Department of Marine Biology, Microbiology and Biochemistry, School of Marine Sciences, Cochin University of Science and Technology.	Delegate
	2 <sup>nd</sup> Workshop under Obama-Singh Initiative, "Sustainable Aquaculture Production Systems (RAS, IMTA, ZWEAPS) with integrated disease management" during 22-24, July 2016 at School of Marine Sciences Auditorium, CUSAT, Kochi	Delegate
Anoop B.S.	Fish cell culture Technique – Training programme at NBFGR, Kochi (01-07 April 2016)	Participant
	Sustainable Aquaculture production systems (RAS, IMTA, ZWEAPS) – Towards security and Conservation of oceans for posterity – NCAAH, CUSAT (22-24 July 2016)	Participant
	Next Gen Genomics, Biology, Bioinformatics and Technologies (NGBT) conference. SGRF, Kochi (3-5 October 2016).	Participant



Ajitha V	Sustainable Aquaculture production systems (RAS, IMTA, ZWEAPS) – Towards security and Conservation of oceans for posterity – NCAAH, CUSAT (22-24 July 2016)	Participant
	Hands-on Course on Basics of Flow Cytometry : Centre of Cellular and Molecular Platforms (C-CAMP), NCBS-TIFR, Bangalore 560 065 during 21 <sup>st</sup> to 24 <sup>th</sup> March, 2017	Training participant
Jisha Kumaran	National Consultation Meet on “Pharmaceuticals and Bio-fuel from Marine Biological Systems-Status, Constraints and the Way forward” on 1 <sup>st</sup> – 3 <sup>rd</sup> February 2016	Participant
	National workshop – Sustainable Aquaculture Production Systems (RAS, IMTA, ZWEAPS) Towards Nutritional Security and Conservation of Oceans for Posterity on July 22-24, 2016	Participant
	Indo-US Mini Symposium – Marine Biotechnology and Biomedicine on 1 <sup>st</sup> August, 2016	Participant
Indira K.	National workshop – Sustainable Aquaculture Production Systems (RAS, IMTA, ZWEAPS) Towards Nutritional Security and Conservation of Oceans for Posterity on July 22-24, 2016	Participant
	Next Gen Genomics, Biology, Bioinformatics and Technologies (NGBT) conference. SGRF, Kochi (3-5 October 2016).	Participant
Deepa G.	Hands-on Course on Basics of Flow Cytometry : Centre of Cellular and Molecular Platforms (C-CAMP), NCBS-TIFR, Bangalore 560 065 during 21 <sup>st</sup> to 24 <sup>th</sup> March, 2017	Training participant



	National workshop – Sustainable Aquaculture Production Systems (RAS, IMTA, ZWEAPS) Towards Nutritional Security and Conservation of Oceans for Posterity on July 22-24, 2016	Participant
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**16. Role of Faculty in International/National Organizations and Institutions/ Editorial Boards**

Name of Faculty	Name of Organization	Role
Prof. I.S. Bright Singh	National Academy of Agricultural Sciences	Fellow
Prof. I.S. Bright Singh	Department of Biotechnology	Member, Task force on Aquaculture and Marine Biotechnology
Dr. Valsamma Joseph	Faculty of Health Sciences, University of Calicut	Member

**17. Awards/Honours/Fellowships etc. received:**

Name of Awardee	Particulars
Dr.Sajeevan T.P	Awarded with UGC-Raman Post Doctoral Fellowship to do postdoctoral research at USA (2016-17)
Dr. Jayesh P.	Innovative Young Biotechnologist Award, Department of Biotechnology, Government of India (implemented from March, 2017)

**18. Sponsored Research Projects:**

**Ongoing Research Projects**

Sl.No.	Title and period	Funding agency	Total cost In Lakhs
1	Evaluating costs and benefits of prophylactic health products and novel alternatives on smallholder aquaculture farmers in Asia and Africa (IMA Qualate) (29.03.2016 to 28.03.2019) PI: Prof. I.S.Bright Singh	DBT - BBSRC - DFID Scheme of DBT	55.232





2.	Indo-US initiatives on innovative reforms in marine biotechnology education and research and development of sustainable aquaculture production systems for inclusive economic growth and sustainable development 01-08-2015 – 30-07-2018 Project Director: Prof. I.S. Bright Singh, with all Faculty members as participants	UGC, Govt.of India	125.9
3.	Bioactive peptides and Depsipeptides with potential anticancer activity from marine sponges and tunicates of Indian Ocean 16.09.2015 – 15-09-2018 PI: Dr. Sajeevan T.P.	Kerala State Council For Science, Technology And Environment, Govt.of Kerala	22.65
4.	Detailed performance evaluation and accelerated commercialization of the nitrifying bioreactor technology in Indian market – Phase II. Period: 7-11-2012 to 7-11- 2017. PI: Prof. I.S.Bright Singh	Department of Biotechnology, Government of India, Under SBIRI Scheme	15.0 lakhs
5.	Polyhydroxy butyrate from marine microorganisms for biomedical and aquaculture applications. Period: 1-4-2012 to 31-3-2017. PI: Prof. I.S.Bright Singh	Centre for Marine Living Resources and Ecology, Ministry of Earth Science, Government of India	87.0
6.	Selection and identification of immunocompetent early life stages of the giant fresh water prawn <i>Macrobrachium rosenbergii</i> based on differential mRNA expression. Period: 19-6-2013 to 18-6-2016 PI: Prof. I.S.Bright Singh	Department of Science and Technology, Government of India.	43.67
7	Development of induced pluripotent stem cells (iPSC) from <i>Daphnia pulex</i> and neural tissue engineering for identification of genetic and epigenetic factors responsible for differentiation and neural-degeneration PI: Dr. Jayesh Puthumana	Department of Biotechnology, Government of India	69.23

**19. Research programmes and activities**

Sl. No	Name	Guide	Area of Research
1.	Dhaneesha, M.	Dr. T.P.Sajeevan	Bioprospecting for antitumor compounds from marine actinomycetes
2.	Jisha Kumaran	Dr. Valsamma Joseph	Development of photobioreactors for mass production of marine microalgae as live feed in aquaculture systems
3	Merlin T.S	Dr.Sajeevan T.P	Ascidians with biomedical importance from Indian ocean, its <i>Ex-situ</i> and <i>In vitro</i> propagation
4	Deepa G	Dr.Sajeevan T.P	Development of polymer based nanoparticle of marine derived anticancer drugs for targeted delivery and reduction of toxicity
5	Lekshmi N	Dr.Sajeevan T.P	Bioprospecting For Neuroprotective Compounds From Marine Organisms As Potential Drug Candidates For Neurodegenerative Disorders
6	Devassy Christo	Dr. Valsamma Joseph	Metagenomic approach to cloning and expression of endo and exoglucanases and beta, 1-4 glycosidase from forest eco system
7	Ramya R. Nair	Dr. Valsamma Joseph	Diversity and abundance of key microbial functional groups involved in nitrogen biogeochemical cycling in shrimp culture systems through metagenomics approach
8	Sanyo Sabu	Dr. Valsamma Joseph	Marine microalgae with high neutral lipid content: Optimization of lipid and biomass production and relative quantification of the key genes expressed
9	Krishnapriya R	Dr.Sajeevan T.P	Characterization of immunocytokines of <i>Lates calcarifer</i>
10	Ammu Thomas	Dr. Rob H. Reed & Dr. I.S.Bright Singh	Development of photosynthetic sulphur bacteria based bioremediation technology for aqua culture system for H <sub>2</sub> S removal.



11	Deepa G.D.	Dr. A. Mohandas & Dr. I.S.Bright Singh	Cyanobacterial probiotic Synechocystis MCCB 114 and 115- Purification, molecular characterization, microbial association and mass production in photobioreactor
12			
13	Anoop B.S.	Dr.Sajeevan T.P	Cellular and Molecular approaches for the Development of immortal cell lines from <i>Penaeus monodon</i>
14	Linu Balan	Dr. A.Mohandas	Polyhydroxybutyrate from marine bacteria and their potential applications in human and veterinary medicine
15	Sowmya P. Mohandas	Dr. A.Mohandas	Polyhydroxybutyrate from marine microorganisms and its application in biological systems
16	Sivakumar K.C	Dr.Sajeevan T.P.	Insilico screening of marine bioactive molecules as white spot virus inhibitors, and its synthesis and validation.
17	Boobal, R.	Dr. I.S.Bright Singh	Dynamics of microbial population in the nitrifying bioreactor connected to aquaculture systems
18	Indira K.	Dr. Valsamma Joseph	Structure and biosynthesis of hydrocarbons of biofuel significance in marine algae
19	Md. Umar	Dr. Sajeevan T.P.	Microbial biodiversity and ecology of Arctic fjord.

### Research projects under M.Tech Marine Biotechnology

Sl. No	Name	Guide	Area of Research
1.	Pratima Vasistha	Dr. T.P. Sajeevan	Bioprospecting for anticancer agents form marine fungi
2.	Vertika Bajpai	Prof. I.S. Bright Singh	Assessment of higher feed conversion efficiency in <i>Anabas testudineus</i> and quantification of growth hormone gene in normal and shooter population
3.	Thulasidharan D.	Dr. Valsamma Joseph	Structure elucidation of hydrocarbons of biofuel significance in brown sea weeds



4.	Vidya Balasubramanian	Dr. Valsamma Joseph	Isolation and identification of filamentous cyanobacteria from Lakshadweep Islands and screening for antibacterial activity
5.	Harshal Jadhav	Dr. Valsamma Joseph	Making Novel Proteins from Non-coding DNA of <i>Vibrio harveyi</i>
6.	Ritesh C. Urade	Prof. I.S. Bright Singh	Building of molecular markers in support of enhanced growth rate in fishes.
7.	Gayatri Rajendra Kachh	Prof. I.S. Bright Singh	Development of cell culture systems from <i>Anabas testudineus</i>

## 20. Seminar/Conference/Workshop/Refresher Course conducted by the Department:

1. Workshop on 'Sustainable Aquaculture production systems (RAS,IMTA,ZWEAPS) – Towards security and Conservation of oceans for posterity' – NCAAH, CUSAT (22-24 July 2016), as part of Indo-US knowledge initiative programme
2. As part of Indo-US knowledge initiative programme "National Consultation on 'Pharmaceuticals and Bio-fuel from Marine Biological Systems - Status, Constraints and the Way Forward' was conducted from 1<sup>st</sup> to 3<sup>rd</sup> February 2016.
3. Indo-US Mini Symposium - Marine Biotechnology and Biomedicine on 1<sup>st</sup> August, 2016

## 21. Consultancy/Extension work

The Centre has undertaken consultancy/extension works on routine monitoring of the water and sediment quality and health status of aquatic animals from various aquaculture farms from Kerala and outside.

### Extension Service:

#### Disease diagnosis and management in aquaculture systems

The Aquaculture Extension Cell of the Centre worked towards helping farmers in completing successful crops of *finfish and shellfishes*. The service has been extended to Maharashtra, Andhra Pradesh, and Tamil Nadu apart from several farms in Kerala.

#### High Density GIFT (Genetically Improved Farmed Tilapia) Culture under RAS Mode

As part of the extension activities of the Centre, a High Density GIFT Culture (HDGC) under Recirculating Aquaculture System mode was developed with the



technological inputs from the Centre. Recently, with the announcement of the success in HDGC at Cheranellore, there is an overwhelming response from the people of the state to adopt the technology. The Centre could organize classes for 600, from which 60 have registered to avail the technology.

**The extension activities of the Centre are supported by the following technical staff (Temporary):**

Aquatic Animal Health Assistants

1. Ms. Blessy Jose
2. Mr. Soman A.L.
3. Ms. Surya Sugunan
4. Ms. Pramada Prasad
5. Mr. Ambady Kannan M.S.

Besides, Research Scholars are also assigned with mini extension programmes with in the purview of their research programmes.

**Continuing education programme:** The Centre has organized several orientation programmes on zero water exchange sustainable shrimp culture and Diseases in Ornamental Fish Diseases. In addition the Centre could organize training programme on 'High Density GIFT culture' for more than 600 farmers during the years.

**Revenue generated through extension activities (1-4-2015 to 31-3-2016)**

Month	Rs.
April, 2016	201411.0
May, 2016	273896.0
June, 2016	54315.0
July, 2016	64794.0
August, 2016	149920.0
September, 2016	128231.0
October, 2016	98459.0
November, 2016	137403.0
December 2016	135372.0
January, 2017	144640.0
February, 2017	2,70,664.0
March, 2017	374678.0
<b>Total</b>	<b>2033783.0</b>

## INTER UNIVERSITY CENTRE FOR NANOMATERIALS AND DEVICES (IUCND)

### 1. Brief History:

The Centre was established by the Cochin University of Science and Technology in September 2009 with a view to promoting research in the area of Nano Science and Nanotechnology and also for fostering interdisciplinary research activities in the area of nanotechnology, both intra as well inter University. The center hosts 9 adjunct faculty members. Dr. M.R. Anantharaman, Professor, Physics, Cochin University of Science and Technology is the Honorary Director of the center. The department has strong research programs in the fields of nanomaterial synthesis, Ferro fluids, energy generation and storage and biomedical implants.

### 2. Adjunct Faculty Members

Sl. No.	Name	Designation	Qualification	Specialization
1.	Dr. M.R. Anantharaman	Honorary Director (Professor, Dept of Physics)	M.Sc, Ph.D (IIT, Bombay)	Experimental Condensed matter Physics, Nanotechnology
2	Dr. K Sreekumar	Adjunct Faculty (Professor, Dept. of Applied Chemistry)	M.Sc. Ph.D	Polymers
3	Dr. C. K Aanandan	Adjunct Faculty, (Professor, Dept of Electronics)	M.Sc. Ph.D	Antenna
4	Dr. M. K Jayaraj	Adjunct Faculty, (Professor, Dept. of Physics)	M.Sc. Ph.D	Nanophotonics
5	Prof: VPN Nampoori	Adjunct Faculty, (Emeritus Professor ISP)	M.Sc. Ph.D	Optics, Nano optics Lasers
6	Dr. Prathapachandra Kurup	Adjunct Faculty, (Professor, Dept. of Applied Chemistry)	M.Sc. Ph.D	Inorganic Chemistry



7	Dr. NManoj	Adjunct Faculty, (Associate Professor, Dept. of Applied Chemistry)	M.Sc.Ph.D	Organic Chemistry
8	Dr. K.Girishkumar	Adjunct Faculty, (Professor, Dept. of Applied Chemistry)	M.Sc.Ph.D	Analytical Chemistry
9	Dr. Anjali Paravannoor	INSPIRE Faculty Fellow	M.Sc.Ph.D	Nanotechnology

### 3. Administrative Personnel

Sl. No.	Designation	No. of Posts
1	Section Officer (Applied Chemistry Dept. on Additional Charge)	1
2	Assistant (on daily wage basis)	Service temporarily discontinued
3	Sweeper cum Cleaner (on daily wage basis)	Service temporarily discontinued

### 4. Technical Personnel

Service temporarily discontinued

### 5. Awards/ Honours/ Fellowships etc. received

Name of Recipient	Name of Fellowship/ Honour /Award	Awarding Agency
Dr. M.R. Anantharaman	BSR Fellowship	DST

### 6. Sponsored Research Projects

Sl. No.	Title	Sponsoring Agency	Amount	Investigator
1	Li ion batteries based on Si anodes and ionic liquid electrolytes for high temperature applications	DST	35,00,000	Dr. Anjali Paravannoor

### 7. Research Facilities

#### a. Laboratories

Synthesis lab

Instrumentation Lab

**b. Major equipments:**

Scanning Probe Microscope

Ultrasonicator

Centrifuge

Hot air oven

**c. Library**

No of books and Journals as on 31 <sup>st</sup> March 2017	Additions during the current year
410	NIL

**8. Research Programmes and Activities**

SI.No.	Problem / Topic	Investigator (s)
1.	Hetrogeneous Catalysis	Dr. K Sreekumar (Professor, Dept. of Applied Chemistry)
2	Preparation of oxide Thin Films for the application of TTFT	Dr. M K Jayaraj (Professor, Dept. of Physics)
3	Studies on Betanin Natural Dye Incorporated ZnO Composites at Nano and Micro scale for Photonic Device Applications	Prof: VPN Nampoori (Emeritus Professor ISP)
4	Microwave properties of nanomaterials	Dr. CK Aanandan (Professor, Dept. of Electronics)
5	Ongoing Investigation on Ferrofluids and nanomagnetic materials	Dr.M.R.Anantharaman (Professor, Dept.of Physics)
6	Supercapacitors and Li- ion batteries based on nanostructured alloy anodes	Dr Anjali Paravannoor (INSPIRE Faculty Fellow, IUCND)

**Research high lights**

Ongoing programmes in the centre includes topics ranging from electromagnetic devices to artificial muscles.

Radio frequency interference/electro-magnetic frequency interference (EMI) is a serious issue caused by rapid proliferation of electronics, wireless systems, navigation, space technology, etc. EMI adversely affects the performance of the electric device as well as living organisms. Therefore shielding materials such as metals, carbon materials and conducting polymers have been employed to prevent electromagnetic noise. It has been observed that for conducting polymers, when combined with other Nano components like CNT, enhances EMI shielding performance. Conducting polymer-nanoparticle/microemulsion composites for





near field electromagnetic applications were developed as a potential candidate to be used as an efficient EMI shield. Using magnetic nano particles as the filler particles, it was shown that this composite has almost 40 dB of shielding as it requires for the commercial purposes. The SEM image shows that the particles having a size of less than 10 micrometer. By including the nano particles as the fillers we can increase the surface area so that we will get an enhanced version of microwave shielding. PANI-CSA composite was also investigated which could enhance the shielding efficiency of polyaniline almost for a broad band range.

Energy generation is another area of research being carried out at the center. Li ion batteries with alloy anodes like metallic Si are being investigated in combination with ionic liquid as the electrolyte solvent so as to design safer high voltage batteries. Nanostructured Si anodes are expected to be possible candidates for highly energy dense batteries due to their ultra-high theoretical capacity if electrodes structural integrity could be maintained during lithiation/delithiation process. 1-D morphologies are considered to be effective in doing the same since the network like structure helps to distribute the stress during the redox process effectively. Si nanowires have been synthesized in a novel anodic deposition method.

Significant research has been carried out in the field of energy storage wherein dye sensitized as well as Schottky barrier solar cell utilizing ZnO nanoparticles as the active material were investigated employing resourceful modifications. ZnO decorated with TiN nanoparticles were found to enhance the performance of DSSC significantly.

## Publications

### Papers

SI No	Name of Paper	Impact factor
1	Interfacial properties of alloy anodes in combination with Room Temperature Ionic Liquid Electrolytes: A review based on Li secondary batteries, Anjali Paravannoor, Journal of Electroanalytical Chemistry, (Accepted, article in press)	3



## INTER UNIVERSITY CENTRE FOR IPR STUDIES

### 1. Brief History

The Centre for IPR Studies, established in the School of Legal Studies of the Cochin University of Science & Technology in 2003, is converted into IUCIPRS to encourage multidisciplinary teaching and research in the area of Intellectual Property Rights. Centre for IPR Studies was originally established with Dr. K.N. Chandrasekharan Pillai, Dean, Faculty of Law as the Hon. Director and Dr. N.S. Gopalakrishnan as the Coordinator. The Centre is also supported by the Ministry of Human Resources Development, Government of India, which established HRD Chair on Intellectual Property Rights in CUSAT in 2003. The Government of India also extended financial support to develop a depository of IPR materials. The Govt. of Kerala has converted the Centre for IPR Studies in to Inter University Centre for Intellectual Property Rights Studies in 2010 vide Go. Go. (Ms) No. 348/10/H. Edn. dated 13/10/2010 which was modified by G.O (Ms) No.235/11/ H.Edn. dated 23/09/2011. In 2013 the Government of Kerala issued a common G.O. No.59/2013/H.Edn dated 06.03.2013 for Inter University Centres. The Centre, at present, receives financial assistance from both the State Government and the Central Govt. At present the Centre has one of the best collections on IPR from different parts of the world.

### 2. Programmes of Study/Research:

The main activities of the Centre include policy research support to both Central and State Government, supporting/assisting Government of India in International Negotiations conducting extensive research in Intellectual Property related areas, conducting different types of academic programmes which include Ph.D programmes with fellowships, facilitating multi-disciplinary research, undertaking post graduate courses for students of School of Legal Studies, from science, technology and management disciplines of CUSAT, short-term fellowship for students from other universities who have registered for PhD on any IP related areas, visiting fellowship for eminent academics from India and abroad, financial support for students giving them an opportunity to associate with conferences and workshop on emerging issues on Intellectual Property Law and conduct training programmes for Judges, Professionals, Scientists. It also extends supports to scientists, industrialists and other technical experts from CUSAT and outside in obtaining different forms of IP protection. The Centre has prepared Policy Research Papers for the Government



of India for international text based negotiations in World Intellectual Property Organisation for different treaties on protection of traditional knowledge, traditional cultural expression /folklore and genetic resources. Also supported Government of Kerala in implementing the IPR Policy of Kerala.

### 3. Faculty Members

Sl.No.	Name	Designation	Qualification	Specilisation
1	Prof. (Dr.) N.S. Gopalakrishnan	Professor	LLM, Ph D	Intellectual Property
2	Dr. T.G. Agitha	Associate Professor	LLM, Ph D	Intellectual Property
3	Dr. I G Rathish	Assistant Professor (on contract)	PhD	Chemistry
4	Ms. Madhuri Anand	Assistant Professor (on contract)	LLM	Intellectual Property
5	Ms. Anjana Girish	Assistant Professor (on contract)	LLM	Intellectual Property
6	Ms. Rujitha T R	Assistant Professor (on contract)	LLM	IPR & Commercial Law

### 4. Visiting Faculty (If any)

Sl.No.	Name	Designation	Qualification	Specilisation
1	Mr. K M Gopakumar	Legal Adviser and Senior Researcher, TWN	LLM	IP & Human Rights

### 5. Research/Project Staff

Sl. No.	Name	Designation	Qualification	Specilisation
1	Ms. Karishma Birthare	Research Officer	LLM	IPR & Corporate laws
2	Mr. Anson C J	Research Officer	M.Com	Intellectual Property
3	Ms. Disamol M D	Steno/Documentation Assistant	DCP, B.Com, BLIS	-

**6. Research Scholars**

Sl. No.	Name	Funding Agency	Guide	Area of Work
1	Chaithanya E.P.	Fellowship period over	Prof. (Dr.) N.S. Gopalakrishnan	The Role of State in the Protection of Traditional Knowledge
2	Narendran T	Converted to Part-time	Prof. (Dr.) N.S. Gopalakrishnan	Alternatives to Intellectual Property Rights based Pharma Innovation Model: A Study on Open Source Drug Development
3	Anson C.J	Converted to Part-time	Prof. (Dr.) N.S. Gopalakrishnan	Definitional Issues of Geographical Indications (GI) and Role of Consumer Perceived Value in Marketing GI Products: A Multidisciplinary Study on Selected GIs in Kerala
4	Rujitha T.R	Converted to Part-time	Prof. (Dr.) N.S. Gopalakrishnan	Patenting Life Under U/S 3 j of Patent Act and its Impact
5	Sathivel M	Converted to Part-time	Prof. (Dr.) N.S. Gopalakrishnan	Protection of Authors' Right in Live Streaming: A Study in the Context of Digital Broadcasting
6	Arathi Ashok	Converted to Part-time	Dr.T.G.Agitha	Shift of Indian Copyright Regime: from Entrepreneur to Author
7	Kioko Nzuki Mwanja	ICCR	Dr.T.G.Agitha	Management of Cultural Assets in Museums in Kerala and Intellectual Property
8	Somalatha Moly T S	UGC	Dr.T.G.Agitha	IP & Agriculture
9	Sreegovind K	Government of Kerala	Prof. (Dr.) N.S. Gopalakrishnan	Game Theoretical understanding of Intellectual Property Negotiations
10	Bilal A Nazeer	Government of Kerala	Dr.T.G.Agitha	Patent Law and Modern Biotechnology Industry
11	Vishnu Sankar P	Government of Kerala	Dr.T.G.Agitha	Exhaustion and Free Movement of Goods
12	Parvathy K	Government of Kerala	Prof. (Dr.) N.S. Gopalakrishnan	Effectiveness of User Country Measures in Internationally Implementing Access and Benefit Sharing
13	Naveen Gopal	Government of Kerala	Prof. (Dr.) N.S. Gopalakrishnan	Protection of Undisclosed Information in India



14	Sulok S K	Government of Kerala	Prof. (Dr.) N.S. Gopalakrishnan	Geographical Indications: The Concept and the Beneficiaries
15	Sruthy Rajendran	Government of Kerala	Prof. (Dr.) N.S. Gopalakrishnan	Patenting Public Funded Innovations in India
16	Madhuri Anand	Part Time	Dr. P S Seema	Green Technologies and Intellectual Property Rights
17	Anjana Girish	Part Time	Dr. P S Seema	Visually Impaired Treaty and Human Rights
18	Vidyuth K S	Part Time	Dr. P S Seema	Reconstructing a conception of Social Access Facilitating Intellectual Property from John Rawl's theory of Justice
19	Pai Yogesh Anand	Part Time	Dr. T.G. Agitha	International Technology Standardisation, Patents and Competition Law: Addressing Gaps in the International Legal Framework

## 7. Administrative Personnel

SI.No.	Designation	No. of Posts
1	Administrative Officer	1
2	Assistant	2
3	Peon	2
4	Gardner	1

## 8. Technical Personnel

SI.No.	Designation	No. of Posts
1	Assistant Librarian	1
2	Professional Assistant	2

## 9. Student Enrollment

SI.No.	Programme of Study	Men	Women	Total
1	Ph D	3	4	7
2	LLM (IPR) PhD	0	4	4
3	LLM (IP) PhD	2	2	4
4	One Year LLM (IPR)	3	12	15



## 10. Research Facilities

### a. Library

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
Books – 3590 Journals – 2 Online Database - 1	Books – 437 Journals – 0 Online Database - 0

## 11. Distinguished visitors

Sl.No.	Name	Affiliation	Remarks
1	Dr. Shubha Ghosh		Crandall Melvin Professor of Law; Director of the Technology Commercialization Law Program
2	Dr. Anuj Bhuvania		Law Faculty at SAARC University, Delhi
3	Dr. Biswajit Dhar		Professor, Centre for Economics Studies & Planning, Jawaharlal Nehru University, New Delhi

## 12. Publications

### a. Papers

Sl. No.	Name of Paper	Impact Factor, if any
1	“Overlap of Copyright and Design Protection”, in Annotated Leading Copyright Cases in Major Asian Jurisdictions, Ed, Kung-Chung Liu, Hong Kong University Press (2016) by Prof. (Dr.) N.S. Gopalakrishnan	
2	“Idea-expression Dichotomy and Originality requirements for Copyright Protection: An analysis of the jurisprudential underpinnings of the judicial pronouncements in India” Copyright Law in the Digital World, Springer 2017, accepted in April 2016 by Dr. T G Agitha	
3	TKDL –A Weapon against Bio piracy, Publication in proceedings of Fourth Indian Biodiversity Congress - (IBC -2017) 10-12 March 2017 by Ms. Madhuri Anand	
4	Implementation of Access and Benefit Sharing in Biological Diversity Act: An Analysis, Publication in proceedings of National Biodiversity Conference 2017 at Thiruvananthapuram on 23rd and 24th February 2017 by Ms. Madhuri Anand	
5	“Ambit of Right to Information Act, 2005-Wide Enough to cover Private Aided Colleges?” in “Right to Information and Good Governance, Book Series-III-National Law School of India University, Bengaluru”. (ISBN-978-93-83363-45-2) by Ms. Anjana Girish	



6	“Rethinking biotech patents: Lesson from United States Experience” published as chapter in a book, VIT publishers, Ravi raj& venkatesh (eds) 2016 by Rujitha T R	
7	“Assistive Technologies for Disabled and Role of Patent system” in Army institute of Law journal, AIL Journal Vol. IX Issue 16,2016 by Rujitha T R	
8	“Balancing the interest of generic drug manufacturers vs patented drug manufacturers accepted in journal of legal thought by Rujitha T R	
9	Bioinformatics patents: The challenges, Journal of commercial biotechnology, vol.22 I no.3 July 2016 p.64-78 by Rujitha T R	
10	Book chapter titled Exhaustion of IP: A Tool for Competition in “Short Notes on Competition Law in India”, Aneesh V. Pillai (Ed.), Regal Publications, New Delhi, 2017, pp. 216-231 [ Chapter 16] by Ms. Arathi Ashok	
11	Book chapter titled Innovation, IP and India: The Dichotomy Between Facts and Fiction in “Innovation and IPR in China and India: Myths, Realities and Opportunities”, Kung-Chung Liu and Uday S. Racherla (Eds.), Springer, 2016, pp. 121-142 [Chapter 5] by Ms. Arathi Ashok	
12	Goods in Transit: Right Holder v. Holder of Goods, An Uneasy Case, edited by Dr.P.R.L Rajavenkatesan, Dr. Rabbiraj C, VIT School of Law, First Edition, July 2016, ISBN:978-93-81992-08-1 by Mr. Naveen Gopal	
13	“Exceptions and Access to Medicine- TRIPS”, published in VIT School of Law Journal, 2016 by Parvathy K	
14	“The National IPR Policy- A Critique”, pp. 84-95, Vol 3, Issue 2, International Journal of Socio-Legal Research, ISSN-2393-8250 by Sruthy Rajendran	
15	Incentive Theory Justification for Intellectual Property Rights in USA: Judicial Trends, Elenchus Law Review, Vol. 2, Issue 1, ISSN:2395-034X by Sulok S K	
16	Patent Infringement in Outer Space: Review, Journal of Intellectual Property Laws, pp.29-43, Issue 2, Vol. 2016-17, ISSN: 2455-0361 by Sulok S K	
17	United States Supreme Court sets new standard for Definiteness of Patent Claims; Nautilus Inc. v. Biosig Instruments Inc, Law, Science and Technology, edited by Dr.P.R.L Rajavenkatesan, Dr. Rabbiraj C, VIT School of Law, First Edition, July 2016, ISBN:978-93-81992-08-1 by Sulok S K	
18	Utility Requirements for the Patenting of Biotechnology Inventions, Legal Mirror, Issue 4, Vol. 2, June 2017, ISSN: 24546216 by Bilal A Nazeer	
19	Myriad: Myriad of Problems Unresolved, Law, Science and Technology, edited by Dr.P.R.L Rajavenkatesan, Dr. Rabbiraj C, VIT School of Law, First Edition, July 2016, ISBN:978-93-81992-08-1 by Bilal A Nazeer	



### 13. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students.

Name of Participant	Name of Seminar / Conference/ Workshop	Role
Prof. (Dr.) N.S. Gopalakrishnan	Access to Seeds, ISID, ISAE & TWN, 24 <sup>th</sup> - 28 <sup>th</sup> October, 2016, Delhi.	Resource Person
	Refresher Course for IP Teachers on Developmental Perspectives on IPR at IUCIPRS on June 2016	Resource Person
	Facilitating Innovation and Patent Filing at Kannur University (Outreach program)	Resource Person
	Facilitating Innovation and Patent Filing at MG University (Outreach program)	Resource Person
	Facilitating Innovation and Patent Filing at KUFOS, Panangad, Ernakulam (Outreach program)	Resource Person
Dr. T G Agitha	Refresher Course for IP Teachers on Developmental Perspectives on IPR at IUCIPRS on June 2016	Co-Ordinator
Dr. I G Rathish	One day Panel discussion on Digital Creativity in Entertainment Industry and Intellectual Property Rights on world IP day celebration on 26.04.2016	Participant
	Refresher Course for IP Teachers on Developmental Perspectives on IPR at IUCIPRS on June 2016	Participant
	Facilitating Innovation and Patent Filing at Kannur University (Outreach program)	Resource Person
	Facilitating Innovation and Patent Filing at MG University (Outreach program)	Resource Person
	Facilitating Innovation and Patent Filing at KUFOS, Panangad, Ernakulam (Outreach program)	Resource Person
	Fourth Annual National Workshop for Law Students: Copyright Issues in the Entertainment Industry	Participant
	Two days faculty development program on "Excellence in Teaching and Transforming Classrooms" organised by School of Legal Studies, CUSAT from Nov. 4 <sup>th</sup> 2016 to Nov. 5 <sup>th</sup> 2016.	Participant





	Delivered a talk on “Role of IPR in Entrepreneurship” organised by Innovation and Entrepreneurship Development Centre, SSET in the 5 day Entrepreneurship awareness camp at SCMS College of Engineering and Technology, Karukutty on July 22, 2016.	Resource Person
	Delivered a talk on “IPR and Patents” STTP on Scratch to End Product (STEP) program organised by Division of Electronics Engineering, School of Engineering, CUSAT on Sept 29, 2016.	Resource Person
	Delivered a talk on “Patenting and IPR for research” in the Two-day workshop on Research Methodology, Writing Practices, Language and Soft Skills organised by SN College, Kollam on March 27, 2017.	Resource Person
Ms. Madhuri Anand	TKDL-A Weapon against Bio piracy, Publication in proceedings of Fourth Indian Biodiversity Congress - (IBC -2017) 10-12 March 2017	Presented a paper
	Implementation of Access and Benefit Sharing in Biological Diversity Act: An Analysis, Publication in proceedings of National Biodiversity Conference 2017 at Thiruvananthapuram on 23 <sup>rd</sup> and 24 <sup>th</sup> February 2017	Presented a paper
	“Patent Promotes Innovation –Is It!!! Innovation in Neglected Diseases?” in a national conference on Health Care System in India and Human Rights Concerns conducted by School of legal Studies, CUSAT	Presented a paper
	“Role of WHO in integrating Patent and Public Health”, in a national seminar conducted by Department of Law, University of Kerala.	Presented a paper



	“Whether India needs a Utility Model Patent Protection”, in a national seminar conducted by Tamil Nadu National Law School, Thiruchirapalli.	Presented a paper
	‘Compulsory License and Government Use’ on a Two day Workshop on ‘Declaration on Patent Protection: Regulatory Sovereignty under TRIPS’ organized by IUCIPRS, CUSAT, Max Planck Institute for Innovation and Competition, Germany, Center for Economic Studies and Planning, JNU, Delhi and Institute for Studies in Industrial Development, Delhi on July 12-13, 2016	Panel Member on the session
	One day Panel discussion on Digital Creativity in Entertainment Industry and Intellectual Property Rights on world IP day celebration on 26 <sup>th</sup> April 2016	Participant
	Refresher Course for IP Teachers on Developmental Perspectives on IPR at IUCIPRS on June 2016	Participant
	Fourth Annual National Workshop for Law Students: Copyright Issues in the Entertainment Industry	Participant
Ms. Anjana Girish	Panel discussion on “Digital Creativity In Entertainment Industry And Intellectual Property Rights” 26 <sup>th</sup> April, 2016, organised by IUCIPRS and IPR Chair, CUSAT.	Participant
	Refresher course on Patent Law and Development, 17 <sup>th</sup> - 24 <sup>th</sup> June, 2016, organised by IUCIPRS and IPR Chair, CUSAT.	Participant
	International Interdisciplinary Seminar on Impact of Globalisation on Human Rights organised by Department of Law, University of Kerala	Paper Presenter
	National Conference on Health Care System in India and Human Rights Concerns organised by School of Legal studies, CUSAT	Paper Presenter
	One day Panel discussion on Digital Creativity in Entertainment Industry and Intellectual Property Rights on world IP day celebration on 26.04.2016	Coordinator
	Refresher course on Patent Law and Development, 17 <sup>th</sup> - 24 <sup>th</sup> June, 2016, organised by IUCIPRS and IPR Chair, CUSAT.	Participant
	Fourth Annual National Workshop for Law Students: Copyright Issues in the Entertainment Industry on February 8-10,2017	Coordinator



3 <sup>rd</sup> Round table on visionary IP Professors Asia IP co-operation held in National Taiwan University September 30-Oct 1st, 2016	Participated and Paper presented
“Rethinking biotech patents: Lesson from United States Experience” organised by VIT Law school, July 23 <sup>rd</sup> 2016	Presented a paper
“Balancing the interest of generic drug manufacturers vs patented drug manufacturers : An evaluation” in National seminar on Access to Health Care held on 13-15 March 2016 organised by School of Legal Thought, Mahatma Gandhi 2016	Presented a paper
Presented on the Topic “Recent Trends in Biotech Patenting” in the knowledge forum organised by CUSAT on 7/9/2016	Presented a Topic
“Stem cell Technologies : Legal and Ethical Issues n International conference on “Immune Response in Health and Disease” organised by ST. Xavier’s college Alwaye on January 24-25 <sup>th</sup> 2017	Presented a paper
“Intermediary Liability : Indian and EU Approach” In national seminar on Cyber Laws : Issues and Challenges organised by school of legal studies, CUSAT January 6-7 2017	Presented a paper
“Drug pricing Mechanism in India: Is it serving public need? N National conference on “Health Care System in India and Human Rights Concerns” held on 5 <sup>th</sup> -9 <sup>th</sup> December 2016 on Organised by school of legal studies CUSAT on Dec 2016	Presented a paper
“Recent Trends n Patenting software n Biomedical Industries” in National seminar on IPR and New age challenges organised by Tamilnadu National Law school on Nov 12 <sup>th</sup> 2016	Presented a paper
Participated in Asia IP Symposium “Prospect of patent invalidation in Taiwan and Asia” organized by Taiwan IP office September 30 <sup>th</sup> 2016	Participant
Participated in 2 days faculty development programme on “Excellence in Teaching and Transforming class rooms held at school of legal studies, CUSAT on 4-5 <sup>th</sup> Nov 2016	Participant
“Biological research tool Patenting: Issues and concerns” in Singapore Management University, on February 23-24 2017	Presented a paper



Ms. Arathi Ashok	Refresher Course for Law Teachers on Developmental Perspectives of Intellectual Property Laws, organised by Inter University Centre for Intellectual Property Rights Studies, CUSAT, from 17 <sup>th</sup> to 24 <sup>th</sup> June, 2016.	Participant
	Session on “Entertainment Industry and the Triangular Relation among Authors, Owners and Users” at the 4 <sup>th</sup> Rethinking Intellectual Property Rights Annual National Workshop for Law Students organised by Inter University Centre for Intellectual Property Rights Studies, CUSAT, from 8 <sup>th</sup> to 10 <sup>th</sup> February, 2017.	Resource Person
	Special Lecture on “Intellectual Property and Forum Shifting” at National University for Advanced Legal Studies (NUALS) on 3 <sup>rd</sup> February, 2017	Invited Speaker
	Session on “Managing IPR in Universities” at National Workshop on Emerging Trends in Information Technology in University Management organised by Association of Indian Universities and University of Calicut from 14 <sup>th</sup> – 16 <sup>th</sup> December, 2016.	Resource person
	Session on “Access to Medicine and IP Regime” at five day National Conference on Health Care System in India and Human Rights Concerns organized by Justice V. R. Krishna Iyer Chair of Human Rights, School of Legal Studies, CUSAT, from 05 – 09 December, 2016	Resource person
	Lectures on Industrial and Intellectual Property at Department of Law, University of Calicut on 5 <sup>th</sup> – 6 <sup>th</sup> August, 2016	Invited speaker
	Session on ‘Therapeutic Technique – ART, Organ Transplantation and Stem Cell Research’ in five day National Conference on Health Care System in India and Human Rights Concerns organized by Justice V.R. Krishna Iyer Chair of Human Rights, School of Legal Studies, CUSAT, from 05 – 09 December, 2016	Chair for the Session
	First Asia – Pacific Colloquium on Intellectual Property and Competition Law organized by National Law University, Delhi from 13 <sup>th</sup> to 17 <sup>th</sup> March, 2016.	Participant



	One Day National Workshop on Human Trafficking: Prevention, Control and Rehabilitation organized by School of Legal Studies, CUSAT in association with Anti Human Trafficking Club, Kochi on 19 <sup>th</sup> November, 2016	Participant
Mr. Anson C J	GIAN course on Intellectual Property Rights and International Economics Development December 12-16, 2016 at IIT, Indore.	Participant
	Empirical Methods in Innovation, Intellectual Property and Competition. National Law University, Delhi from March 9 <sup>th</sup> to 11 <sup>th</sup> , 2017	Participant
	“Multivariate Data Analysis: Basics & Advances’ from May 8-12, 2017, SMS, CUSAT	Participant
	Rethinking Intellectual Property Rights: Copyright Issues in Entertainment Industry 8 <sup>th</sup> to 10 <sup>th</sup> February 2017	Organizer
Mr. Sulok S K	Second International Seminar on Health, Human Rights and Intellectual Property Rights National University of Advanced Legal Studies, October 2016.	Paper Presenter
	National Seminar on Law, Science and Technology at VIT School of Law, Chennai Campus.	Paper Presenter
	GIAN Certificate Course on Intellectual Property and International Economic Development, Indian Institute of Technology, Indore.	Participant
	Declaration on Patent Protection- Regulatory Sovereignty under TRIPS, Institute for Studies in Industrial Development, Delhi on July 2016.	Panel Member
	Panel Discussion on Digital Creativity in Entertainment Industry and Intellectual Property Rights organized by IUCIPRS, CUSAT on April 26, 2016.	Participant, Part of Organizing team
	Fourth Annual National Workshop for Law Students on ‘Rethinking Intellectual Property Rights- Copyright Issues in the Entertainment Industry’, IUCIPRS, CUSAT, February 2017.	Participant, Part of Organizing team
	National Seminar on Law, Science and Technology at VIT School of Law, Chennai Campus.	Paper Presenter
	Declaration on Patent Protection- Regulatory Sovereignty under TRIPS, Institute for Studies in Industrial Development, Delhi on July 2016.	Panel Member



Mr. Naveen Gopal	Panel Discussion on Digital Creativity in Entertainment Industry and Intellectual Property Rights organized by IUCIPRS, CUSAT on April 26, 2016.	Participant, Part of Organizing team
	Fourth Annual National Workshop for Law Students on 'Rethinking Intellectual Property Rights- Copyright Issues in the Entertainment Industry', IUCIPRS, CUSAT, February 2017.	Participant, Part of Organizing team
Ms. Parvathy K	National Seminar on Law, Science and Technology conducted by VIT School of Law, Chennai on 23th July, 2016	Presented paper on "Exceptions and Access to Medicine-TRIPS"
	Fifth Annual National Conference on Contemporary Legal Scholarship, held on 10th September 2016 at Symbiosis Law School Pune.	Presented paper on "Website blocking as a solution for Copyright Infringement"
	2nd International Seminar on Health, Human Rights & Intellectual Property Rights held on 21-23 October, 2016 at NUALS campus	Presented paper on "Implementation of TRIPS Flexibilities to Facilitate Access to Medicine and Challenges".
Ms. Somalatha Moly T.S	National Conference On Right to Food: Constitutional Perspectives organised by School of Law, Christ University, Bangalore, January 6-7, 2017	Paper Presenter
	ACCESS TO SEEDS: Building Capacities, Discussing Policies, Five-Days Program Co-organised by Institute For Studies In Industrial Development (ISID), Indian Society for Agro Ecology (ISAE) & Third World Network (TWN) from 24-28 October 2016 Venue: ISID, Delhi	Participant
	Panel Discussion on Digital Creativity in Entertainment Industry and Intellectual Property Rights organized by IUCIPRS, CUSAT on April 26, 2016.	Participant, Part of Organizing team
	Fourth Annual National Workshop for Law Students on 'Rethinking Intellectual Property Rights- Copyright Issues in the Entertainment Industry', IUCIPRS, CUSAT, February 2017.	Participant, Part of Organizing team
	Panel Discussion on Innovation-Improving Lives and Intellectual Property Rights organized by Inter University Centre for Intellectual Property Rights Studies (IUCIPRS), CUSAT on April 26, 2017.	Participant, Part of Organizing team



	Refresher Course on Patent Law and Development organized by Inter University Centre for Intellectual Property Rights Studies (IUCIPRS), June 17-24, 2016.	Participant, Part of Organizing Team.
Mr. Bilal A. Nazeer	National Seminar on Law, Science and Technology at VIT School of Law, Chennai Campus.	Paper Presenter
	Panel Discussion on Digital Creativity in Entertainment Industry and Intellectual Property Rights organized by IUCIPRS, CUSAT on April 26, 2016.	Participant, Part of Organizing team
	Fourth Annual National Workshop for Law Students on 'Rethinking Intellectual Property Rights- Copyright Issues in the Entertainment Industry', IUCIPRS, CUSAT, February 2017.	Participant, Part of Organizing team
Ms. Karishma Birthare	Seven days "Refresher Course for Law Teachers on Developmental perspectives of IP Law" from June 16, 2017 to June 23, 2017 at IUCIPRS.	Joint Coordinator
	ICSSR sponsored Two-weeks Capacity Building Programme on 'Industrialisation, Corporate Sector and Development' held at the Institute for Studies in Industrial Development (ISID), New Delhi during the period May 22 to June 07, 2017.	Participant
	Panel Discussion on "Digital Creativity in Entertainment Industry and Intellectual Property Rights" organized by IUCIPRS, CUSAT on April 26, 2016.	Participant
	Fourth Annual National Workshop for Law Students on "Rethinking Intellectual Property Rights- Copyright Issues in the Entertainment Industry" jointly organized by IUCIPRS and Chair on IPR, CUSAT during February 8 to 10, 2017.	Joint Coordinator
	IBA-CLE Chair, National Law School of India University, Bengaluru, M K Nambyar Academy for Continuing Legal Education, Kochi in association with IUCIPRS, CUSAT during 18-20 November, 2016.	Participant



Leena Sara Zachariah	National Conference on RIGHT to FOOD: CONSTITUTIONAL PERSPECTIVES at School of Law, Christ University, Bangalore, on Jan 6-7, 2017.	Participated and presented a Paper on “ <i>Nutraceuticals – an emerging area in the food world</i> ”
	Participated in the course “ <i>Intellectual Property Rights and International Economic Development</i> ” conducted by Global Initiative of Academic Networks, MHRD, Government of India held on December 12-16, 2016, IIT, Indore.	Participant
	National Seminar on Law, Science & Technology, VIT School of Law, VIT University, Chennai on July 23, 2016.	Paper Presentation/ Participation
	Panel Discussion on “Digital Creativity in Entertainment Industry and Intellectual Property Rights” organized by IUCIPRS, CUSAT on April 26, 2016	Participant
	Seven days “Refresher Course for Law Teachers on Developmental perspectives of IP Law” from June 16, 2017 to June 23, 2017 at IUCIPRS.	Organized and participated
	Fourth Annual National Workshop for Law Students on “ Rethinking Intellectual Property Rights- Copyright Issues in the Entertainment Industry” jointly organized by IUCIPRS and Chair on IPR, CUSAT during February 8 to 10, 2017	

#### 14. Sponsored Research Projects

SI.No.	Title	Sponsoring Agency	Amount	Investigator(s)
1	IPR Chair	DIPP	52.30 Lakhs	Prof. (Dr.) N.S. Gopalakrishnan

#### 15. Research Programmes and Activities:

SI.No.	Problem / Topic	Investigator (s)
1	Section 3(d) under Indian Patent Act: Its Effectiveness and Efficacy for Asian Countries (VIPP Research Project)	Prof. (Dr.) N.S. Gopalakrishnan, Madhuri Anand & Rujitha T R





## 16. Seminar/ Conference/ Workshop/ Refresher Courses conducted by the Department

Sl.No.	Title	Duration	Coordinator	Funding Agency
1	World IP Day	One day (26.04.2016)	Ms. Rujitha T R	DIPP & IUCIPRS
2	Refresher Course for IP Teachers on Developmental Perspectives on IPR at IUCIPRS on June 2016	7 days (17 to 24.06.2016)	Dr. T G Agitha	DIPP & IUCIPRS
3	Facilitating Innovation and Patent Filing at Kannur University (Outreach program)	One day (20.07.2016)	Dr. I G Rathish	DIPP
4	Facilitating Innovation and Patent Filing at MG University (Outreach program)	One day (19.08.2016)	Dr. I G Rathish	DIPP
5	Facilitating Innovation and Patent Filing at KUFOS, Panangad, Ernakulam (Outreach program)	One day (07.12.2016)	Dr. I G Rathish	DIPP
6	Fourth Annual National Workshop for Law Students: Copyright Issues in the Entertainment Industry	3 days (8 to 10.02.2017)	Ms. Rujitha T R	IUCIPRS

## 17. Consultancy Work

Sl. No.	Name of Consultancy	Name of Consultant	Sponsoring Agency
1	Tutor – WIPO Distance Learning Programme, WIPO Academy	Prof. (Dr.) N.S. Gopalakrishnan	World Intellectual Property Organization
2	IP Consultancy for Novelty Assessment of Invention	Dr. I G Rathish	Individual
3	Consultancy for patent opposition work	Dr. I G Rathish	Courtyard Attorneys

## ADVANCED CENTRE FOR ATMOSPHERIC RADAR RESEARCH

### 1. Brief History

To improve the capability of weather forecasting in India, and further enhancement in basic research in atmospheric sciences, Cochin University of Science and Technology in collaboration with the Department of Science and Technology, Govt. of India had initiated steps to establish a state-of-art Stratosphere-Troposphere (ST) Radar in the Advanced Centre for Atmospheric Radar Research (ACARR), CUSAT. ST Radar is a state-of-the-art system to probe the Earth's atmosphere, and uses radio waves (frequency – **205 MHz**) to communicate with the atmosphere, a new frequency band that has never been employed anywhere in the world. This National Radar Facility was dedicated to the country on July 11, 2017, by **Dr. Harsh Vardhan**, Hon'ble Minister of Science and Technology, Government of India.

Since Kerala, especially Cochin region is subsumed to be the 'Gateway of Monsoon', the installation of CUSAT Radar makes itself capable of sensing the vagaries of monsoon currents and climate. In addition, it will be an inevitable part of warning extreme weather events such as severe thunderstorms, lightning, torrential rain, storm surges etc. ST Radar information can even be used for the prediction of atmospheric waves, clear air turbulence, fog, convective clouds and heavy rainfall events near the vicinity of the airport area. The point of attraction of the Radar is that the conceptualization, design, fabrication and installation of the same took their birth indigenously. A part from the above laurels, the Centre offers itself as a better model of fostering interdisciplinary and multi-disciplinary research activities, and is recognized as a Multi-disciplinary Centre under faculty of Marine Science, Science, and Technology. The Departments of Atmospheric Sciences and Electronics of CUSAT join hand in hand to corroborate that both Science and Technology are two sides of the same coin.

### 2. Faculty/Staff in ACARR

The following is the list of Faculty/ Staff associated with ACAAR.

<b>Director</b>	:	Prof. (Dr.) K. Mohankumar
<b>Assoc. Director</b>	:	Prof. (Dr.) K.R. Santosh



<b>Co-ordinators</b>	:	Prof. (Dr.) P. Mohanan
		Prof. (Dr.) K. Vasudevan
		Prof. (Dr.) C.K. Anandan
		Dr. K. Satheesan
		Dr. S. Abhilash
<b>Hon. Professor</b>	:	Dr. V.K. Anandan
<b>Scientists</b>	:	Dr. M.G. Manoj
		Dr. Ajil Kottayil
<b>Engineers</b>	:	Titu K. Samson
		Rakesh V.
		Rejoy Rebello
<b>Accounts</b>	:	Mrs. Sunitha Nair

### 3. ACARR – a Centre of Multi-disciplinary Research and Training

Intense research on Indian monsoon, local convection, atmospheric waves and turbulence, stratosphere-troposphere exchange processes etc. takes place at this new research centre. Some of the research outputs have been published in international peer-reviewed journals. Shortage in trained manpower in this advanced field is a major challenge that the country is acutely facing. The Centre is offering both short-term and long term training programs to students in the field of Atmospheric Science, Electronics and Radar Technology. Several PhDs are expected to materialize shortly. ACARR also focusses on man power training. More than 24 students, from various national Institutes such as IISER, IIST, and various Universities including one student from abroad, have completed their Summer Internship Programs, and about 10 new students are currently undergoing the training. Following is the details of students with respective topics.

Sl. No.	Student Name	Dept./Institute/ Course	Period	Topic Research
1	Anandu P.	IISER – Kolkata BSMS	June-July, 2016	A review on black-body radiation laws
2	Anupama C.	IISER – Kolkata BSMS	June-July, 2016	Seasonal and vertical variation of atmospheric lapse rate and stability
3	Aswathy S.	IISER – Kolkata BSMS	June-July, 2016	Statistical prediction of air temperature using multiple regression analysis



4	Athira C.C	IISER – Kolkata BSMS	June-July, 2016	Comparison of wind measurements by a VHF radar and radiosonde at Cochin
5	Lakshmi K.	IISER – Kolkata BSMS	June-July, 2016	Identifying date of onset of Indian summer monsoon using a VHF radar and complementary data set
6	Meera Mohan	IISER – Pune BSMS	June-July, 2016	Seasonal variation of planetary boundary layer and tropopause heights at cochin using radiosonde data
7	Ahana K.K.	Atmospheric Sciences, CUSAT	January – March, 2016	Monsoon Onset Characteristics
8	Amal Joy	Atmospheric Sciences, CUSAT	January – March, 2016	Study of Internal Gravity waves
9	Arun K.	Atmospheric Sciences, CUSAT	January – March, 2016	Study of Thunderstorm characteristics over Cochin
10	Aswathi K.K.	Atmospheric Sciences, CUSAT	January – March, 2016	Vertical Structure of Tropical Clouds
11	Athuldev A.V.	Physical Oceanography, CUSAT	January – March, 2016	Retrieval of Integrated Precipitable Water Content
12	Keerthi S.K.	Atmospheric Sciences, CUSAT	January – March, 2016	Characteristics of Tropospheric Duct
13	Krishnakumar A.P.	Atmospheric Sciences, CUSAT	January – March, 2016	Estimation Eddy Kinetic Energy
14	Rajeswari J.R.	Atmospheric Sciences, CUSAT	January – March, 2016	Radio Refractive Index Structure Parameter – Cn2
15	Swathy Vasudevan	Physical Oceanography, CUSAT	May-June 2015	Retrieval of Temperature Profile from Radar
16	Rahul A.R.	MSc – Electronics, CUSAT	May-June 2015	Denosing and Interference Detection of Radar Data
17	Sreelakshmi M.S.	MSc – Electronics, CUSAT	May-June 2015	Development of Improved Signal to Noise Ratio Algorithm
18	Harikrishnan Nair	MS – Physics, University of Michigan, USA	July 2016	Clear Sky radiative transfer in infrared and microwave spectral regions



19	Jayadev Pradeep	IIST – Trivandrum, BSMS	December 2016	Eddy dissipation rate and turbulent Kinetic Energy from 205 MHz ST Radar
20	Sreeja S. Kumar	St. Albert's College, MSc Space Science	July- September 2016	Seasonal distribution of Refractive Index Structure Parameter (Cn <sup>2</sup> ) from Radiosonde data
21	Abina Maria	St. Albert's College, MSc Space Science	July- September 2016	Estimation of cloud thermodynamical parameters over cochin using radiosonde and ancillary data
22	Anand Viswanath	St. Albert's College, MSc Space Science	July- September 2016	Estimation of Eddy dissipation rate over Cochin
23	Geethu Girivasan	MSc – Electronics, CUSAT	January – April, 2017	Effects of mutual coupling on the phase of Yagi-Uda antenna arrays
24	Nandana Viswanathan	MSc – Electronics, CUSAT	January – April, 2017	Effects of mutual coupling on the phase of Yagi-Uda antenna arrays

#### 4. List of Publications

- i) Kottayil, A., K. Mohanakumar, T. Samson, R.Rebello, M.G. Manoj, R.V, K.R. Santhosh, P. Mohanan and K. Vasudevan (2016) Validation of 205 MHz Wind Profiler Radar Located at Cochin, India Using Radiosonde Wind Measurements, Radio Science, vol.51, pp 2016) doi:10.1002/2015RS005836. (Impact Factor: 1.75)
- ii) Kottayil, A., and K. Satheesan (2016) Enhancement in the upper tropospheric humidity associated with aerosol loading over tropical pacific, Atmospheric Environment, vol. 122, pp 148 – 153 (2015), doi:http://dx.doi.org/10.1016/j.atmosenv.2015.09.043.(IF: 3.4)
- iii) Titu K Samson, Manoj M.G, Ajil Kottayil, Rakesh V, Rejoy Rebello, Vasudevan K, Santhosh K.R, Mohanan P. and Mohanakumar K. (2016) Technical Aspects of 205 MHz Mini Wind Profiler Radar for Tropospheric Probing, IEEE Transactions on Geo-Science and Remote Sensing Letters, vol.13(7), pp 1027-1031. (IF: 2.22)
- iv) Suresh Narayanan, Ajil Kottayil and K Mohanakumar (2016) Monsoon low



- level jet over the gateway of Indian summer monsoon: A comparative study for two distinct monsoon years,, Meteorology and Atmospheric Physics, vol. 128, p1-8 (2016) (IF:1.2)
- v) Manoj M.G, Satheesh Kumar M.K, Mohanakumar K (2016) On the unprecedented heat burst event and subsequent searing of foliage over the tropical monsoon region,, International Journal of Earth and Atmospheric Science, 3(3):45-56
- vi) Ajil Kottayil, Viju O. John, Stefan A. Buehler and K. Mohanakumar (2016) Evaluating the Diurnal Cycle of Upper Tropospheric Humidity in Two Different Climate Models Using Satellite Observations,, Remote Sensing, vol 8, 325 2016,; doi: 10.3390/rs8040325.(IF: 3.13)
- vii) Remya, Ajil Kottayil and K. Mohanakumar (2017) Influence of Sudden Stratospheric Warming and Quasi Biennial Oscillation on Western Disturbance over North India, *journal of Atmospheric and Solar Terrestrial Physics*
- viii) Nithya K., M.G. Manoj, K. Mohanakumar (2017) Effect of El-Nino/La-Nina on Tropical Easterly Jet Stream during Asian summer monsoon season, International Journal of Climatology, DOI: 10.1002/joc.5137.

## 5. Service to the Public

ACARR regularly issues **Weekly Weather Bulletin** and Current Weather Events over Cochin and central Kerala for the information of **Farmers, Fisherman and General Public** through University website since November 2, 2015. (<http://acarr.cusat.ac.in/wordpress-4.3.1/index.php/data-centre/>).

## 6. Technical Consultancy:

- **Cochin International Airport**

ACARR has given Technical advices on the *Airflow pattern in the Runway associated with the construction of New Terminal at CIAL*.

- **Noise Survey at SPL, VSSC, ISRO Trivandrum**

ACARR conducted Noise level Survey for the installation of an L-Band Radar at SPL, VSSC, ISRO Trivandrum (September 01-08, 2016).

## 7. Training/Workshop:

- An **In-house and On-site training** on the principle, operation and maintenance to the Project Staff was organized at ACARR, CUSAT and Data Patterns India Ltd, Chennai, during the period 02-09 August 2016.
- A 2-day national brain storming **User Scientists Workshop** on the



scientific and technical applications of the state-of-the-art Stratosphere-Troposphere Wind Profiling Radar at the Cochin University of Science and Technology was held at the Advanced Centre for Atmospheric Radar Research, CUSAT during February 09-10, 2017.

- **International Conference on radar Meteorology (iRAD-2017)** at CORAL, IIT Kharagpur, West Bengal during January 08-11, 2017 (Participants: Prof. K. Mohanakumar, Dr. M.G. Manoj, Dr. Ajil Kottayil).
- 3<sup>rd</sup> URSI (Union Radio-Scientifique Internationale) Regional Conference on Radio Science (**URSI-RCRS 2017**) at National Atmospheric Research Laboratory, ISRO, Tirupati, during March 01-04, 2017 (Participants: Dr. M.G. Manoj, Mr. Titu Samson, Rakesh V., & Rejoy Rebello – ACARR).

## 8. Recognition & Accomplishments:

- NITI-Ayog invited ACARR to New Delhi to present on the indigenously developed ST Radar, and the same has been recognized in the '**Make-in-India**' Program of the Govt. of India.
- **European Space Agency (ESA)** is launching a New satellite AEOLUS in 2017 to measure global winds (0 to 30 km altitude) from space using lidar, and are interested in finding **ST Radar wind profiles from Cochin**.
- **ISRO** sought the support of **CUSAT ST Radar** for the validation of their C- Band and S-band Radars.
- **Indo-French Joint Research Programme** to study the Climate Change under the European Community **StratoClim** Program with ACARR, CUSAT.

## 9. Visit of distinguished Guests:

- **Dr. M. Rajeevan**, Union Secretary, Ministry of Earth Sciences, Govt. of India (February 08, 2016)
- **Dr. M.W. Sinha**, Director, Science and Engineering Research Board, DST, Govt. of India (February 25, 2016)
- **Dr. B.M. Reddy**, Chairman-PIC & INSA (Hon.) Scientist, NGRI, Hyderabad (February 25, 2016)
- **Dr. A. Jayaraman**, Director, National Atmospheric Research Laboratory (February 25, 2016)
- **Dr. R. Mehajan**, Advisor, Science and Engineering Research Board, DST, Govt. of India (February 25, 2016)



- **Dr. Ram Sagar**, NASI Senior Scientist, Indian Institute of Astrophysics, Bangalore (February 25, 2016)
- **Prof. S. Ananthkrishnan**, INSA Distinguished Scientist & Raja Ramanna Chair (February 26, 2016)
- **Dr. S.S. Shenoi**, Director, Indian National Centre for Ocean Information Services (INCOIS), MoES, Govt. of India (February 26, 2016)
- **Dr. V.K. Saraswat**, Hon'ble Member, NITI Aayog, Govt. of India (March 08, 2016)
- **Dr. N.R. Munirathnam**, Scientist, Centre for Materials for Electronics Technology, Ministry of Electronics & Information Technology, Govt. of India (May 09, 2016)
- **Dr. Avinash Deshpande**, Senior Scientist, Raman Research Institute, Bangalore (October 20, 2016)
- **Dr. Saraba Gopalan**, Scientist, Raman Research Institute, Bangalore (October 20, 2016)
- **Dr. D. Pradhan**, Head (Instruments Division), India Meteorological Department, Govt. of India, New Delhi (November 03, 2016)
- **Dr. K.C. Sai Krishnan**, Head (UAID), Ministry of Electronics and Information Technology, Govt. of India, New Delhi (November 03, 2016)
- **Prof. P.B. Rao**, Founder Director of MST Radar Facility, Tirupati, (April 27, 2016)
- **Dr. G. Viswanathan**, former Director of ISTRAC, Bangalore (Dec 16-17, 2016)
- **Dr. C.H. Joshi**, TSG Member, Rashtriya Uchchar Shiksha Abhiyan (RUSA), Ministry of Human Resource Development, Govt. of India (November 09, 2016)
- **Dr. P.S. Feroze**, TSG Member, Rashtriya Uchchar Shiksha Abhiyan (RUSA), Ministry of Human Resource Development, Govt. of India (November 09, 2016).
- **Dr. Rajwant**, Scientist-E, Science and Engineering Research Board, DST, Govt. of India (December 16, 2016)
- **Dr. Archana Bhattacharya**, Chairman-PAC, Department of Science and Technology, Govt. of India (December 16, 2016)
- **Dr. B.V. Krishnamurthy**, Former Director, SPL, VSSC, Trivandrum (February 07, 2017).





## CENTRE FOR INNOVATION, TECHNOLOGY TRANSFER & INDUSTRIAL COLLABORATION

Centre for Innovation Technology Transfer and Industrial Collaboration (CITTIC) is a space aiming at the promotion of technology entrepreneurship and innovation. It bridges the gap between the industry and curriculum ensuring the development of Human Resources in the Startup domain in the right quality and with high quality through programs such as training, conferences and seminars, and other programs that bring together experts and laypeople.

### CUSATIFIED

Cusatified, a mobile application had been developed by students of Cochin University of Science and Technology under CITTIC which aims in helping the students and also freshers to find their way in and around CUSAT easily. The application is bundled with unique features for the students that help and guide them to the new atmosphere. The features include information about banks, ATMS, and hospitals nearby. It provides information about the syllabus and a list of best books to follow and also about places of tailoring and laundry, accommodation to hostels, paying guest accommodations, and shopping centres etc. The application promised to be a complete guide for anyone at CUSAT and was launched in July 2016.

This Android App help you to browse through the 180 Acre Campus without any Guidance. CUSATified literally simplifies the whole Campus into the touch of your finger Tip.

The application has added features that gives you details of all nearby:

Banks, Pharmacies Internet Cafes-Xerox and Stationary shops

Sports utilities – Gymnasiums – Stadiums and Play grounds

Uniform Center – Tailoring and Laundry shops

Grooming spots

Auto stands – Bus Stands and Bus Stops – Railway Station – Airport

Shopping Marts and Malls



## **Activities:**

A workshop had been conducted for the students of CUSAT at CITTIC named 'PREFACE' on October 1<sup>st</sup> 2016. More than 100 students had registered for this event. The workshop concentrated on the topic of Web Development, Electronics/IOT, Android. The programme was inaugurated by Mr. Sijo Kuruvilla, former CEO startup Village Kochi and he gave an introductory talk about students Entrepreneurship and its merits. The remaining classes were taken up by the students of CUSAT namely Irfan, Akhil James, Javid Abdul, Vinayan, Suhair, and Akshay. The sessions were involved in providing awareness about the topics like Android Development and Web Development. The afternoon session covered topics on Hardware (Arduino, Raspberry Pi, etc.).

## **Entrepreneurship Awareness Camp (EAC)**

We conducted Entrepreneurship Awareness Camp (EAC) for 50 students at CITTIC in December 2016. Mr. Rajan T. Nair, Project Officer Entrepreneurship Development Institute of India, KILA Campus, Thrissur and Ms. Sumi, Project Manager Startup Village Kochi handled the classes.

## **CUSAT INNOVATE 2017**

CITTIC conducted a National level event called **CUSAT INNOVATE 2017** during February 18 and 19, 2017. It was a platform to exhibit the innovations in the minds of the future generation. Not only showcasing but also to fetch the guidance for making it reach heights. The various events held after formal inaugurations were exhibitions and Hackathon. Workshops and seminars were conducted in the SMS Auditorium and CUSAT Auditorium.

Innovate, as the name suggests, is a platform to exhibit the innovations in the minds of the future generation. Not only showcasing but also to fetch the guidance for making it reach heights and also to gain monetary support for the same. It was a two day event, with the first day focussing on a startup conference STARCON. This event aimed at bringing various startups with promising ideas and the people already shining in this field under one roof. Not only providing them verbal guidance but also allowing them to pitch their ideas and helping them fetch angel investors for their companies. The main help for budding startups is to get contacts with people. When they are made to communicate with them, their major starting hurdle is solved in the first go itself.

A 24 hour HACKATHON was also conducted. This focused on the people who already had ideas to implement as business and also by putting the spotlight on the people who had the furnished skills to solve various tech based issues. The Hackathon conducted started from the eve of the first day running for 24 hours.



This helped to polish the skills of the participants as well as acquire a solution for the hosting company. This not only provided a solution through their developed prototype but also by developing this, a huge prize could be won by them.

As a part of CUSAT INNOVATE on realizing the role of academia to initiate innovative and scalable solutions to address some of the real-life problems faced by the citizen and to help government policies, we conducted 24 hour Hackthon on Smart city challenges like Education & Skill, Food & Agriculture, Housing & Transportation, Health & Hygiene, Citizen empowerment & Transparency, Finance & Personal Security, Energy Water & Environment. Ten teams were participated the event Hackathon from across the state. Former mayor Kochi Mr. Sohan and Additional General Manager, KMRL evaluated the Hackathon. Thirty Four stalls were put up at the exhibition site at CUSAT Auditorium apart from an exclusive center for Polymer Science and Rubber Technology stalls in front of Amenity Center. The exhibition showcased various exhibits prepared by the students. Stalls were put up by various groups of people for promoting their products. Four main workshops were held during the programme apart from various seminars and learning stations.

Starcon aims at helping them with this issue itself. Making the people who have actual experience in this field, angel investors who will fund for their upraising and the entrepreneurs themselves, all will be brought together in one platform to communicate together, thus making it the a real conferencing platform.

CITTIC started incubating startup companies from February 2017 onwards. The companies registered are working/incubated in the center by paying the approved rent by the university. The list of companies are given below.

Sl. No.	Company Name	Founder
1	STICON	Sony T.L
2	GOODSEBEROID	Muhammed Irfan
3	Marvonic	Pramod Krishna K
4	AZX Technologies	Muhammed Shibin
5	CYMBUS MEDIA	Abdulla M.P.
6	Iconx Solutions	Sibu S.K.
7	GREEN HOPPERS	Maaz M.M
8	Company of Rubin Ray	Rubin Ray
9	Company of Arun Jose	Arun Jose
10	COFFYE Innovations	Saleeh K
11	Renzo Solutions	Anush



## INTER UNIVERSITY CENTRE FOR DEVELOPMENT OF MARINE BIOTECHNOLOGY

Estd 2010

### 1. Brief History

The School of Marine Sciences of the Cochin University of Science and Technology is one of the pioneer institution offering research and teaching in all aspects of Marine Sciences. The School, established in 1938 and the first in india in this field, have five Departments viz., Dept of Atmospheric Sciences, Dept of Chemical Oceanography, Dept of Marine Biology, Microbiology and Biochemistry, Dept of Marine Geology and Geophysics and Dept of Physical Oceanography. Due to the high complexity of the Marine System and the interdependency of various factors governing the system, majority of the teaching and research programmes in the School of Marine Sciences are interdisciplinary. Marine Biotechnology is a field emerged from this interdisciplinary character.

The UNESCO has projected that in the 21<sup>st</sup> century people will have to depend on the marine system for the sustenance of the human life on earth. Based on this revelation a greater importance was given to the studies on this system since 1990s. The Marine resources include a wide spectrum of compounds starting from the simplest and the most important common salt to life saving drugs, food to poison, sand to valuable minerals, etc. OECD definition of biotechnology is “The application of science and technology to living organisms, as well as parts, products and models thereof, to alter living or non-living materials for the production of knowledge, goods and services”. Based on the above definition the objectives of Marine Biotechnology can be spelt out as

- Developing novel drugs; Marine Natural products
- Producing diagnostic devices for monitoring health;
- Discovering new types of composite materials, biopolymers and enzymes for industrial use;
- ensuring safety of aquaculture and fisheries;
- Providing new techniques for management of marine environments;



## 2. Faculty Involved

Dr. N. Chandramohanakumar, Ph. D; Emeritus Professor and Hon Director Inter University Centre For Development Of Marine Biotechnology (IUCDMB), – Green Chemistry, Marine Biosensors, Bio-fuel cells, Biomarkers/tracers, Bioactive compounds

Dr. S. Muraleedharan Nair, Ph. D; Professor, Dept of Chemical Oceanography – Marine Biosensors, Bio-fuel cells, Bioactive compounds and Marine Natural Products

Dr. Babu Philip Ph.D. Professor (Retd), Dept of Marine Biology, Microbiology and Biochemistry – Biochemistry, Bioactive Compounds

Dr. A.V. Saramma, Ph.D., Professor, Dept of Marine Biology, Microbiology and Biochemistry – Biochemistry, Bioactive Compounds

## 3. Post doctoral Fellows

**Dr. Manju Mary Joseph – KSCSTE Fellowship**

**Dr. Deepulal P.M. -- UGC - Kothari Fellowship**

### Academic Output:

Peer Reviewed international journals	: 8
No of Post doctoral Fellows	: 2
No of Fellows working in the centre under various fellowships and projects	: 11
No of Ph.D. Thesis awarded using the facility	: 3

## 4. Ph.D. Awarded (using the facilities of the Centre)

1. Kala, K. Jacob. 2016. Anticancer potential of sterols isolated from *Turbanaria conoides* against lung and liver cancer.
2. Abhilash P. Kailas 2016. Characterisation and quantification of major biochemical components and Secondary metabolites of some green and red sea weeds.
3. Anuradha V 2017. Chemical Investigations of the Marine Sponge Axinella Cartein from Lakshadweep Archipelago



## 5. Research Fellows currently using the facility

Topic	Name of Scholar	Name of Guide
Natural products from seaweeds	Libin Baby (Thesis under preperation)	Dr. N. Chandramohanakumar
Bioactive compounds from marine Mollusca	Ragi.A.S	Dr. S. Muraleedharan nair
Bioactive compounds from marine Mollusca	Leena.P.P	Dr. S. Muraleedharan nair
Biogeochemistry of Mangroves	Movitha Mohan Das	Dr. S. Muraleedharan nair
Natural compounds from marine micro organisms	Saritha.s	Dr. S. Muraleedharan nair
Organic geochemistry of Cochin Estuary	Ramzi	Dr. N. Chandramohanakumar
Natural products of Marine Origin	Anu Susan Cherian	Dr. N. Chandramohanakumar
Organic Chemistry of Mud Banks	Mousumi	Dr. N. Chandramohanakumar
Bioactive Compounds from Indian Mussels	Divya K.R.	Dr. N. Chandramohanakumar
Molecular modelling and docking studies using marine natural products	Shameem K	Dr. S. Muraleedharan nair
Marine Bioactive Compounds from from Lakshadweep	Mohammed Akbar K I N	Dr. S. Muraleedharan nair

## 6. Work Report

A detailed review of the present scenario of Marine Biotechnology presented a lean research status for the field in India, with most of the work concentrating in identifying the bioactivity of crude and sometimes partially refined extracts of the marine plants/organisms. The economic as well as societal requirements to identify and commercialising the bioactive components have taken place only very rarely. It is in this backdrop this centre was established in 2009 with prime objective to identify and characterise the chemical components in the bioactive extracts.

As an initial step for ground breaking research for novel discoveries and to develop new technologies for mankind, fully furnished laboratory has been set up, well equipped with sophisticated instruments: LCMS, GCMS, FTIR, Flash Chromatograph, HPLC, Microplate Reader, Refrigerated centrifuge, Insitu fermenter, Rotary evaporator, Freeze Dryer, TOC Analyser, Lyophiliser and other minor equipments.

We strive for excellence in all endeavours comprising the conduct of research program, which is mainly concentrated on the extraction and isolation of (1) Bioactive



metabolites from sponges, alcyonarians and microorganisms (actinomycetes) Seaq weeds, mangroves and other marine organisms and (2) Enzyme inhibitors from marine source and we have identified a number of potential molecules with significant bioactivity.

The Centre have collaboration with the CSIR- National Institute of Science Communication and Information Resources (NISCAIR), Government of India New Delhi in the Lakshadweep studies. The Centre is working as a facility for sister departments of the University. The centre has extended its facilities to the post graduate and research students, teachers and scientists of the Colleges, Universities and institutes in kerala

Our core research group had initially four Senior Faculty and four junior research fellows. Presently along with the faculty members, two post doctoral fellows and thirteen research fellows (in various fellowships) form the working group of the centre. In addition to this, for promoting the next generation of researchers and scientific workforce, training in the sophisticated instrumentation is one of the integral components of our scientific programs. The instrumentation facilities have been made available to the students of the universities across the state. We take seriously the obligation to responsible custodian of the resources invested by the state.

## 7. Current Research initiatives at the Centre

1. **Isolation of bioactive compounds from marine invertebrates and aquatic plants** - the extraction and subsequent isolation and characterization of secondary metabolites from the invertebrates of marine environment collected from Lakshadweep Archipelago and studies on the biological activities and scope of patenting. The identification of the compounds from Various fractions of marine sponge *Axinella carteri* and of soft coral Sarcophyton *Flexuosum* Tixier Durivault was done using PerkinElmer Clarus 680 GCMS equipped with head space sampler.
2. **Bioactive compounds from marine microorganisms** - Out of 38 actinomycete isolates 2 incubated in Marine actinomycetes broth showed antimicrobial activity.
3. **Isolation and characterisation alpha-amylase inhibitors from marine sources** - Mangroves, a part of marine ecosystem were screened for amylase inhibitor activity. The aqueous extract of true mangrove *Sonneratia caseolaris* has been identified for the presence of alpha-amylase inhibitor Aqueous extracts of *Sonneratia caseolaris*, *Cerbera odolam* and *Murraya koenigii* (Curry Plant), *Soneratia caseolaris* seeds showed a comparatively remarkable inhibition. Among eight species of mangroves *A. corniculatum* and *R. mucronata* showed



extended inhibitory activity.

4. **Biomaterials from marine invertebrates** - studied the organic matrix of endoskeletal spicules from alcyonarian coral, analyzed the sequences and functional properties of the proteins present. The cleaned sclerites were characterized using the techniques SEM, EDS, XRD, TGA, FTIR, SAXS
5. **Biomarker Studies** - Biomarkers are compounds used as signatures of individual organisms or groups of organisms, or of certain environmental processes. Lipid compounds such as fatty acids and terpenoids with their abundance, source specificity and relative stability in the marine environment are used for tracing sources and diagenetic changes of organic material in the aquatic environment. The Centre has applied this concept in the mangrove and estuarine systems.
6. **Natural Products from Mangroves** - Screening and identification of terpenoids, Fatty acids, Steroids and Flavanoids from different mangrove species. The Centre have identified novel natural products with bioactive potential from mangroves
7. **Prediction the bio activity of compounds identified** - The bio activities of the compounds can be predicted on the basis of structure-activity relationships using the soft ware PASS (*Prediction of Activity Spectra for Substances*), which was developed by Poroikov and Filimonov (2000)

## 8. Instrumental Facilities

The Centre has a fully furnished Instrumentation laboratory, well equipped with sophisticated instruments:

LCMS, GCMS, FTIR, Flash Chromatograph, HPLC, Microplate Reader, Refrigerated centrifuge, Insitu fermenter, Rotary evaporator, Freeze Dryer, TOC Analyser, Lyophiliser and other minor equipments.

## 9. Publications in Peer Reviewed international journals

1. Resmi P., Manju M. N., Gireeshkumar T. R., Ratheesh Kumar C.S., Chandramohanakumar N., 2016. Source characterization of Sedimentary organic matter in mangrove ecosystems of northern Kerala, India: Inferences from bulk characterization and hydrocarbon biomarkers. *Regional Studies in Marine Science*, 7, 43-54.
2. Manju, M.N., Resmi, P., Kumar, R.C.S., Gireeshkumar, T.R., Kumar, R.C.S., Chandramohanakumar, N., Joseph, M.M., 2016. Biochemical and stable carbon isotope records of mangrove derived organic matter in the sediment cores. *Environmental Earth Sciences* 75, 565.





3. Manju Mary Joseph, K. R. Renjith, Gaby John, S. Muraleedharan Nair & N. Chandramohanakumar 2017 Biodiesel prospective of five diatom strains using growth parameters and fatty acid profiles *Biofuels* Volume 8, Issue 1
4. Anitta Thomas, Prashob Peter K J, N Chandramohanakumar. 2016. A Profiling of Anti-Tumour Potential of Sterols in the Mangrove Fern *Acrostichum aureum*, *International Journal of Pharmacognosy and Phytochemical Research* 8(11); 1828-1832.
5. K.R. Renjith, Joseph Manju Mary, C.S. Ratheesh Kumar, M.N. Manju, N. Chandramohanakumar. 2016. Nutrient Distribution and Bioavailability in a Tropical Microtidal Estuary, Southwest India, *Journal of Coastal Research: Volume 32, Issue 6: 1445-1455.*
6. P. Resmi, M.N.Manju, T.R.Gireeshkumar, C.S.Ratheesh Kumar, N. Chandramohanakumar. 2016. Source characterisation of Sedimentary organic matter in mangrove ecosystems of northern Kerala, India: Inferences from bulk characterisation and hydrocarbon biomarkers. *Regional Studies in Marine Science*, Volume 7, Pages 43-54.
7. Ramzi A., Habeeb RahmanK., GireeshkumarT.R., Balachandran K.K., Jacob Chacko., ChandramohanakumarN. 2017. Dynamics of polycyclic aromatic hydrocarbons (PAHs) in surface sediments of Cochin estuary, India. *Marine Pollution Bulletin*, Volume 114, Issue 2, Pages 1081-1087.
8. Libin Baby, Gireesh Kumar TR, Remyakumari KR, Johns Varkey, Sankar TV, Chandramohanakumar N, 2017. Comparison of hydrographic and sediment characteristics of seagrass meadows of Gulf of Mannar and Palk Bay, South West Coast of India, *International J. of Fisheries and Aquatic Studies* 2017; 5(2): 80-84.

## SCHOOL OF MARINE SCIENCES

### 1. Brief History

The School of Marine Sciences is one of the oldest institutions in India imparting postgraduate teaching, training and research in all branches of Ocean Science and Technology. The School comprises of five departments (1)Department of Atmospheric Sciences, (2)Department of Chemical Oceanography, (3)Department of Marine Biology, Microbiology and Biochemistry, (4)Department of Marine Geology and Geophysics and (5)Department of Physical Oceanography. The School is coordinating several teaching and research programmes. It has an excellent library and has earned the special recognition of the University Grants Commission under DRS, COSIST and SAP Programmes. The School has completed the Phase III of the DSA programme and is aiming for the Center of Excellence in Ocean Sciences.

### 2. Faculty Members :

Sl.No.	Name	Designation	Qualification	Specilisation
1	Prof (Dr) K. SAJAN	Director	M.Sc., Ph.D	Estuarine and Coastal Sedimentology and Geochemistry

### 3. Administrative Personnel

Sl.No.	Designation	No. of Posts
1	Assistant section Officer	1
2	Computer Assistant (Sel.Grade)	1
3	Computer Assistant Grade-II	1
4	Security Guards	5
5	Assistant Librarian	1
6	Professional Asst (Gr.II)	2
7	Library Assistant	1

### 4. Technical Personnel

Sl.No.	Designation	No. of Posts
1	Driver Senior Grade	1



## 5. Research Facilities :

### a. Library

No of books and Journals as on 31 <sup>st</sup> March of the Previous Year	Additions during the current year
20514	83

### b. Others : Boat Jetty

## 6. Distinguished visitors :

Sl.No.	Name	Affiliation	Remarks
1.	Dr Jason Hall Spencer	Plymouth University, U.K.	
2	Dr. Iain Simpson Stewart	Plymouth University, U.K.	
3	Dr. Kennath A Rose	Louisiana State University, USA	
4	Dr. Samuel J Bentley	Louisiana State University, USA	

7. **Orientation Programme** : Library Orientation Programme for fresh students in order to make them equipped with the facilities offered by Central Library as well as the CUMS Library

## WOMEN'S STUDIES CENTRE

### 1. Brief History

Women's Studies Centre (WSC), Cochin University of Science and Technology was formally inaugurated on 18-08-2010 by the Hon'ble Vice-Chancellor, Dr.RamachandranThekkedath. On the same day of inauguration book entitled 'Female Employment in India : Issues and Challenges' edited by Prof. (Dr)Meera Bai M was released by the Vice- Chancellor, Dr.RamachandranThekkedath by handing over a copy of the book to Smt. Sindhu Joy, a Women Activist, Kerala. Since then the Centre has been conducting various Programmes like Seminars both National and International, Workshops, Yoga, Research Programmes etc.

### 2. Faculty Members

SI.No	Name	Designation	Qualification	Specilisation
1	Dr.Meera Bai M	Adjunct Professor & Hon.Director	M.A(Eco); M.A.(His) & Ph.D	Industrial Economics &Women's Studies

### 3. Emeritus Professor/Scientist(if any)

SI.No	Name	Designation	Qualification	Specilisation
1	Dr.Lakshmi Devi K.R	Emeritus Professor	M.A(Eco) & Ph. D	Women's Studies

### 4. Research/Project Staff

SI.No	Name	Designation	Qualification	Specilisation
1	Merlin Joseph	Research Associate	M.A, Ph.D	Women's Studies

### 5. Research Scholars

SI.No	Name	Funding Agency	Guide	Area of Work
1	Dr.Haseena V A (Post Doctoral Fellow)	ICSSR	Dr.Meera Bai M	Tribal Women & Children



## 6. Administrative Personnel

Sl.No	Designation	No. of Posts
1.	Data Entry Operator/Computer Assistant	1
2.	Office Attendant	1

## 7. Research Facilities

### a. Library

No of books and Journals as on 31 <sup>st</sup> March of the previous year	Additions during the current year
Books: 437	Books Will be added shortly

## 8. Distinguished visitors

Sl.No	Name	Affiliation	Remarks
1	Dr.Manimekalai	Head & Director Women's Studies Centre, Bharathidasan University, Thiruchirappilly	
2	Dr.Rekha Pandae	Professor & Head Dept. of History & Faculty Women's Studies Centre Hyderabad Central University, Hyderabad-46	
3	Dr.Thara Sebastian	Assistant Professor Department of Home Science St.Teresa's college Ernakulam	
4	Dr.R. Ramya	Assistant Professor Department of Economics Government College, Thrissur	
5	SheethalShyam	Activist, LGBTQ	
6	Dr. Mani K P	Professor Dr. John Mathai Centre Aranattukara P O, Thrissur	
7	Deepa	Sr. Civil Police officer Cyber Cell, Kochi	
8	Dr.Rejula P.K	Associate Professor Dept. Of Sociology K.N.M Govt.Arts and Science College, Kanjiramkulam	



9	Dr. Moly Kuruville	Professor & Head Department of Women’s Studies, Calicut University	
10	Rajendra Prasad	Editor Gothrabhoomi Kaloor,Kochi	
11	Dr.Latha Marina Varghese	Head & Director PG Department of English & Centre for Research Baselius College, Kottayam	
12	Dr.Sobhana Kurian	Cunnapuzha House Near CMS College Kottayam	
13	Dr.Sobha P S	Yoga Consultant	
14	Dr.P.A Mary Anitha	Chairman Centre for Empowerment & Enrichment	

**9. Publications.**

**a. Papers**

SI.No	Name of Paper	Impact Factor, if any
1	Criminality among Women: Observations from Kerala	Journal of Women Empowerment and Technology (WET) Vol.1,No.1, January-June, 2015
2	Social Development- VAW Nexus: Some Micro Level Observations	Journal of Women Empowerment and Technology (WET) Vol.1,No.2, July-December, 2015
3	Will Information and Communication Technology Empower Women?	Journal of Women Empowerment and Technology (WET) Vol.2,No.3, January-June, 2016



### 10. Participation in Seminar/Conference/Refresher Courses etc by Faculty/ Students

Name of Participant	Name of Seminar/ Conference/Workshop	Role
Dr.Haseena V A Post Doctoral Fellow, WSC	International seminar on Service sector dynamics organized by Department of Economics, Government Achutha Menon College, Aranattukara on 'Cultural Diversities of Tribals in Kerala' on 23-7-2016	Paper Presentation
Dr.Haseena V A Post Doctoral Fellow, WSC	Chaired a session in the National conference of "Research Methodology at Government College, Ambalappuzha on 4-08-2016	
Dr.Haseena V A Post Doctoral Fellow, WSC	International conference on "Self help Groups and Tribal Women organized by IMRF, GOA on 17-10-2016	Paper Presentation
Dr.Haseena V A Post Doctoral Fellow, WSC	International conference on Dynamics on Indian Economy organized by Department of Economics, Government college, Amaplappazha on 10-02-2017.	Paper Presentation
Dr.Haseena V A Post Doctoral Fellow, WSC	Training programme on Human Resource Development organized by the Kerala University, HRDC Centre on 17-02-2017 to 4-03-2017.	Participation
Dr.Haseena V A Post Doctoral Fellow, WSC	Two Days National seminar on 'Prevalence of Modern Slavery among Marginalised Women and Children in India: Causes and Consequences on 15 <sup>th</sup> & 16 <sup>th</sup> December, 2016	Resource Person

### 11. Seminar/Conference/Workshop/Refresher Courses conducted by the Centre

SI.No	Title	Duration	Coordinator	Funding Agency
1	Three Days' Scholar in Residence Programme under the ERUDITE Scheme of Kerala State Higher Education Council, Thiruvananthapuram	31-03-2016- 02-04-2016	Hon. Director, WSC	WSC
2	Special talk on 'Entrepreneurship Development: Ways and Means'	26-09-2016	Hon. Director, WSC	WSC
3	Two Days National seminar on 'Prevalence of Modern Slavery among Marginalised Women and Children in India: Causes and Consequences	15-12-2016, 16-12-2016	Hon. Director, WSC	WSC



4	Two Days State Level seminar on 'Extent and Intensity of Crime and Violence against Women and Children in Kerala	27-02-2017, 28-02-2017	Hon. Director, WSC	WSC
5	Essay Competition on 'Women's Freedom is properly understood Yes or No'	08-03-2017	Hon. Director, WSC	WSC
6	Three days Refresher Workshop on Building Conducive Environment for Academic Leadership of Women faculty	27-03-2017-29-03-2017	Hon. Director, WSC	WSC





## ANNUAL ACCOUNTS OF THE UNIVERSITY

### STATEMENT SHOWING THE RECEIPTS AND EXPENDITURE FOR 2016-17

Sl. No.	Items		Plan	Non-Plan	Total
	<b>Opening fund balance as 01.04.2016</b>		<b>38,10,88,633</b>	<b>16,90,69,011</b>	<b>55,01,57,644</b>
<b>I.</b>	<b>RECEIPTS FOR 2016-17</b>				
1	Internal Revenue (including fee receipts)			31,20,90,709	31,20,90,709
2	Grant from State Govt		21,00,00,000	1,00,54,00,000	1,21,54,00,000
3	Grant from UGC		6,98,95,537		6,98,95,537
4	Grant from other GOI Sources		17,82,61,920		17,82,61,920
5	Grant from other Agencies		3,06,96,948		3,06,96,948
6	Other grants from State Govt.		2,74,45,685	54,45,000	3,28,90,685
7	Scholarships/Prizes			2,76,182	2,76,182
8	Pension Fund receipts			1,36,73,079	1,36,73,079
9	Interest on Investments		1,24,79,683		1,24,79,683
10	Net Debt Head Receipts (Excluding PF)				
	Debt Head Receipts	21,86,97,342			
	(Less) Debt Head Expenditure	21,59,99,305			
	Net Debt Head Receipts (Excluding PF)			26,98,037	26,98,037
	<b>Total Receipts for 2016-17</b>		<b>52,87,79,773</b>	<b>1,33,95,83,007</b>	<b>1,86,83,62,780</b>
<b>II</b>	<b>EXPENDITURE FOR 2016-17</b>				
10	Administrative Expenses				
a)	Salaries and other allowances		0	15,43,30,038	15,43,30,038
b)	Other revenue expenses		25,50,301	43,31,76,681	43,57,26,982
11	Examination Expenses				
a)	Salaries and other allowances		0	10,48,70,559	10,48,70,559
b)	Other revenue expenses		5,98,929	2,15,09,883	2,21,08,812
12	Academic Expenses				
a)	Salaries and other allowances		16,67,334	41,46,57,612	41,63,24,946
b)	Other revenue expenses		3,62,10,082	2,70,38,387	6,32,48,469



13	Other Auxiliary Expenses				
a)	Salaries and other allowances		55,95,185	5,86,10,967	6,42,06,152
b)	Other revenue expenses		1,27,51,779	5,85,61,251	7,13,13,030
14	Capital Expenses				
a)	Vehicles		0	0	0
b)	Computer & other Expenses		3,57,30,988	44,512	3,57,75,500
c)	Furniture		91,38,354	52,380	91,90,734
d)	Books & Journals		2,53,81,812	0	2,53,81,812
e)	Works		18,09,66,105	0	18,09,66,105
15	State Govt. Kerala Schemes		3,52,32,427		3,52,32,427
16	UGC-Bulk Grants & Schemes		2,43,93,178		2,43,93,178
17	Other GOI Sources		7,30,24,876		7,30,24,876
18	Scholarships/Fellowships/ Prizes		5,33,27,677	2,23,64,686	7,56,92,363
19	Others (Bulk Grants & Schemes)		1,55,80,829		1,55,80,829
	<b>Total Expenditure for 2016-17</b>		<b>51,21,49,856</b>	<b>1,29,52,16,956</b>	<b>1,80,73,66,812</b>
	<b>Closing fund balance as on 31.03.2017</b>		<b>39,77,18,550</b>	<b>21,34,35,062</b>	<b>61,11,53,612</b>
	PF receipts for 2016-17			16,37,32,707	
	PF expenditure for 2016-17			14,49,28,795	

Note: Non plan fund balance also includes endowments (Rs. 36,43,184) and pension fund balance (Rs. 1,92,20,281/-)

**PART – IV****ENGINEERING DEPARTMENT****MINOR WORKS 2016-17 (1-97-0-T-4-999)**

Sl. No.	CB No.	Name of Work	Name of Contractor	Bill Amount
1	501	Amount to be reimbursed to UE for the payment already effected as per the 3 bills	Departmental	33290
		Fixing steel sinks in the fish processing lab of School of Industrial Fisheries at Lakeside Campus	Rajendran P.V.	6250
		Rectification of cracked side wall of low level water tank of lake side building	Sureshkumar S.S.	5500
		Rectification of damaged ceiling and side cladding of the in FSC class rooms and auditorium of Industrial Fisheries Building	Sureshkumar S.S.	19500
2	502	Purchase of Electrical material to the Engineering Department store at Tkra Campus	Departmental	19988
3	503	Purchase of electrical items to the Engineering Department store for the electrica; maintenance works of Hostels, Departments and Administrative office at Tkra campus	Departmental	19968
4	504	Petty works done at PVC's quarters	Bibin Eldho	25940
5	505	Materials for providing waste water drinage system in the microbiology lab in the old building ans wet lab in the new building at lakeside campus	Departmental	4086
6		Labour charge for doing the aforesaid work	Suresh kumar S.S.	6400
	506	Rewinding of faculty fans dismantled from various departments, administrative office etc	Departmental	20000
7	507	The repair of 1Hp Motor placed in the Anagha Hostel and Type II Quarters in Tkra Campus	Departmental	2800
8	508	Electrical and plumbing works	Departmental	22080



9	509	Clearing the light jungles and thick vegetation around the Athidhi Bhavan Block I&II of CUSAT Tkra Campus	Polly Mathew	14504
10	510	For the work done by him ie cleaning the toilets and bathrooms blocks (GF&FF) in OBC Boys hostel at CUSAT Tkra campus	Departmental	3000
11	511	Providing new sinks in the Museum lab and Fermentation lab in the School of Industrial Fisheries in Marine Science Campus	Sureshkumar S.S.	19750
12	512	The Purchase of materials to Registrars quarters in connection with the maintenance work	Departmental	11319
13	513	For the repair work of 3HP motor done by them placed in Athulya Hostel at Tkra Campus.	Departmental	3000
14	514	The cost of materials, labour charges and transportation charges for providing chequered plate coner for water tank in A Type quarters in Tkra Campus	Meetheen Kunju P.K	14800
15	515	For repairing the doors in various rooms of Athidhi Bhaven Bulilding	Abdul Aziz	9500
16	516	Dismantling old damaged rolling shutter and providing new shutter for departmental cement store of Engineering Department	Sr. Meetheenkunju P.K	36245
17	517	For cleaning jungle and grass of vegetation in Tkra campus	Sri M.V.George	7878
18	518	Towards cleaning the inside & premises of students amenity centre in CUSAT	M/s. Frisk Services	57100
19	520	Cleaning the block of Chambers (Closet line and food waste line) in the Sanathana Hostel Tkra campus)	Sr. Shaji V.K.	46508
20	521	The purchase of curtain rods & accessories to provide curtains	Departmental	10335
21	522	Replacing damaged hose of submissibile pump 10 HP installed in the main pond of Tkra campus	M/S. Periyar Trading Company	9446
		Green Hose 30 Meter in 2 nos 10 HP motor in pond of Tkra campus	M/s. PS Electric works	3000
22	523	Amount to be reimbursed to University Engineer as per the 3 bills	Departmental	9598



23	524	Purchase of curtain rods & accessories to provide VC's quarters	Departmental	9150
24	525	For fitting curtains in the quarters of VC	Departmental	12200
25	527	The repairing of ceiling fans for hostels and department at Tkra campus	Departmental	17350
26	528	The purchase of remote and PCB for repaing of the AC at VC's quarters	M/s. Aircol Enterprises	1889
27	529	Purchase of 166 Nos of cushioned chairs with (black Colour) for furnishing Seminar Complex at Tkra campus	M/s. Sidco Sales Emporium	195000
28	530	Repairing of AC in guest house of Pro VC Banglavou a Tkra Campus.	M/s. Lemon Cool Refrigeration	6937
29	531	Renovation of Exam C & M section in the ground floor of Administrative Building, CUSAT Tkra campus	Ajmal T.M	135200
30	532	The purchase of fertilizers for the use of land scaping to the seminar complex garden at Thrikkakara campus	Departmental	525
31	533	The work of renovation Athidi Bhavan at TKRA campus	Sajeeb P.K	25343
32	534	Providing reception in the entrance lobby of Adm building at TKA campus	Melby Correa	58000
33	535	For providing a wooden door for the varandha of the finance store room in the ground floor of Adm Block near exam C & M section in CUSAT	Suresh kumar S.S.	32090
34	536	The Purchase of new indoor unit of 1.5 Ton A/C for installing in the bedroom of PVC's quarters	Departmental	11450
35	537	Repairing 1.5 Ton Split A/c first floor bedroom in VC's quarters in TKA Campus	Departmental	13905
36	538	The various works done in connection wih the cable joining behind seminar complex	Departmental	20107
37	541	The purchase and installation of volta's 1 ton split AC and V guard stablier for installation in room no 33 of athidhi bhavan at TKA campus	M/s Aircol Enterprises	32800



38	542	The purchase of items to the electrical section store of the engineering department ( LED 30 W street light - 2 nos & 20 W street light - 5 nos )	M/s Dewton Industries	18470
39	543	Purchase of fishing rope to electrical section store of Engg. Dept. at Tkra	Departmental	2532
40	544	Providing tile flooring to the Kitchen and work area of the main canteen at Tkra campus	Ajmal T.M.	107179
41	545	Purchase of 11 Nos. of ceiling fan to Electrical store of the Engineering Department	M/s. Loyal Agencies	14740
42	546	The work undertaken regarding cleaning the premises, roof top and drain of PVC's quarters	Polly Mathew	2000
43	549	For the work done by Abdul Aziz M.M. for clearing the toilet block of Athidhi Bhavan Block I Room 8	Departmental	800
44	550	The cost of 1 No.of Sp Tormac 1.0 HP openwell sub.pump for the use of A type quarters at Tkra Campus	M/S. Periyar Trading Company	9477
45	551	The AMC account of Passenger lift in marine science campus for the year 2014-15	M/s.Thyssenkrupp Ellvator	96571
46	552	The work of modification of inside courtyard garden (reconstruction of RR plinth around the mango tree)in the Administrative office	Seethu Sasidharan	29505
47	553	Modification of inside courtyard ie construction of concrete step around the mango tree in the courtyard of admn. Office	Sureshkumar S.S.	19525
48	554	The work done regarding the levelling the premises of masonry round and filling the masonry round in the courtyard of admn.office	V.A.Augesthy	5725
48	554	Demolishing the damaged edges of concrete slabs at the Verandah of Admn office	Anshad V.A.	8900
48	554	Concreting 3 sides of damaged verandha portion of the administrative office	Shaji V.K.	19800
49	555	Clearing light jungles in premises of sanatha hostel	Polly Mathew	2639
49	555	Clearing light jungles in premises of sanatha hostel	M.V George	6422



50	556	Clearing light jungles in premises of sanatha hostel	Polly Mathew	12043
		Painting of M.Tech valuation camp of Admn Office	Polly Mathew	29863
51	557	Partition works and fitting cupboard at VC's office	M/s.Sidco Sales Emporium	213904
52	558	Providing cabin for Deputy Registrar of IRAA section	Fazil Muhammed V.M.	84348
53	559	Loading unloading and transportation of earth from quarters area to admn office	Sr.Nazar V.K	9000
		For installation of mosquito nets for the windows in finance section	M/s.Net Tradors	19923
54	560	Earth work excavation for rectification of pipelines - side road of btech hostel, F-type quarters etc	Shaji.V.K	12500
55	561	Renovation works in the entrance lobby in the ground floor- admn office	Fazil Muhammed	225673
56	562	Providing mosquito nets of the windows in AD A &G section	Net Traders India	19978
57	563	Fee for certification of campus layout of CUSAT	Departmental	25000
58	564	Removing & replanting coconut tree at admn building, earth work excavator work near VFC at admn building	Suresh kumar S.S.	6850
59	565	Providing grills around the varandah portion of the back side of open air auditorium	Sajeeb P.K	39615
60	566	Cleaning inside and premises of Students amenity centre	M/s. Frisk Services	28550
61	567	Disposal of carcass of a cow, repairing and recanning of Wooden chair, clearing light jungle etc	Departmental	30180
62	568	Sweeping and cleaning charge for 14 weeks around common places such as university main road	Departmental	21000
63	569	Loading unloading and transportation of unservicable material from admn office to engineering dept	Fazil Muhammed	3100
		Repairing the doors of PRO office	Shaji.V.K	1950
64	570	Providing mosquito nets aluminium frame and steel net	Departmental	14817



65	571	Purchase of Bed spreads for Athidhi bhavan guest house and VFC at TKA Campus	Departmental	43345
66	572	Modification work done inside the garden in Adm office	Abdul Aziz M.M	90406
67	573	Cutting and removing coconut tree (2 nos) from Marine science campus	Departmental	5500
68	574	Painting of Room no.GF-10 students Amenity centre	Rajendran P.V	18389
69	575	Preparation of layout map of TKA campus	Departmental	45740
70	576	Clearing blocks in the washbasin and toilet of VC's Anteroom	Polly Mathew	2800
71	577	Cleaning the premises of students Amenity centre	M/s FriskServices	28550
72	578	Supplying and fixing information panel boards in front of students amenity centre	Departmental	67498
73	579	Heiring charges for enaging JCB's fro yard leveling - Building for Nano studies	Manu K.A	19184
74	580	Providing venetion blind partition in K.M mani centre for Budget Studies	Rajendran P.V	35862
75	581	Replacing damaged UG cable from electric post to panel board in Adm office	Shine Star	71304
76	582	AC repairing at PVC's quarters	Cool Care	2634
77	583	Repairing old damaged battery in Substation No.2	Power controls	26500
78	584	Cutting the branches of the trees leaning over open air auditorium Crush and canteen building etc	Departmental	15000
79	585	Patch work in car porch of administrative office providing sink in the office room of DRDO	Suresh kumar S.S.	16800
80	586	Maintenance of common facility centre	Shaji V.K.	2601893
81	587	Materials purchased/labour charge for plumbing work done in front of open air auditorium	Departmental	14688
82	590	Providing concrete slab over drain in front of mathematics dept, disposal of a carcass of a calf near KMSME	Departmental	3200
83	591	Modification work done inside the coutyard in admn office	Sajeep P.K	6800





84	592	Clearing grass ISP,Aiswarya, athulya hostel premises of athidhi bhavan canteen	M.V. George	45121
85	593	Removing bee hive near the office of the Registrar, cleaning the drain in front of FO's office	Departmental	9000
86	594	Providing and laying interlocking paver block and allied works to the foot path leading to food court	Abdul Aziz M.M	158181
87	595	Cutting and removing fallen accacia tree-near guest house	Abdul Aziz M.M	2000
		Cutting and removing fallen vatta tree-quarter of security staff	Polly Mathew	1800
88	596	Providing false ceiling work done in ladies toilet of admn office	Rajendran P.V	18877
89	597	Purchase effected for repairing door closer of VC's anto room cutting fallen trees over the quarters of VC and PVC	Departmental	19680
90	598	Laying vinyl flooring and partitioning of store room and health club of students amenity centre	Rajendran P.V	460117
91	599	Cleaning inside and premises of Students amenity centre	Frisk Services	28550
92	600	Purchase effected for providing mortise lock and latches in VFC building	Departmental	15960
93	601	Fee for certification of campus layout of CUSAT	Rajesh Antony	30000
94	602	Purchase of refrigerator to batchlors hostel	Departmental	19980
		Purchase of streetlight accessories to store of engg. Dept.	Dewton Industries	18936
95	603	Cutting various trees vaka, muringa etc oven Type 1 quarters,students amenity centre etc	Polly Mathew	5800
96	604	Recanning and polishing chairs of the quarters of registrar, purchase of locks and keys	Departmental	3640
97	605	Repairing of AC at Tkra campus(10 Bills)	Lemon Cool Refrigeration	44083
98	606	Providing aluminium shelf closing the ventlator opening etc-athidhi bhavan block 1	Suresh kumar S.S.	12000



99	607	Urgent painting works, providing stick no bills and no parking near new arch gate	P.A. Augustine	56834
100	608	Removing and disposal of carcass of a dog from the compound of athidhi bhavan	Departmental	1500
101	609	Providing S S net with aluminium frame - office of PVC's and Controller of exams	Net Traders India	16850
102	611	Clearing jungles including uprooting of rank vegetation grass, brush wood trees and sapling etc	Polly Mathew	4950
103	613	Cleaning inside and premises of Students amenity centre	Frisk Services	28550
104	614	Providing tree guards around trees in the premises of CUSAT auditorium	Abdul Aziz M.M	140987
105	615	SITC of water purifier cum water cooler 31 Nos. in hostels, admn and depts	Kelby Water Technologies	1138059
106	618	Cutting and removing the branches of vaka tree C.7 quarters, Type1 A quarters	N.K. Usman	9500
107	619	Closing the open ventilator of door windows etc in rrom no.33 of athidhi bhavan block 1.	Suresh kumar S.S.	4500
108	620	Maintenance of visiting faculty complex	Suresh kumar S.S.	721617
109	621	Providing main power supply to the admn block from outside electric post	M/s.Yesgee Electrical contractors Pvt Ltd	35839
110	622	Clearing light jungles in premises of sibiria hostel	M.V. George	13307
111	623	Construction of Security Cabin behind Guest House	Sajeeb P.K	357621
112	625	Purchase of tube Lights to Electrical Store	Departmental	5000
113	626	Purchase of LED Light to Electrical Store	M/s Dewton Industries	19278
114	627	Purchase of LED Street Light And Lamp to Electrical Store	M/s Dewton Industries	22695
115	629	Disposal of carcass of a dog And Cat-near SBT	Departmental	1800
116	630	Cutting and removing fallen Trees near SMS,Seminar Complex,Engg.Dept etc..	Abdul Aziz M.M	14000
117	631	Clearing grass and removal of rubbish-Sahara Hoatel	M.V. George	16340
118	632	Acid Washing of Toilet in Adhithi Bhavan	M/s FriskServices	18868
119	633	Providing drainage facillitties in the primises of day care centre	Shaji.V.K	456226



120	634	Purchase of Aam Hv Battery	M/s Zoom Agencies	11000
121	635	Purchase of Electrical itemes for maintenance in Admn.Block	Departmental	20394
122	636	Purchase effected for the providing connection to the Sullage Water Tank-near Adhithi Bahvan Canteen	Departmental	3579
123	637	Variousse Petty Works-Removing waste,Repairing door frames,Clearing blocks behind CFC	Shaji.V.K	41150
124	639	Clearing inside and Primises of Students Amenity Centre	M/sFrisk Services	28550
125	640	Petty works done in Department of Hindi,Providing and Fixing reflecting Stickers on trees and electrical posts	Departmental	10150
126	641	Supplying and errecting campus map at three locations	M/s Printzone Flex printers and Advertisers	263808
127	642	Purchase of Meterials and labour charges effected for recaning damaged chairs in Engg.Dept	Departmental	8208
128	643	Clearing grass and removal of rubbish-Sub station_i&II,Post Office	M.V. George	4916
129	644	Loading,Unloading,Trasporting the furniture,e-waste and other junk materials from ADMN to Engg.Dept	Ajmal T.M	22000
130	645	Modification of room (GF-4) Mind behaviour Studio in Studets Amenity Centre	Rajendran P.V	56515
131	646	Various Petty Works done in Security Cabin,providing GSB in front of volly ball court,developing yard inside the compound of statutory officers quarters	Shaji.V.K	68800
132	647	Suppying and Fixing information Sign boards inside studets Amenity Centre	M/s Sign Arts	2061
133	649	Modification of inside courtyard garden in Admn.Office	Anshad.V.A	38400
134	650	Cleaning and sweeping charge(Guest house to ADMN.Gate)	Departmental	42500
135	651	Cutting And removing branches of trees at various locations(5 nos.)	Abdul Aziz M.M	62950
136	652	Various petty works done in pysical Science block,Electronics Dept,Library Buldg.A Economics etc..(5Nos.)	Polly Mathew	48300



137	653	Urgent painting work in the Library Buldg, And Furniture Including Labour Charges	Departmental	27749
138	655	Cuttind and removing Branches of trees(Ship,maths,SLS etc,,)(7Nos.)	Abdul Aziz M.M	93900
139	656	Repair work of low level tank behind A-type Qtrs	Polly Mathew	17500
		Filling Gutters using baby metal in Admn.Office	Abdul Aziz M.M	2000
140	657	Purchase of Primer,Enamel for paiting electrical goods, Work in the Dept of photonics,Purchase of plastic Sheet for covering junk materials,providing 2 nos of name boards,providing logos to the dias tables 2 nos in seminar complex	Departmental	40789
141	658	SITC of 30KVA G set in main pump house at TKA campus	Aby Abraham P J	273609
142	660	Rectitification of flooding of waste water at the road near security cabin at main entrance	Abdul Aziz M.M	14000
143	661	SITC of water purifier cum water cooler 31 Nos. in hostels, admn and depts	Kelby Water Technologies	547954
144	662	Providing inter locking paveblock for vehicle parking in Adm block at TKA campus	Ajmal T.M	400337
145	663	Providing generator suply to FESEM machine installed in the room near to the car porch and auditorium of dept of Physics	Aby Abraham P J	61477
146	664	Purchase of mixer grinder to PVC's quarters at TKA campus	Departmental	3500
147	665	Providing UPS power points in exam valuation camp in Adm second floor at TKA campus	Reji George	14198
148	666	Purchase of electrical item to electrical storein Engineering Dept	Departmental	1602
149	667	Purchase of electrical items to electrical store at Engg Dept	Vejoy Electrical	4723
150	668	The work undergone in library (old building) (closing the AC opennings)	Departmental	507
		Labour charge for work done in library (old building)	Polly Mathew	1100



		Cleaning the retaining wall in front of the Dept of Hindi in connection with NAAC visit	Sugi Xavier	7950
151	669	Purchase of Material and labour charge canning seat and seat back of chairs in SMS auditorium in connection with NAAC visit	Departmental	7173
		Urgent wall painting furniture polishing and enamel painting in connection with NAAC visit launch pad (IEDC) room no 404 in SESI (electronics dept)	Rajendran P.V	25500
152	670	Rewiring of VFC building in guest house at TKA campus	ABM Electricals	501820
153	671	For clearing of grass and removal of the rubbish upto a distance of 50m outside the periphery of the area cleared	M.V. George	26362
154	672	Painting the compund walls,Parapets etc. Of Substation 1 at Tkr campus	Suresh kumar S.S.	13125
		Supplying and fixing FRP door at Cusat Canteen	PK Sajeeb	12000
155	673	Cleaning work done in Savanna hostel,open Air Auditorium CFC daycare centre etc.	Polly Mathew	39800
156	674	Painting inside the security cabin in front of ADM office	Polly Mathew	18800
157	675	Purchase and Refixing and repairing thermocol ceiling - Photonics dept.	Sugi Xavier	21500
158	676	Clearing grass and removal of rubbish-Statistics dept.	MV George	11605
159	677	Purchase plywood for sticking the flush doors ,sink cock and cups for fixing in kitchen sinks of VFC	Departmental	29767
160	678	Purchase of Sluice valve for the use in main pumphouse	Departmental	14206
161	679	Purchase of floor springs for fixing aluminium doors in VFC	Departmental	6200
162	680	Purchase of Materials for supplying and fixing glass tops to the wooden dining tables 6 nos at VFC	Departmental	19587
163	681	Removing of carcass of a cow from the back side of IPR studies	Departmental	5000



164	682	Purchase of sluice valve for the use in main pumphouse	Departmental	14656
165	683	Painting the flag post and garden rounds, sunshades and ceiling in second floor ADM office	Suresh kumar S.S.	24950
		Shifting files, almarah and furniture to the new storeroom from verandha	Anshad.V.A	8650
166	684	Purchase of material and labour charge towards urgent masonry repair work done in Physical Science block	Sugi Xavier	6510
167	685	Fixing granite table tops and painting table in the kitchen of ADM canteen	Rajendran P.V	5100
168		construction of a chamber for a new valve near LIDAR building	Shaji V.K.	13300
169	687	Cleaning inside and premises of student Amenity centre	Frisk Services	28550
170	688	Disposal of carcass of dogs at various location at Tkr campus	Departmental	3000
171	689	Providing partition in Administration A, B, E and F section	Fazil Muhammed	154828
172	690	Cutting coconut tree (library building)	Shamsudheen	6000
		providing Vinyl flooring to Payroll section	Ajmal T.M	14990
		Carpentry/repair work of halfdoors of office VC PVC, windows of audit and planning section	Shaji V.K.	8800
173	691	various carpentry rectification work-CUMS lake side campus, painting the room of Exam N section	Suresh kumar S.S.	22500
		rectification of pipe lines behind Savanna hostel	Shaji V.K.	2950
174	692	Clearing grass and removal of rubbish in ISP, CIRM	MV George	15702
175	693	Dimantling UG cable to FESEM lab connecting generator panel in Physics dept.	Reji George	7860
176	694	Panel board replacing near library and electrical wiring in Marine science	Reji George	143788
177	695	For arranging generator to departments	Departmental	46000
178	696	Clearing grass and removal of rubbish in various places in TKR campus	MV George	15799
179	697	Purchase of cleaning material for recaning chairs damaged in Engn dept	Departmental	4786



180	698	Clearing grass and removal of rubbish in Sarovar Boys Hostel	MV George	10988
181	699	Purchase and labour charge providing rolling shutter with grill in Engg DEPT	PA Augutine	39490
182	700	Providing curtain rolls,accessories in Aminity Cente	Rajendran P.V	12650
183	701	Cutting and removing branches of trees in ADM office	Abdul Aziz M.M	14800
184	702	recrification of Various plumbing work done in hostels, departments etc	Departmental	6898
185	703	Masonry work,presure washing and Painting work in verandha ADM,	Ajmal T.M	17000
186	704	Land devolopment work done in Common facility centre	Shaji V.K.	417368
187	705	Purchase of electrical items to the elctrical store in Engg dept.	Transavave Equipment	19602
188	706	Purchase of electrical items to the elctrical store in Engg dept.	Departmental	2204
189	707	Providing wall mounted fan,ceiling fan tube light fitting in Finance Audit Cash section In ADM	Aby Abraham P J	103805
190	708	reconstruction damaged steps infront of main canteen	Shaji V.K.	103454
191	710	urgent cutting and levelling for praparing parking space in Academic ares at tkr campus	Anshad.V.A	113926
192	711	Urgent maintainance work done at University Main Canteen	Sajeeb P.K	980686
193	712	Repairing of AC in syndicate room	Lemon Cool Refrigeration	1800
194	713	Supply and interrior furnishing work done at Financem,Cash and Audit wing In ADMN office	SIDCO	3015679
195	714	Cutting and removing branches of trees near Adithi bavan	Abdul Aziz M.M	8000
196	716	Dismantling of Electrical fittings in VFC building	ABM Electricals	14500
197	717	Painting the exterior walls and corridors in Engg Dept.	PA Augutine	77805



198	718	Purchase of electrical items to the elctrical store in Engg dept.	Transavave Equipment	17152
199	719	Purchase of electrical items to the elctrical store in Engg dept.	Departmental	4282
200	720	Polishing the existing mosaic floor in the GF and FF and Verandha of ADMN office	Polly Mathew	95305
201	721	Clearing jungles and grass and disposal of waste in Various places at tkr campus	MV George	44938
202	722	Clearing jungles and grass and disposal of waste in Adithi bavan at tkr campus	Polly Mathew	14504
203	723	Cleaning the outer walls of ADMN building	Polly Mathew	26198
204	724	Repairing of Panasonic AC in server room in IRM	Departmental	1850
205	725	Labour charge for fixing water heaters in VFC building	Departmental	4520
206	726	Purchase of electrical items to the elctrical store in Engg dept.	Dpartmental	11100
207	727	Repairing of AC in Tkr campus	Lemon Cool Refrigeration	17330
208	728	Painting basement portion and edges of Verandha In ADM	Polly Mathew	9627
209	729	Cleaning the ATM counter Painting in Adithi bavan block 2 levelling the front portion of sahara Hostel	Abdul Aziz M.M	13300
210	730	Replacing damaged accessories ans servicing of Departmental Vehicle KL 07 M 5288	Departmental	26868
211	731	Repairing of AC in syndicate room	Lemon Cool Refrigeration	2150
212	732	Repairing flush tank in the toilet of Syndicate room	Departmental	630
		Providing new doors to the syndicate room	Shaji V.K.	14950
		Polishing the doorof Syndicate room	Abdul vahid NK	4700
213	733	Painting the compound wall of Cusat Auditorium	Suresh kumar S.S.	33740
214	734	Clearing grass and removal of rubbish-pumphouse	MV George	3167





215	735	Clearing grass and removal of rubbish in various ladies hostel	MV George	28989
216	736	Clearing grass and removal of rubbish in various ladies hostel in connection with reopening of hostel	MV George	29021
217	737	Cleaning the drain, parking area near guesthouse, savanna , CFC building security cabin etc	Polly and George	5466
218	738	Clearing grass and removal of rubbish- Alakananda Hostel	MV George	69951
219	739	Purchase of 1" & 2" section hose to the electrical store in Engg dept	Departmental	5335
220	740	Repairing of 25 nos of Ceiling fan in Electrical store in Engg Dept	Rotomech Engineers	13740
221	741	Repairing furniture of VFC	Meetheen Kunj	202600
222	742	Installation of new pumpset in Adithi Bavan, near open well	PS Electricals	8600
223	743	Repairing of Water Purifiers in VC's quarters	BN Bio Environment and Energy	1350
224	744	Cleaning work ,cutting and removing the branches of Trees near Adithi Bavan	Abdul Aziz M.M	14250
225	745	Basement filling in the newly constructed toilets in ADM, Powder coating in old aluminium doors and partition in front of VFC building	Suresh kumar S.S.	20900
226	747	Repairing charges of pumpset in Bachelors Hostel	PS Electricals	3200
227	748	Repairing of Motor in Main pump house, C type quarters and Play ground	PS Electricals	10660
228	749	Repairing the ventilator and Mosquito net at PVC quarters	Sajeeb P.K	4700
229	750	Clearing grass and removal of rubbish- Pond area	MV George	2648
230	751	Clearing grass and removal of rubbish in various places in TKR campus	MV George	42161
231	752	Cleaning inside the premises of Amenity center -Oct and Nov 2016	Frisk Services	57100
232	753	Cleaning the water tank of Amenity centre	Polly Mathew	14700
		cleaning the backyard of ADM	Anshad.V.A	3200
233	754	Clearing grass and removal of rubbish in various places in TKR campus	MV George	3295



234	755	Purchase of water metre for replacing faulty water meters at Post Matric hostel for Boys	Departmental	5038
235	756	Petty works done,Providing aluminium ventilator to the toilet,painting work done in Savanna hostel	Suresh kumar S.S.	43475
236	757	Disposal of dacayed carcass of a dog at Engineering office	Departmental	2000
237	758	Installing new AC and dismantling of Old window AC in VC server room	Lemon Cool Refrigeration	7033
238	759	Fixing Steel sink in the dining hall of SBT in CFC	Shaji V.K.	6150
		cutting and removing accasia trees in Uty Guest House	Abdul Aziz M.M	14500
239	760	Repair of water tank in SOE and Mathematics dept	Departmental	11550
240	761	Purchase of water metre for at Post Matric hostel for Boys	Departmental	3500
241	762	Providing LED light fittings at the entrance of ADMN block	Regi George	38156
242	763	Purchase effected for repairing water supply pipe lines	Departmental	4386
243	764	Providing water supply line to water coolers	Shaji V.K.	230018
244	765	Purchase of 11 Nos. of ceiling fan to Electrical store of the Engineering Department	Loyal Agencies	13970
245	766	Purchase of door closer to the Syndicate room	Departmental	1868
246	767	Providing decorative boarder to the truss work for the newly constructed toilet block -ADMN Office	Suresh kumar S.S.	8225
247	768	Cleaning inside and premises of Students amenity centre	Frisk Services	33100
248	769	Repairing and Servicing of Central A/C Planet in CIRM at Thrikkakara Campus	LG Air con services	29700
249	770	Purchase of LED Street Light fittings to Electrical Store	Dewton Industries	14784
250	771	Purchase of AC stands to IPR studies	AIRCOL Enterprises	10500



251	772	Purchase of Hardware items to electrical store in Engg dept	Departmental	573
252	773	Plumbing work done in savanna, Anaswara E type quarters dept. of Biotech etc	Departmental	6837
253	774	Purchase of electrical items to the electrical store in Engg dept.	Departmental	17123
254	775	Various masonry work in office, painting work in the library building in Marine sciences	Sajeeb P.K	13600
255	776	Repair of windows in VC's office	Polly Mathew	4150
		Repair of aluminium windows of exam G and I sections white board fixing in FO's Office	Vindod OT	4500
256	777	Providing name board VISITING FACULTY COMPLEX at Tkr campus	Suresh kumar S.S.	33000
256	778	Repairing of centralised AC system in DRDO computer centre	Departmental	2400
256	779	cleaning the drainage and patch plastering in Marine science campus	Sajeeb P.K	5800
		cleaning and painting the rooms and toilets in Marine science	Abdul vahid NK	14900
257	781	Urgent rectification work done in toilets of Mathematics dept	Departmental	4835
258	782	Urgent rectification work done in toilets of Mathematics dept	Departmental	5125
259	783	Rectification work in Mathematic dept. Labour charge	Jayan MK	26200
260	784	Cleaning grass and removal of rubbish at tkr campus	MV George	36606
261	785	Urgent maintenance to post office including light roofing	Suresh kumar S.S.	1381928
262	786	Purchase of electrical items to the electrical store in Engg dept.	Vejoy Electrical	13282
263	787	Purchase of electrical items to the electrical store in Engg dept.	Departmental	17906
264	788	Purchase of electrical items to the electrical store in Engg dept.	Departmental	1770



265	789	Labour charge for repairing 24 nos of ceiling fan	Rotomech Engineers	13191
266	790	Cleaning grass and removal of rubbish at tkr campus	MV George	11375
267	791	Purchase of Electrical item for PVC's office and Registrars office	Departmental	12999
268	792	Repair of AC in PVC's office	Lemon Cool Refrigeration	5003
269	793	Repair and maintenance of 3 nos of Acs in VC's quarters	Sumesh KS	10720
270	794	Repairing of water heaters at guest house	Integrated Service	1134
271	795	Providing UPS supply to Audit Finance and Cash section	SIDCO	298179
272	796	Repairing of motor pumps in pumphouse,pond and E type quarters	PS Electricals	18490
273	797	Providing pre coated GI sheet roofing to VFC	Meetheen Kunj	731373
274	798	Providing curtains to VFC	Vindod OT	86925
275	799	Providing and fixing poster boards of Various locations	Anwar PA	95247
276	800	Servicing of AC in Syndicate room,Exam Confidential and VC's office	Lemon Cool Refrigeration	42109
277	802	Rate contract for electrical maintenance work connecting to NAAC visit at TKR campus	Yesgee Electricals	230248
278	803	Electrical maintenance work of SMS auditorium	Regi George	249752
279	804	Purchase of Ceiling fan to the store in Engg dept	Transavave Equipment	25534
280	805	Repairing of ceiling fan in store of Engg dept	Rotomech Engineers	14152
281	806	Providing electrical point to the dept of Ship technology	Jerry KJ	37487
282	807	Repair and maintenance in MOOC -C-sis	Regi George	48748
283	808	Clearing jungle and grass at Tkr campus	MV George	103006



284	809	Providing cross drainage with Rcc pipe in ADM office	P.A Muhammed	77784
285	810	Fixing 2nos of Energy meters in Nalukket, Amenity, Akshya etc	Aby Abraham P J	4240
286	811	Purchase of Material for water supply fitting and pipes in various Hostel	Departmental	10819
287	812	Repairing of Openwell pumpset in Adithi Bhavan	PS Electricals	19200
288	813	Providing packing area and road in east side of ADMN office	P.A Muhammed	602615
289	814	Servicing of 3nos of AC in PVC office and 2nos in VC's office	Lemon Cool Refrigeration	46524
290	815	Providing and laying granular sub base to the road in front of C1 type quarters	Shaji V.K.	172605
291	816	Purchase effected towards pumping work in various hostel	Departmental	5090
292	817	Purchase effected for pumping work done in Health centre and Anaswara Hostel	Departmental	2072
293	818	Purchase effected for pumping work done in Aiswry's Hostel	Periyar Trading Company	12792
294	820	Providing aluminium composite panel cadding to VFC	Meetheen Kunj	649727
295	821	Repairing of watercooler and water purifiers in ADM office Security Cabin Sanathana and Sarovar Hostel	suresh ks	33180
296	822	Replacing and fixing fans in Various places	Aby Abraham P J	9700
297	823	Retaining of damaged road in the west side of ADM building	P.A Muhammed	438498
298	824	Repairing of Post office building	Regi George	110476
299	825	Cleaning inside and premises of student Amenity centre	Frisk Services	33100
300	826	providing sheet roofing for open area near exam store	Anshad.V.A	122393
301	827	Repairing of AC	Lemon Cool Refrigeration	14868



302	828	Purchase of water cooler for security cabin	AIRCOL Enterprises	44500
303	830	Architectural consultancy work of amenity centre	Sukumar Associates	416424
304	831	Electrification of Instrumentation block (extension)	ABM Electricals	1154345
305	832	For clearing of grass and removal of the rubbish upto a distance of 50m outside the periphery of the area cleared	MV George	7967
306	833	Purchase of electrical items to electrical store in Engg dept	Departmental	12408
307	834	Purchase of a AA batteries for mike installed in senate hall	Departmental	2809
308	835	Purchase of Steel heavy dutie racks for gym in amenity centre	SIDCO	47536
309	836	Providing vertical venitian blinds in IRA , M-tech Valuation camp	Vailankanni Industries	27867
310	837	Standardisation of Electrical installation for obtaing approval from the Electrical Inspectors	Biju T Baby	4027395
311	838	Providing AC pont for 3ton AC and fixing departmentaly purchased light fittings in New library	Aby Abraham P J	43270
312	839	Electrical maintainance of Siberia Hostel	Aby Abraham P J	31338
313	840	Providing additional switch board in Faculty room of ISP	Aby Abraham P J	10400
314	841	Repairing of pump provided infront of Adithi bavan canteen and pond and nalukettu building	PS Electricals	17300
315	842	Providing new wash basin in the office of youth welfare	Ajmal T.M	12200
316	843	clearing of grass and removal of the rubbish	MV George	42161
316	844	clearing of grass and removal of the rubbish near boys hostel	MV George	8960
316	845	Removal of the carcass of an ox - backside of guest house	Abdul Aziz M.M	3000



		Cleaning the compound from mainroad junction to Adithi Bavan canteen - Sasthrayan function	Polly Mathew	2100
		leak proofing work in the security cabin	MV George	12700
317	846	Repairing of 25nos of Ceiling fan in Electrical store in Engg Dept	Don Electricals	13800
318	847	Painting the gates in ADM and windows and security cabin	Shaji V.K.	5100
		Removing branches of tree In E type quarters	Abdul Aziz M.M	14800
		cutting and removing fallen tree in the quarters ring and removal of a carcass of a dog from Btech hostel	Departmental	4800
318	848	Electrical maintainace work at various hostels and departments	Jerry KJ	483058
319	849	Rectification of pipe line to the guest house and relying pipe lines to open air auditorium	Shaji V.K.	16450
		purchase of locks and punching machine cover	Departmental	900
		labour charge for the aforesaid work	Manu K.A	3450
320	850	Painting work done in outside walls of security cabin In ADM	Polly Mathew	19900
		Providing traffic cones chain and boards to the entrance for deviation	P.A Muhammed	8400
		Cutting and removing of coconut trees carpouch of ADM	NK Usman	4000
321	851	Urgent painting works done in rooms of EC 403, 408, 418 and 419 of SES 1	Rajendran P.V	35931
322	852	Providing a non return valv in the main water supply line in Main pumphouse	Shaji V.K.	30776
323	854	Cleaning and sweeping road sides and footpaths in ADM junction To Hindi DEPT.	Jisha Deep	7200
324	855	Construction of wetland treatment sysytem for the main canteen	Sajeeb P.K	993927
325	856	FEE for preparation of campus map 2011 to 2015 modifaications of CTP's approval	KG Sukumaran and Associates	115000



326	857	Painting the garden rounds and flagpost near ADM office	Suresh kumar S.S.	8500
		Providing new lock to the door to the office of Registrar	Meetheen Kunj	3600
		cutting and removing branches of Accasia trees leaning over Csis Building	Usman NK	2500
		Repairing windows in Exam section 2nd floor in ADM	Vinod OT	6800
<b>Total</b>				<b><u>32820036</u></b>

**1-97-0-T-2-406**

Sl. No.	CB No.	Name Of Work	Name Of the Contractor	Amount
1	1503	Repair work done in Aiswarya Ladies hostel	Polly Mathew	528911
2	1511	Leak Proofing work done in Sarovar Boys Hostel	Shaji VK	6900
3	1512	Purchase of Electrical Items for the work done in Aiswarya Hostel	P.S Electrics Works Aluva	4350
4	1514	Cleaning of Septic tank Anaswara Ladies Hostel	Polly Mathew	46629
5	1516	Various petty works done in Siberia Boys Hostel	Departmental	28500
6	1517	Various work done in Bachelors Hostel/ Sahara Boys Hostel etc	Departmental	16750
7	1526	Various Work done in C type quarters	Shaji VK	5800
8	1529	Renovation work done in Sanathana Boys Hostel	Rajendran PV	25886
9	1536	Work done in Sagar Boys Hostel	Departmental	17832
10	1540	Work done Ananya Ladies Hostel	Polly Mathew	36840
11	1541	Cleaning work of all ladies hostel except Anaswara and Alakananda	Anwar PA	294465
12	1544	Repair work done in Athulya and Anagha Hostel	Polly Mathew	23584
13	1547	Replacing damaged pipelines and fittings to the gas system in Athulya hostel	Departmental	60328
14	1548	Purchase effected for plumbing work in Sanathana Hostel	Departmental	291
15	1551	Repairing of boiler in Anaswara hostel	Balaji Kitchen Equipment	85788
16	1556	Urgent petty work in Anagha Hostel	M.V George	56004
17	1560	Cleaning and draining work done in Sanathana And Sagar Hostel	Eldho Kuruville and Polly Mathew	17700
18	1564	Cleaning work done in Swaraj Hostel	Abdul Aziz	5500





19	1574	Renovation work done in Sagar Boys Hostel	Shaji VK	34019
20	1576	Work done in Swaraj Hostel	Anwar PA	199172
21	1583	Purchase of Steel coat - Bachelors Hostel	SIDCO	77156
22	1586	Work done Swaraj hostel	Abdul Aziz	32442
23	1589	Rectification of Toilets in Sarovar Hostel	Shaji VK	140148
24	1595	Various works done ladies hostel	Departmental	43135
25	1601	Providing paving block in mess area and reaping drain in Athulya Hostel	Biju CK	732196
26	1604	Renovation work in Sanathana Hostel	Anshad VA	78988
27	1608	Painting works of compound wall in Anagha Athulya	Departmental	31768
28	1617	Providing light proofing for cloth dayning area in Anaswara Hostel	PK Sajeeb	736691
29	1619	Repair work for compound wall (Anaswara Aiswarya and Athulya)	Departmental	13030
30	1620	Installation of Bio Incinerator in Ladies Hostel	Biotech renewable Energy Pvt.Ltd	450000
31	1628	Various works done in Ladies hostel	Departmental	26003
32	1660	Repairing of water purifier in ladies hostel	Departmental	16923
33	1663	Purchase effected for repairing pumpset in Anaswara Hostel	P.S Electrics Works Aluva	3750
34	1664	Repairing water purifier 6nos.in various hostel	Bio system and device	3875
35	1666	Painting work done in Swaraj hostel	Anwar PA	195354
36	1676	Repairing of water purifier in various hostel	Departmental	3600
37	1678	Construction of waste water tank in Swaraj Hostel	Abdul Aziz	99800
38	1691	Providing water tank and allied work done in roof top of Anaswara Hostel	Ajamal TM	19400
39	1703	Painting work in Sanathana Hostel	PK Sajeeb	179331
40	1706	Special repair and Maintanance In Siberia Boys Hostel	AV George	2466595
41	1707	Various work done in Ladies Hostel	Departmental	24467
42	1708	Cutting down of branches of trees and Painting works in Aiswarya And Anaswra Hostel	Abdul Aziz	26400
43	1709	Petty works in Anaswara Hostel	PK Sajeeb	6000
44	1710	Various work done in Ladies Hostel	Polly Mathew	14900
45	1715	Purchase effected for Repair of Sagar Hostel	Departmental	1051
46	1723	Laying new water supply line in Sahara Hostel	Shaji VK	9960



47	1725	Purchase effected for Various work done in Mens Hostel (Marine science campus) and Anagha Hostel	Departmental	2795
48	1726	Various petty works done in Sanathan Boys Hostel	Anshad VA	358592
49	1735	Purchase effected for renovating old flooring of Athulya ladies Hostel	Departmental	18827
50	1736	Purchase effected for painting work done in Athulya hostel	Departmental	9288
51	1737	Emergency Painting works in Athulya Hostel	Biju CK	24088
52	1738	Cutting trees around Athulya Hostel	Abdul Aziz	15000
53	1748	Renovation work done in Anaswara Hostel	Meetheenkunj	91897
54	1772	Special repair and Maintanance on Siberia Boys Hostel	AV George	714757
55	1773	Painting work done in Ananya Hostel	Abdul Aziz	53108
56	1779	Modification for converting rooms to office to Assitant warden in all Ladies hostel	Anshad VA	220027
57	1780	Providing new dining and kitchen area In Sarovar Hostel	Anwar PA	711197
58	1781	Urgent Painting works in Athulya Hostel	Polly Mathew	212767
59	1792	Special repair and Maintanance in Siberia Boys Hostel	AV George	2729778
60	1794	Increasing the capacity of existing septic tank in Sanathana Hostel	Shaji VK	230319
61	1797	Reconstruction of damaged drains and construction of retainig wall in Aiswarya Hostel	Abdul Aziz	431284
62	1802	laying paver blocks inside the courtyards in Aiswarya hostel	Abdul Aziz	358445
63	1803	supplying and fixing bio incenerator at various ladies hostel	Biotech renewable Energy Pvt.Ltd	1290000
			<b>Total</b>	<b>14400381</b>

**1-97-0-T-1-040**

Sl. No.	CB No.	Name of work	Name of Contractor	Amount
1	1814	Vertical extension to the first floor of dept. of Statistics	George Thomas	802871

**1-97-0-T-1-041**

Sl. No.	CB No.	Name of work	Name of Contractor	Amount
1	1578	Water supply and sanitary works in the dept.of Instrumentation	PA Raju	441633



2	1606	Supplying name board in the Dept.of Instrumentation	Perl Craft Metal Graphics	39960
3	1701	construction of an extension building for Dept.of Instrumentation	Alias Abraham	5946381
4	1784	Architectural consultancy charges for the construction of new building-Dept.of Instrumentation	Ajith Associates	153336
			<b>Total</b>	<b>6581310</b>

**1-97-0-T-1-045**

Sl. No.	CB No.	Name of work	Name of Contractor	Amount
1	1528	Construction of building for Inter university centre for Nano Material devices	Alias Abraham	2908567
2	1535	Water supply,sanitary,septic tank and sockpit for the proposed building of Inter university centre for Nano Technolgy	Alias Abraham	410261
3	1800	Design and preparation of drawings of Inter university centre for Nano materials and devices	Modarchs Consultants India Pvt Ltd	57394
			<b>Total</b>	<b>3376222</b>

**1-97-0-T-1-047**

Sl. No.	CB No.	Name of Work	Name of contractor	Amount
1	1689	Providing welded mesh for windows and false ceiling in UTY library new block	Cherian Vargeese	721938

**1-97-0-T-1-052**

Sl. No.	CB No.	Name of Work	Name of Contractor	Amount
1	1508	Preparation of drawings of vertical extension of 3rd Floor of SLS	Amal Krishna	39911

**1-97-0-T-1-054**

Sl. No.	CB No.	Name of Work	Name of Contractor	Amont
1	1573	Providing Aluminium Partition work in Computer centre for DDUKK at Tkr Campus	Vinod OT	76880

**1-97-0-T-4-600**

Sl. No.	CB No.	Name of Work	Name of Contractor	Amont
1	1634	Rectification work done in Uty Main road using inetlocking paver blocks	Ajmal TM	31644
2	1653	Urgent pothole fittings and rectification work to the damaged areas of Uty Internal roads	Anwar PA	1369327
3	1693	Urgent painting works done on the surface of kerdwall and median	Abdul Aziz	59214
4	1787	Petty works done in connection with road drainage at various location at tkr campus	Suresh kumar SS	328579
			Total	1788764

**1-97-0-T-4-603**

Sl No.	CB No.	Name of work	Name of Contractor	Amount
1	1502	Providing Aluminium Ladder with stand to the auditorium of seminar complex	Departmental	55000
2	1505	Purchase of 166 number of cushion chair for furnishing in semiar complex	SIDCO	723608
3	1519	AMC for cleaning inside the premises of Science seminar complex March 2016	KV krishnan	23584
4	1532	AMC for cleaning inside the premises of Science seminar complex April and May 2016	KV krishnan	49550
5	1545	Purchase effected for replacing damaged pillar taps of a Wash basins in Gents Toilet of Seminar complex	Departmental	2287



6	1546	Purchase effected for providing door closer in room no.5 in seminar complex	Departmental	1718
7	1565	Purchase effected for the replacement of front glass door at seminar complex	Departmental	19950
8	1566	AMC for cleaning seminar complex and maintaining landscaping etc. June 2016	KV krishnan	24775
9	1579	AMC for cleaning seminar complex and maintaining landscaping etc. July 2017	KV krishnan	24775
10	1610	SITC of 250 Kva DG set for seminar complex	Dinu Electrical	734030
11	1625	AMC for cleaning seminar complex and maintaining landscaping etc. August and September 2016	KV krishnan	49550
12	1652	AMC for cleaning seminar complex and maintaining landscaping etc. October 2016	KV krishnan	24775
13	1661	Purchase Of Handles flush door in Seminar Complex	Departmental	480
14	1665	Purchase(labour charge) effected for replacing broken glass of window shutters of Seminar complex	Departmental	17524
15	1680	Urgent Interior painting work,shifting rearranging of furniture in seminar complex	Anwar PA	102669
16	1692	AMC for cleaning inside the premises of Science seminar complex November 2016	KV krishnan	24775
17	1718	AMC for cleaning inside the premises of Science seminar complex December 2016	KV krishnan	24775
18	1728	Installation of Fire protection system in seminar complex	Cochin Firetech India Pvt.ltd	600382
19	1729	Purchase of 9" Brass encraved logos	Perl Craft Metal Graphics	3206
20	1742	AMC for cleaning inside the premises of Science seminar complex January 2017	KV krishnan	24775
21	1763	Urgent Painting work done in seminar complex related to Governors visit	Suresh Kumar SS	39622



22	1788	AMC for cleaning inside the premises of Science seminar complex February 2017	KV krishnan	24775
23	1796	Providing foundation of Lightroof for the pump to be installed for the fire protection system in seminar complex	Suresh Kumar SS	213576
24	1799	Extra items for pipe fittings	Cochin Firetech India Pvt.ltd	44600
25	1804	Supply and Installation Of Pumps and panel borad for fire fighting system in seminar complex	Powerskill Corporation	305170
			<b>Total</b>	<b>3159931</b>

**1-97-0-T-4-620**

Sl. No.	CB No.	Name of Work	Name Of Contractor	Amount
1	1515	Operation and AMC of STP of at Various Mens Hostel	Biju OP	164970
2	1561	Operation and Maintanance sewage treatment plant at various mens hostel for the month of May	Chakkanat Service Cube	47300
3	1570	Running and Maintanance of Prasannan's Echo Bio System-Post metric OBC boys hostel	SK Prasanna Kumar	220000
4	1580	Operation and Maintanance sewage treatment plant at various mens hostel for the month of June and July 2016	Chakkanat Service Cube	94600
5	1592	Disposal of Bio waste and non biowaste from Uty Campus For the Month Of June to August	Kalamassery Municipality	180000
6	1594	Operation and Maintanance Sewage treatment plant at various mens hostel for the month of August 2016	Chakkanat Service Cube	47300
7	1646	Operation and Maintanance sewage treatment plant at various mens hostel for the month of September and october 2016	Chakkanat Service Cube	94600
8	1682	Disposal of Bio waste and non biowaste from Uty Campus For the Month Of June to August to October	Kalamassery Municipality	180000



9	1694	Operation and Maintenance sewage treatment plant at various mens hostel for the month of November 2016	Chakkanat Service Cube	47300
10	1782	Operation and Maintenance sewage treatment plant at various mens hostel for the month of December to February 2016	Chakkanat Service Cube	141900
			<b>Total</b>	<b>1217970</b>

**1-97-0-T-4-621**

Sl. No.	CB No.	Name of Work	Name of Contractor	Amount
1	1513	Upgrading of substation No.2 at Tkr campus	Dinu Electricals	590205

**1-97-0-T-4-643**

Sl. No.	CB No.	Name of Work	Name of Contractor	Amount
1	1506	Construction of pond at tkr campus	Noble Mathew	583206
2	1672	Construction of pond at tkr campus	Noble Mathew	1129772
3	1754	Construction of pond at tkr campus	Noble Mathew	434673
4	1810	Construction of pond at tkr campus	Noble Mathew	6383995
			<b>Total</b>	<b>8531646</b>

**1-97-0-T-4-644**

Sl. No.	CB No.	Name of work	Name of Contractor	Amount
1	1789	Fee for preparation of plan and perspective of building for budget study center	KG Sukumaran and Associates	115000

**1-97-0-T-4-648**

Sl. No.	CB No.	Name of Work	Name of contractor	Amount
1	1702	Providing toilet block and rest room for gardeners and sweepers in ADM office	Suresh Kumar SS	878078

**MINOR WORKS – School of Engineering**

<b>'1-97-0-T-4-995'</b>				
<b>Sl. No.</b>	<b>CB No.</b>	<b>Name of Work</b>	<b>Name of contractor</b>	<b>Amount</b>
1	102/16-17	Repairing of water coolers in B.Tech hostels, Anaswara and Aiswarya hostels	M/s. New Tech cool solutions, Perumbavoor	26,400/-
2	103/16-17	Providing and fixing M.S. grill door for the stair cabin portion of B.Tech Men's hostel	Sri. Eldho N. Paul	26,794/-
3	104/16-17	Fixing GI sheet in the grill door of Ladies dressing room (sweepers) in Sahara hostel	Departmental	3,600/-
4	105/16-17	Painting work done in Lecture hall and office block in SOE campus	Sri. Shaji V.K.	1,83,460/-
5	108/16-17	a) Providing door to the room in order to enter from the Verandha in NLB of SOE campus	Sri. Anshad V.A.	14,000/-
		b) Cutting and removing huge tree fallen in front of B.Tech Boys hostel.	Sri. Abdul Azis M.M	10,500/-
		c) Various works done ie. Painting, fitting of door etc.	Sri. Shaji V.K.	12,500/-
		d) Clearing blocks in the waste lines of bathroom and toilets in Alakananda hostel.	Sri. Polly Mathew	2,500/-
6	107/16-17	Providing partition to the class room for accommodating Faculty room in Fire & Safety Engineering Lab of SOE	Sri. Rajendran P.V.	83,260/-
7	110/16-17	Aluminium partition work done in Alakananda hostel	Sri. Polly Mathew	2,01,201/-
8	109/16-17	a) Cleaning plants & Creepers from sunshades, terrace, open grills etc in all buildings in SOE, cleaning septic tank, premises of canteen in SOE.	Sri. Polly Mathew	16,000/-
		b) Cleaning the entire SOE campus and removing & disposing the dumped washes, cleaning drainages etc.	Sri. Abdul Azis	7,500/-
9	114/16-17	Painting works done in electrical Lab of SOE	Sri. Anwar P.A.	35,193/-





10	115/16-17	Purchase effected and painting work done in Geo technical lab at old SOE	Departmental	39,852/-
11	116/16-17	Repairing the damaged grill door locking system in Sahara Boys hostel	Eldho Kuruvila	4,500/-
12	117/16-17	Renovation work done in the kitchen areas of Sahara hostel	Sri. P.K. Sajeeb	2,57,559/-
13	118/16-17	Painting works done in dining hall, toilet wing, wardens office etc. in Sahara Boys hostel	Sri. P.K. Sajeeb	3,15,982/-
14	120/16-17	Repairing of water coolers in Sahara boys Hostel	Departmental	1,100/-
15	121/16-17	Replacing damaged partition wall with new Aluminium cubicle in Geo Technical Engg. Lab	Sri. Anwar P.A.	97,714/-
16	122/16-17	Providing water supply line from OH tank near Siberia Hostel to Lab block building at SOE campus	Sri. A.V. George	2,63,738/-
17	124/16-17	Various petty works such as dismantling Aluminium partitioned cubicles, providing partition in toilet near PCB Lab, repairing of windows, ventilators in Division of Electronics Engineering	Sri. Vinod O.T.	21,090/-
18	125/16-17	Dismantling partitions in Geo Technical lab and Aluminium partition of reading room etc in old SOE	Sri. Vinod O.T.	31,226/-
19	126/16-17	Purchase effected for various petty works done in Fire & Safety Division of SOE campus	Departmental	961/-
20	127/16-17	Cleaning the water tanks low level and over head tanks in lab block building in SOE campus	Sri.Abdul Wahid M.K.	8,500/-
21	128/16-17	Repairing of pump set in B.Tech hostel	M/s.P.S.Electric works	4,800/-
22	129/16-17	Purchase effected for repairing ball valves in B.Tech hostel	Departmental	4,542/-
23	130/16-17	Cleaning the OH tank of Software Engg. Block in SOE	Sri. Polly Mathew	3,000/-
24	131/16-17	Various works done in Alakananda Hostel	Sri. Suresh Kumar S.S.	14,800/-
25	132/16-17	Urgent Maintenance work done in Alakananda Ladies Hostel in connection with re-opening	Sri. Suresh Kumar S.S.	29,800/-
26	133/16-17	Urgent Maintenance work done in Alakananda hostel	Sri. Sunil K.V.	20,200/-



27	134/16-17	Urgent Maintenance work done in Alakananda hostel	Departmental	15,748/-
28	135/16-17	Various works done in Alakananda hostel in connection with re-opening	Departmental	4,130/-
29	136/16-17	Maintenance work done in B.Tech Ladies Hostel	Sri. V.A. Augustine	8,050/-
30	137/16-17	Providing and fixing sluice valves in the pipe line from OH tank near Siberia hostel	Sri. George A.V	26,500/-
31	138/16-17	Providing water supply line to vegetable garden of the Library of SOE	Sri. Shaji V.K.	51,557/-
32	139/16-17	Providing concrete paver block in between Lecture hall block I & II at SOE campus	Sri. Rajendran P.V.	1,70,034/-
33	140/16-17	Construction of proposed toilet for Principal's room – Lecture hall block I at SOE	Sri. Shaji V.K.	66,283/-
34	141/16-17	For providing 3 phase power supply to 3 nos. of 3 ton A/c in Computer Science Lab of SOE	Sri. Aby Abraham	12,248/-

**MINOR WORKS – Cochin University College of Engineering  
Kuttanad, Pulincunnu**

1-97-O-T-4-996				
Sl. No.	CB No.	Name of Work	Name of contractor	Amount
1	301/16-17	Purchase of Electrical items for installation of phase energy meter with meter box in the canteen of CUCEK	Departmental	10,058/-
2	302/16-17	Clearing light jungle in the main & mini campus in CUCEK	Krishnakumar C.K.	55,806/-
3	303/16-17	Providing PVC water line under water from Kayalpuram river to Pulincunnu campus through the natural thodu	Hameed M.M.	2,94,644/-
4	304/16-17	Providing single phase & three phase supply in the mechanical workshop in CUCEK	Jerry K.T.	1,93,957/-
5	305/16-17	Providing PVC pipe line under water from Kayalpuram river to Pulincunnu campus	Hameed M.M.	5,57,060/-
6	307/16-17	High Tension Electrical works in connection with laying of 11 KV cable in open trench under supervision of KSEB Engineers	M/s. Delstar	1,71,989/-



7	309/16-17	Repairing of Automatic power factor connection panel installed at CUCEK	Departmental	3,500/-
8	310/16-17	Clearing grass and over growth in CUCEK main & mini campus at CUCEK	Krishnakumar	61,253/-
9	313/16-17	Providing partitions for setting the room for Doctor, N.S.S and SBT counter in the semi permanent building at CUCEK	Vinod O.T.	2,36,092/-
10	314/16-17	Urgent repair works done in the kitchen portion of canteen building at CUCEK	Manojkumar T.G.	1,15,299/-

### MINOR WORKS – Kunjali Marakkar School of Marine Engineering

1-97-O-T-4-997				
Sl. No.	CB No.	Name of Work	Name of contractor	Amount
1	106/16-17	March & April 2016	M/s. Chakkanat Service Cube, Kochi - 20	76,600/-
2	107/16-17	Repairing of Canopy roofing over the courtyards of KMSME Students Hostel	Sri. A.V. George	1,18,745/-
3	109/16-17	Charges for Annual maintenance of Sewage Treatment Plant at KMSME campus for the month of May to August 2016	M/s. Chakkanat Service Cube, Kochi - 20	1,53,200/-
4	113/16-17	Purchase of materials for providing stair door in KMSME building	Departmental	13,875/-
5	119/16-17	Charges for Annual maintenance of Sewage Treatment Plant at KMSME campus for the month of September & October 2016	M/s. Chakkanat Service Cube, Kochi - 20	76,600/-
6	123/16-17	Charges for Annual maintenance of Sewage Treatment Plant at KMSME campus for the month of November 2016	M/s. Chakkanat Service Cube, Kochi - 20	38,300/-
7	139/16-17	Urgent renovation works done in Aiswarya, Anaswara hostel for accommodating lady students of KMSME	Sri. Polly Mathew	2,18,415/-
8	140/16-17	Charges for Annual Maintenance of Sewage Treatment plant at KMSME for the month of December 2016	M/s. Chakkanat Service Cube, Kochi - 20	38,300/-



1-97-0-T-1-036				
Sl. No	CB No.	Name of the work	Name of the Contractor	Amount
1	1509	Providing canopy roofing for DG Set in the Physics dept.	Sajeeb PK	108918
2	1525	Urgent pressure washing and petty repair works at Statistics Dept.	Cheriyar Vargeese	189173
3	1527	laying interlocking paving blocks at lakeside campus	Rajendran PV	71924
4	1530	Providing interlocking paver block around departmental building - Electronics ship technology SES block 3, PS&RT	Anshad VA	1588832
5	1531	Providing light roof over the existing damaged AC sheet roof at SIF	Sajeeb PK	358043
6	1533	Providing inerlocking paving blocks at Marine Science campus	Suresh Kumar SS	244401
7	1543	Purchase of Fire extinguishers for various labs in the Dept.of Chemical oceanography	Alpha Chemicals & Diagnosticis	35000
8	1553	Urgent petty works done in the front yard at lakeside campus	Suresh Kumar SS	136969
9	1557	Ornamental plastering works in the gate pillars of Main gate and sheet shading works and replacing damaged sheets at SIF	Suresh Kumar SS	25000
10	1558	Pressure washing and painting works done in Marine science campus	Departmental	32657
11	1559	rectification and repairing in IF building and clearing blockage at CUMS hostel at lakeside campus	Suresh Kumar SS	45300
12	1567	Purchase effected for removal of blocking wastage and replacing broken closets in Gents and Ladies toilets at Biotechnology Dept	Departmental	19488



13	1569	Renovation of darkroom as gents common room at Electronics dept	CT Joseph	118365
14	1572	Urgent pressure washing and petty repair works at dept of Applied economics, Mathematics, Hindi and Foreign languages	MV George	247098
15	1575	Urgent exterior painting works in Biotechnology dept.	Ajmal TM	74117
16	1577	Rectification of Faculty rooms in department of Statistics	Abdul Aziz	38103
17	1581	Providing new rolling shutter in Marine science campus	Popular Industries Kochi	28592
18	1584	Renovation work done in the Dept.of Mathematics	Suresh Kumar SS	95194
19	1590	Rewiring of central library at Tkr Campus	Biju T Baby	1709768
20	1591	Providing matt finish vitrified tiles at SLS	Fazil Muhammed	105438
21	1593	Rehabilitation work at SMS dept.	Castle Enterprises	247434
22	1596	Painting works in the Labs Classrooms etc in Marine Biology dept at Marine science campus	Anildev Pushpar	505027
23	1597	Urgent painting and rectification works - Computer applications	Rajendran PV	79394
24	1598	Electrification of newly constructed lab in SIF	Reji George	174110
25	1599	Purchase Of Materials for rectification of work in stair roof in Applied economics	Departmental	2500
26	1602	Rehabitation works to the building for SES No.1( Electronics Dept)	Castle Enterprises	463390
25	1603	Petty works done in Dept. Of Statistics	Meetheenkunj	76450
26	1607	Painting works done in the computer lab at Dept.of Statistics	PK Sajeed	14380
27	1611	Providing interlock paver blocks in library building in Marine science campus	Abdul vahid MK	155068



28	1612	Providing and laying granite tiles in the ground floor of SLS	Anwar PA	325560
29	1613	Replacing old and damaged half doors at Dept.of Instrumentation	AV George	19800
30	1614	Disposal of Waste from Marine Science campus	VA Augustine	84000
31	1615	Maintanance and renovation of dept.of Instrumentation	AV George	2184964
32	1616	Urgent painting works of corridors in dept.of Statistics	Meetheenkunj	14940
33	1618	Laying waste water pipelines in library building Marine science campus	Abdul vahid MK	4500
34	1621	Rectification work of Carshed in Physical science block	Anwar PA	36994
35	1624	Purchase effected for stainless steel shutters for the shelves in the kitchen at Marine science campus	Net Traders	19465
36	1626	Vitrified tiles in the first floor of SMS	Shaji vk	139882
37	1630	Painting works on outside walls in Electronics dept.	Suresh K	637508
38	1632	Providing paving block on the existing porch of physical science block	Anwar PA	95289
39	1633	Emergency painting works in SIF at Marine science campus	PK Sajeeb	115322
40	1635	Painting of Verandha walls of library building In Marine science campus	PK Sajeeb	59069
41	1640	Replacement of Hoist motor rope and anchoring system of the passenger elevator at lake side campus	Thyssenkrupp Elevator	302816
42	1641	Urgent Maintanace work of merging classrooms( E308 and E310) In computer science dept.	Rajendran PV	39249
43	1647	Maintanance work including vitrified tile flooring and venition blind in CIRM labs	Abdul Aziz	251035



44	1648	Painting and providing venitian blinds in directors room In SLS	Polly Mathew	50813
45	1649	Providing garden wall infront of electronics dept.	Anshad VA	60738
46	1650	Plumbing and Maintanace work done in PS&RT and Chemistry dept.	Ajmal TM	75801
47	1654	Marble polishing work and providing vitrified floor tile at the conference room in dept of Photonics	Suresh Kumar SS	144910
48	1655	Renovation work done in the Dept.of Ship technology	Suresh Kumar SS	513432
49	1656	Providing cubicle in the faculty room at ISP	Ajmal TM	176938
50	1658	Providing watertank covering in Electronic dept.	Abdul Aziz	38809
51	1659	Dismantling existing old electrical installation in central library	Biju T Baby	19689
52	1662	Purchase of Material for providing sliding shutters in Dept.of Instrumentation	Departmental	19966
53	1667	Painting exterior walls and corridors in dept.of Biotechnology	Sajeeb PK	263782
54	1668	Providing cabin for CH instruments of Dept. Of Ship technolgy	Anshad VA	74480
55	1669	Painting floor with tileguard in the dept.of Photonics	Suresh Kumar SS	59625
56	1671	Painting with interior emulsion in the committee room of ISP	Polly Mathew	11530
57	1673	Painting the entrance portionof multistoried building in Marine science campus	Sajeeb PK	26608
58	1675	Renovation and maintanance of First and second floor of CSIS for dept.of Computer application	MV George	1541539
59	1677	Urgent painting work done in the corridoros and library,director room office room etc in ISP	MV George	190265



60	1679	Urgent modification and Maintenance work In electronic dept. Ground and First Floor	Rajendran PV	1344555
61	1683	Painting of seminar hall in the dept.of Biotechnology	Meetheenkunj	19986
62	1684	Painting groundfloor rooms in CIRM	Abdul Aziz	14007
63	1685	Pressure washing in outerwall of animal house of biotechnology and compound wall of PS&RT	Abdul Aziz	9518
64	1686	Painting the compound wall and presure pumpwashing in the dept.of Photonics	Polly Mathew	15689
65	1687	Providing vitrified floor tile to the server room and adjesent room in CIRM	Abdul Aziz	19368
66	1688	Repair work of pipeline and fittings done in the labs of IF building	PK Sajeed	7000
67	1696	Painting inside the aqua culture lab of IF building	Suresh Kumar SS	8600
68	1697	Painting the marine botany lab of IF building	Suresh Kumar SS	19400
69	1699	Urgent painting and reapiir work don In CITTIC at Tkr campus	Shaji vk	102077
70	1700	Urgent maintainance work done in SMS	Shaji vk	1422839
71	1704	Providing granite tile flooring to the staircase 2nd and 3rd floor at Electronic Dept.	Rajendran PV	115938
72	1712	Urgent painting work done at the entrance and corridors of chemistry dept.	Rajendran PV	36403
73	1716	Urgent Repair work in IF building	Rajendran PV	656281
74	1717	Emergency flooring of Marine Biology lab and aqua cultural lab	Nazar VK	242294
75	1719	Providing chainlink fencing over the compound wall infront of the library building - lake side campus	KP Eldho	205686





76	1720	Painting corridors staircase GF,FF and SF - Dept.of Ship technology	Suresh Kumar SS	443776
77	1721	Replacing damaged false ceiling rectification of leakage of roof and auxilliary works in lake side campus	Joy Thomas	834154
78	1722	Urgent painting works done in the frontage and corridors of dept. Of Mathematics	Polly Mathew	143483
79	1730	Repairing the drawing of the vertical extension of dept. Of Applied economics	Rohan Abraham Kurien	29565
80	1731	Rectification works in the existing drain infront of old SOE(SES block 3)	Anwar PA	67541
81	1732	Providing porch tiles and SS hanvrives to the car porch of SES 3	Anwar PA	107692
82	1733	Cleaning the car shed near the physical science ,SMS, and library and rectification work in roofing of carshed near library	Departmental	12200
83	1734	Painting research scholars room floor using tileguard, reapiir work done in various departments	Shaji vk	22554
84	1739	Renovation work done in toilet and providing readymade septic tank in Mathematics dept.	Shaji vk	119732
85	1740	Setting up of a small classroom in dept .of computer applications	Sugi Xavier	150035
86	1741	Providing water supply line to new library building	Shaji vk	107637
87	1743	Urgent painting works done in library in dept.of Electronics	Rajendran PV	31646
88	1744	Urgent painting works done in the corridors of the dept.of Physics	Rajendran PV	37769
89	1745	Providing new SS hanvrives to the existing masonry handreel to increase the height - USIC dept	AV George	39047



90	1746	Urgent painting work done in the front portion of CIRM , compound wall and security cabin	Abdul Aziz	62149
91	1747	Urgent painting works done in dept.of Hindi	Polly Mathew	35155
92	1749	Urgent Painting work done in the corridors and frontage of dept . Of Foreign Languages	Polly Mathew	36103
93	1750	Purchase effected for urgent rectification work done in toilets of Electronics dept.	Departmental	4135
94	1751	Providing sunshades on truss work and gis sheet proofing in electronic dept.	Departmental	9143
95	1752	Purchase of materials for replacing the damged plywood portion of Museum in the dept. of ship technolgy and labour charge	Departmental	34547
96	1753	Re doing the walls near the washbases in dept.of Statistics	Suresh Kumar SS	3132
97	1755	Urgent Painting works done in the toilet of hindi department	Departmental	3898
98	1756	Purchase for flooring work done in the dept. Of Hindi	Departmental	4201
99	1757	Purchase effected/labour charge flooring work done in the toiilet of dept of Hindi	Departmental	8950
100	1758	Purchase effected for providing and fixing gutters in the edge of GI sheet roofing in ISP	Departmental	11073
101	1759	Purchase effected for providing pvc doors to the toilet of dept of Mathematics clearing the premises of new library building in connection with CUST youth fest	Departmental	6524
102	1760	Purchase/labour charge painting work done in toilet in dept of Mathematics	Departmental	14755
103	1761	Purchase effected for flooring work done in the dept.of Mathematics	Departmental	7303



104	1762	Purchase of sand and metal for tile flooring work in toilet in dept.of mathematics	Departmental	9150
105	1766	Urgent painting work done in the first floor of the dept of Bio-technology	Abdul Aziz	40309
106	1768	Renovation work done in Gents toilet block in the dept of Computer Applications	Anwar PA	287577
107	1769	Urgent painting work done in University Library'	Polly Mathew	69738
108	1770	Emergency flooring work done in Molecular Biology Lab and Anaerobic Culture Facility Labs- Dept of Marine Biology	Shaji vk	266039
109	1771	Providing light roofing to the existing and damaged roofing in School of Industrial Fisheries- Lake side campus	Rajendran PV	343712
110	1774	Providing paving tile at the entrance of ST Radar building	Anwar PA	233241
111	1777	Vitrified tile flooring work done in the ground floor of School of Industrial Fisheries	Sajeeb PK	298880
112	1778	Urgent painting work done in School of Legal Studies	Anwar PA	122396
113	1783	Marble polishing work done to the floors of School of Environmental Studies	Suresh Kumar SS	38064
114	1790	Diverting the pumping line from the pond to the Main Pump house-Budget Studies	Ajmal TM	152010
115	1795	Urgent power coating works done in the existing Aluminium partition in the University Library	Rajendran PV	37814
116	1798	Furnishing the windows with vertical venition blinds in the Department of Electronics	Rajendran PV	31814
117	1801	Pressure grouting to the carporch slab at the main entrance in CIRM	M/S Castle Enterprises	39868



118	1806	Renovation of Room No 106 in C-Sis department	M/S Power Skill Corporation	305170
119	1807	Painting work done in the Dept of Ship Tech, Mahs, Applied Chemistry	Suresh, Polly, Rajendran.	19439
120	1808	Purchase of Material towards urgent leakproofing work done in toilet at the department of Hindi	Departmental	10263
121	1809	Labour charge for leak proofing work in toilet at Hindi Dept	Jayan MK	24800
122	1811	Renovation of animal house at the dept. Of Biotechnology	Joy Thomas	658554
123	1812	Construction of new septic tank in the dept. of Mathematics	Abdul Aziz	191756
124	1813	Renovation of cooling tower in the computer centre	Vinod OT	292119
			<b>Total :</b>	<b>24689704</b>

**1-97-0-T-3-503**

Sl.No	CB No.	Name Of Work	Name of Contractor	Amount
1	1504	Providing new windows in Type 1 quarters Unit no.7	Shaji VK	39680
2	1518	Cleaning work done in the quarter of Registrar	Eldho Kuruvila	7500
3	1522	Purchase of UPS system in the Quarters of Registrar	Supra Hightech Electro Equipment	9733
4	1524	Various works done C type quarters (Unit 7)	Shaji VK	4850
5	1534	Providing new water supply pipe line to F type quarters (1- 20)	Abdul Aziz	97800
6	1539	Levelling yard in the residential area of statutory officers	Abdul Aziz	50890
7	1542	Providing curtains and mosquito nets to the quarters of Registrar	Sajeep PK	105342
8	1550	Plumbing works in C type quarters(unit 4&7) construction of chamber in F type quarters (1-20)	Sreekumar and Abdul Aziz	20500
9	1552	Repairing taps and tiles in the toilets of C type quarters (Unit 5)	Sajeep PK	17450
10	1554	Providing RR masonry wall and levelling in Savana teachers Hostel	Shaji VK	522259



11	1562	Rectification of Main Pipe line near F type quarters and clearing toilet blocks in Sanathana Hostel	Abdul Aziz and Shaji vk	7800
12	1568	Plastering and Painting works of the Car Porch at Type 1 quarters (6&8Units)	Shaji VK	18114
13	1571	Cleaning the septic tank in Type 2 quarters (15-20)	AV Geroge	20000
14	1582	Maintanance of the quarters of Registrar	Cheriyar Vargeese	171015
15	1585	Providing land devolpment work inside the quarters of Registrar	Cheriyar Vargeese	483493
16	1587	Cleaning of Septic tank Type 2 quartes (15-20)	AV Geroge	20000
17	1588	Repairing the joineries of Unit No.1 of Type 2 quarters	Shaji VK	3300
18	1600	Cutting branches of trees in Type B and Type 1 quartes	Abdul Aziz	21700
19	1609	Repair and Maintanance of Type 2 quarters (15-20 units)	AV Geroge	2099529
20	1622	Purchase of Furniture for the quarters of Registrar	SIDCO	99586
21	1627	Clearing the blocks in the pipes of toilets E-9 quarters	Shaji VK	4800
22	1629	Providing Protection to the road leading to the quarters of VC	Shaji VK	103507
23	1631	Urgent renovation work done in B type quarters (Unit 7)	Shaji VK	167586
24	1642	Cutting branches of trees around Type 1,2 B quarters	Abdul Aziz	41950
25	1643	Cutting branches of trees around F type and E type quartes	Abdul Aziz	43100
26	1644	Cutting branches of trees around C,C-1,F and B type quartes	Abdul Aziz	38200
27	1670	Urgent renovation work done in room No.10 (In Savanna teachers hostel)	Polly Mathew	268585
28	1681	Urgent petty works done in C type quarters(Unit no.7)	Sajeeb PK	28038
29	1690	Electrical maintanace in various quarters	Jerry KJ	418341
30	1698	Cutting the branches of the trees in the premises of security barrack	Abdul Aziz	11300



31	1705	Various works done in Unit No.15 of E type quarters	Shaji VK	8400
32	1711	Supplying and fixing pvc doors to the toilet of F type quarters Unit No.22	Departmental	5500
33	1714	Repair work of water supply pipelines,Pvc tanks in Savanna hostel, Variousworks done in B type quarters pvc quarters and in Sarovar hostel	Departmental	7257
34	1724	Supplying and providing single face energy meters in each room of Savanna Hostel	Aby Abraham	110257
35	1727	Urgent renovation work done in Savanna techers hostel	Suresh Kumar SS	151863
36	1765	Repair and Maintanance of C type quarters	Shaji VK	3291058
37	1767	Painting works done in Savanna teachers hostel	Polly Mathew	79603
38	1775	Relaying the water supply lines to the south end of Savanna hostel	Shaji VK	136885
39	1776	Providing drainage facility on the southern side of Savanna hostel	Shaji VK	137095
40	1791	Purchase of Anjili wood VD table to the Registrars quarters	SIDCO	34327
			<b>Total</b>	<b>8908193</b>

### Administrative Personnel

Sl. No.	Designation	No. of Posts
1	Section Officer	2
2	Sr. Gr. Assistant	3
3	Assistant	2
4	Office Superintendent	1
5	Sel. Gr. Computer Assistant	1
6	Computer Assistant Grade II	1
7	LD Driver	1
8	Office Attendant	2
9	Sweeper cum cleaner	1
	<b>Total</b>	<b>14</b>



### Technical Personnel

Sl. No.	Designation	No. of Posts
1	University Engineer	1
2	Executive Engineer/T.O.	2
3	Asst. Exe. Engineer (Civil)	5
4	Asst. Engineer (Civil)	6
5	Asst. Engineer (Ele)	2
6	Overseer/Gr. I (Civil)	3
7	Overseer Gr. I (Ele.)	2
8	Overseer Gr. II (Civil)	2
9	Electrician Gr. II	6
10	Line Helper	3
11	Plumbing Supervisor	1
12	Plumber	3
13	Pump Operator	1
	<b>Total</b>	<b>37</b>

### LIST OF RECOGNISED INSTITUTIONS (2016-17)

Sl. No.	Name of the Institutions	Courses Offered.	Sanctioned Intake 2015-16
1	Indian Institute of Information Technology & Management - Kerala, 'Nila', Technopark, Thiruvananthapuram - 695581	1. M. Sc. (Information Technology)	30
		2. M. Phil (Ecological Informatics)	15
		3. M Sc (Computational Science)	30
		4. M Sc (Geo Informatics)	30
		5. M Phil (Computer Science)	15
		4. M Sc (Computer Science & Information Security)	40
2	CONSPI Academy of Management Studies, Plankalamukku, Industrial Estate PO, Thiruvananthapuram-695109	1. MBA	60



3	Marian College of Architecture and Planning, Kazhakuttom, Thiruvananthapuram - 695 582 Ph : 0471-2706157	1. <b>B. Arch</b>	40
4	T K M School of Architecture, Ezhukone, Kollam	1. <b>B Arch</b>	40
5	Nizar Rahim & Mark School of Architecture, Nizar Estate, Madannada, Kollam Ph:0474-2750060	1. <b>B. Arch</b>	40
6	Bhavan's Royal Institute of Management, Off Hill Palace, Thripunithura, Ernakulam	1. <b>MBA</b>	60
7	Central Institute of Fisheries, Nautical & Engineering Training, Fine Arts Avenue, Kochi - 682 016	1. <b>Bachelor of Fishing Science (Nautical Science)</b>	22
8	Sarabhai Institute of Science & Technology, Uriacode, Vellanadu, Thiruvananthapuram-695543	1. <b>B Tech (Computer Science &amp; Engineering)</b>	
		2. <b>B Tech (Electronics &amp; Communication Engineering)</b>	
		3. <b>B.Tech ( Electronics &amp; Instrumentation Engineering)</b>	
		4. <b>B. Tech (Electrical &amp; Electronics Engineering)</b>	
		5. <b>B.Tech (Civil Engineering)</b>	
		6. <b>B. Tech (Mechanical Engineering)</b>	
		7. <b>M Tech (Computer &amp; Information Science)</b>	
		8. <b>M Tech (Software Engineering)</b>	
		9. <b>M Tech Electronics (Optoelectronics &amp; Communication)</b>	
		10. <b>M. Tech Electronics (Signal Processing)</b>	
		11. <b>M Tech Mechanical Engineering (Thermal Engineering)</b>	
		12. <b>M Tech Civil Engineering (Geotechnical Engineering)</b>	
9	College of Engineering, Government ITI Campus, Attingal, Thiruvananthapuram-695101	1. <b>B.Tech. (Computer Science &amp; Engineering)</b>	
		2. <b>B.Tech. (Electronics &amp; Communication Engineering)</b>	
		3. <b>B. Tech (Electrical &amp; Electronics Engineering)</b>	
10	M G College of Engineering, Thrikkanamangalam, Thiruvallam, Thiruvananthapuram - 695027	1. <b>B.Tech. (Computer Science &amp; Engineering)</b>	





		2. B. Tech (Electronics & Communication Engineering)
		3. B. Tech (Electrical & Electronics Engineering)
		4. B. Tech (Civil Engineering)
		5. B. Tech (Mechanical Engineering)
		6. M. Tech Electrical (Power Electronics)
		7. M. Tech Electronics (Signal Processing)
11	College of Engineering, Kottarakkara, Kollam - 691531	1. B.Tech. (Computer Science & Engineering.)
		2. B. Tech(Electronics & Communication Engineering)
12	College of Engineering, Perinad PO, Perumon, Kollam - 691501	1. B.Tech (Computer Science & Engineering)
		2. B.Tech (Electronics & Communication Engineering)
		3. B.Tech (Information Technology)
		5. B.Tech (Electrical & Electronics Engineering)
		6. M. Tech (Computer & Information Science)
		7. M. Tech Electronics (Wireless Technology)
		8. M. Tech (Power Electronics)
13	College of Engineering, Karunagapally, Kollam - 690518	1. B.Tech (Computer Science & Engineering)
		2. B. Tech (Information Technology)
		3. B. Tech (Electronics & Communication Engineering)
		4. B. Tech (Electrical & Electronics Engineering)
		5. M Tech in Computer Science with specialisation in Signal Processing
		6. M Tech in Computer Science with specialisation in Image Processing
14	T K M Insitute of Technology, Musaliar Hills, Karuvelil, Ezhukone, Kollam	1. B. Tech ( Computer Science & Engineering)
		2. B. Tech (Electronics & Communication Engineering)
		3. B. Tech (Biomedical Engineering)
		4. B. Tech (Food Technology)
		5. B. Tech (Mechanical Engineering)
		6. B. Tech (Electrical & Electronics Engineering)



		<b>7. B. Tech (Civil Engineering)</b>
		<b>8. M. Tech (Computer &amp; Information Science)</b>
		<b>9. M. Tech (Software Engineering)</b>
		<b>10. M. Tech Electronics (Signal Processing))</b>
		<b>11. M. Tech Electronics (VLSI &amp; Embedded Systems)</b>
		<b>12. M. Tech (Electronics (Optoelectronics &amp; Communication)</b>
15	College of Engineering, Pathanapuram, Kuriottumala, Piravanthoor, Pathanapuram, Kollam	<b>1. B. Tech (Electronics &amp; Communication Engineering)</b>
		<b>2. B. Tech (Computer Science &amp; Engineering)</b>
		<b>3. B. Tech (Electrical &amp; Electronics Engineering)</b>
		<b>4. B. Tech (Civil Engineering)</b>
16	College of Engineering, Adoor, Pathanamthitta - 691523	<b>1. B. Tech (Electronics &amp; Communication Engineering)</b>
		<b>2. B. Tech (Computer Science &amp; Engineering)</b>
		<b>3. B. Tech (Mechanical Engineering)</b>
		<b>4. B. Tech (Electrical &amp; Electronics Engineering)</b>
		<b>5. M. Tech (Mechanical Engineering with specialisation in Thermal Engineering)</b>
17	College of Engineering, Kallooppara, Pathanamthitta - 689603	<b>1. B.Tech(Electronics &amp; Communication Engineering)</b>
		<b>2. B.Tech (Computer Science &amp; Engineering)</b>
		<b>3. B.Tech (Electrical &amp; Electronics Engineering)</b>
		<b>4. M. Tech Electronics (Signal Processing)</b>
		<b>5. M. Tech Computer Science (Cyber forensics and information security)</b>
18	College of Engineering, Kidangoor, Kottayam - 686583	<b>1. B.Tech.(Computer Science &amp; Engineering)</b>
		<b>2. B. Tech(Electronics &amp; Communication Engineering)</b>
		<b>3. B. Tech(Information Technology)</b>
		<b>4. B. Tech(Electronics &amp; Instrumentation Engineering)</b>
		<b>5. B. Tech(Electrical &amp; Electronics Engineering)</b>
		<b>6. B. Tech (Civil Engineering)</b>
		<b>7. M. Tech Electronics (Wireless Technology)</b>



		<b>8. M. Tech Computer &amp; Information Science</b>
19	College of Engineering, Poonjar Thekkkara PO, Poonjar, Kottayam - 686583	<b>1. B. Tech (Computer Science &amp; Engineering)</b>
		<b>2. B. Tech (Electronics &amp; Communication Engineering)</b>
		<b>3. B. Tech (Electrical &amp; Electronics Engineering)</b>
		<b>4. M. Tech Computer &amp; Information Science</b>
		<b>5. M. Tech Electronics (Signal Processing)</b>
20	College of Engineering, Chengannur, Alappuzha - 689 121	<b>1. B. Tech (Computer Science &amp; Engineering)</b>
		<b>2. B. Tech (Electronics &amp; Communication Engineering)</b>
		<b>3. B. Tech (Electrical &amp; Electronics Engineering)</b>
		<b>4. B. Tech (Electronics &amp; Instrumentation Engineering)</b>
		<b>5. M. Tech Electronics (VLSI &amp; Embedded System)</b>
		<b>6. M. Tech in Computer Science with specialisation in Image Processing</b>
21	College of Engineering, Pallipuram, Cherthala, Alappuzha - 688541	<b>1. B. Tech (Computer Science. &amp; Engineering)</b>
		<b>2. B. Tech (Electronics &amp; communication Engineering.)</b>
		<b>3. B. Tech (Electrical &amp; Electronics Engineering)</b>
		<b>4. M. Tech (Computer Sciece with specialisation in Computer &amp; Information Science)</b>
		<b>5. M. Tech (Electronics (Signal Processing))</b>
22	K V M College of Engineering and Information Technology, Kokkothamangalam, PB No.30, Cherthala, Alappuzha - 688583	<b>1. MCA</b>
		<b>2. M.Sc. (Biotechnology)</b>
		<b>3. MBA</b>
		<b>4. B. Tech (Mechanical Engineering)</b>
		<b>5. B. Tech (Civil Engineering)</b>
		<b>6. B.Tech (Electrical &amp; Electronics Engineering)</b>
		<b>7. B. Tech (Electronics &amp; Communication Engineering)</b>
		<b>8. B. Tech (Computer Science &amp; Engineering)</b>



23	College of Engineering, Munnar, PB No.45, County Hills, Munnar, Idukki - 685612	1. <b>B.Tech (Computer Science &amp; Engineering)</b>
		2. <b>B.Tech (Electronics &amp; Communication Engineering)</b>
		3. <b>B.Tech (Electrical &amp; Electronics Engineering.)</b>
		4. <b>B. Tech (Mechanical Engineering)</b>
		5. <b>M. Tech Computer &amp; Information Science</b>
		6. <b>M. Tech Electronics (VLSI &amp; Embedded Systems)</b>
24	Model Engineering College, BMC PO, Thrikkakara, Ernakulam - 21	1. <b>B.Tech (Electronics &amp; Communication Engineering)</b>
		2. <b>B.Tech (Computer Science &amp; Engineering)</b>
		3. <b>B.Tech (Electronics &amp; Biomedical Engineering)</b>
		4. <b>B.Tech (Electrical &amp; Electronics Engineering)</b>
		5. <b>B. Tech (Electronics &amp; Communication Engg. -PT)</b>
		6. <b>B. Tech (Electrical &amp; Electronics Engineering - PT)</b>
		7. <b>M.Tech Electronics (VLSI Design &amp; Embedded Systems)</b>
		8. <b>M.Tech Electronics (Optoelectronics &amp; Communication Systems)</b>
		9. <b>M.Tech Electronics (Signal Processing)</b>
		10. <b>M Tech Computer Science (Image Processing)</b>
		11. <b>M.Tech Mechanical Engineering (Energy Management)</b>
25	Toch Institute of Science and Technology, Arakunnam, Ernakulam - 682313	1. <b>B.Tech (Computer Science &amp; Engineering)</b>
		2. <b>B.Tech (Electronics &amp; Communication Engineering)</b>
		3. <b>B.Tech (Information Technology)</b>
		4. <b>B.Tech (Electrical &amp; Electronics Engineering)</b>
		5. <b>B. Tech (Civil Engineering)</b>
		6. <b>B. Tech (Mechanical Engineering)</b>
		7. <b>B. Tech (Safety &amp; Fire Engineering)</b>
		8. <b>M Tech Computer Science (Data Security)</b>
		9. <b>M Tech Electronics (VLSI &amp; Embedded Systems)</b>
		10. <b>M Tech Electronics (Wireless Technology)</b>
		11. <b>M. Tech Electrical (Power Electronics)</b>



		<b>12. M. Tech Construction Engineering &amp; Management</b>
		<b>13. M. Tech Mechanical Engineering</b>
		<b>14. M Tech Computer Science &amp; Engineering (Network Computing)</b>
		<b>15. MBA</b>
26	College of Engineering, Vadakara, Mandarathur PO, Vadakara, Kozhikode - 673 105	<b>1. B.Tech. (Computer Science &amp; Engineering)</b>  <b>2. B. Tech. (Electronics &amp; Communication Engineering)</b> <b>3. B. Tech. (Information Technology)</b> <b>4. B. Tech. (Electronics &amp; Instrumentation Engineering)</b> <b>5. B. Tech. (Civil Engineering)</b> <b>6. B. Tech. (Electrical &amp; Electronics Engineering)</b> <b>7. B. Tech (Mechanical Engineering)</b> <b>8. MCA</b>
27	College of Engineering, Eranholi, Thalassery, Kannur - 670107	<b>1. B.Tech.(Computer Science &amp; Engineering)</b> <b>2. B. Tech(Electronics &amp; Communication Engineering)</b> <b>3. B. Tech(Information Technology)</b> <b>4. B. Tech(Electrical &amp; Electronics Engineering)</b> <b>5. B. Tech(Mechanical Engineering)</b> <b>6. B. Tech (Civil Engineering)</b> <b>7. M. Tech Mechanical Engineering</b> <b>8. M. Tech Electronics (Signal Processing)</b>
28	College of Engineering, Thrikkaripur, Cheemeni, Kasargod - 671313	<b>1. B.Tech (Computer Science &amp; Engineering)</b> <b>2. B.Tech(Electronics &amp; Communication Engineering)</b> <b>3. B. Tech(Electrical &amp; Electronics Engineering)</b> <b>4. B. Tech (information Technology)</b> <b>5. B.Tech (Civil Engineering)</b>



29	College of Engineering, Aranmula, Aranmula PO, Pathanamthitta - 689 533	<b>1. B.Tech (Computer Science &amp; Engineering)</b>
		<b>2. B.Tech (Electronics &amp; Communication Engineering)</b>
		<b>4. B. Tech(Electrical &amp; Electronics Engineering)</b>
		<b>5. B.Tech (Civil Engineering)</b>
30	ER & DCI Institute of Technology, PB No. 6520 Vellayambalam, Trivandrum-695033	<b>1. M. Tech Computer Science (Cyber Forensics &amp; Information Security)</b>
		<b>2. M.Tech.(VLSI Design &amp; Embedded System)</b>



## ACADEMIC PROGRAMMES

### COCHIN UNIVERSITY COLLEGE OF ENGINEERING, KUTTANAD

B. Tech. Civil Engg./ Comp. Science & Engg./ Elect. & Electronics Engg./ Electronics & Comm. Engg./ Inform. Tech./ Mech. Engg./ Safety & Fire Engg. (8 Semesters).

Lateral Entry to the 3<sup>rd</sup> Semester of B.Tech Programmes for Diploma holders M.C.A. (6 Semesters).

### SCHOOL OF ENGINEERING, THRIKKAKARA

B.Tech. Civil Engg./Comp. Science & Engg./Elect. & Electronics Engg./ Electronics & Commn. Engg./Information Technology/ Mechanical Engg./ Safety & Fire Engg. (8 Semesters).

Lateral Entry to the 3<sup>rd</sup> Semester of B.Tech Programmes for Diploma holders M.Tech (Full-time) Electronics & Communication Engg. (full time)/M.Tech Information Technology with Specialisation in Software Systems/Civil Engg. specialization in Geotechnical Engg./ Mechanical Engg. Specialization in Thermal Engg./ M.Tech Computer Science and Engineering with specialization in Network computing/ M.Tech Industrial Safety with specialization in Health, Safety & Environmental Management/ M.Tech Electronic Design and Technology (4 Semesters).

M.Tech (Part time) – conducted in alternate years Civil Engg. (Construction Management)/ Chemical Engg. (Process Engg.)/ Mechanical Engg. (Production Engg.)/ Electrical & Electronics Engg. (Specialization in Power Electronics) (6 Semesters) Ph. D.

### KUNJALI MARAKKAR SCHOOL OF MARINE ENGINEERING

B.Tech. Marine Engg. (Residential Programme) (8 Semesters)

M.Tech. Marine Engg. (4 Semesters)

### SCHOOL OF ENVIRONMENTAL STUDIES

M.Sc Environmental Tech., Stream 1. Env. Engg. (4 Semesters), Stream 2. Env. Biotech. (4 Semesters)

M.Tech. Marine Biotechnology (offered at NCAAH) Spon. By Dept. Bio Technology, Govt. of India, Selection through test conducted by Jawaharlal Nehru University.

Ph.D



## **DEPARTMENT OF ENGLISH AND FOREIGN LANGUAGES**

Certificate Programmes in French/ German/ Japanese/ Russian (1 year) P.G.  
Diploma in Communicative English (1 year)

Diploma Programmes in French/ German/ Japanese/ Russian (1 year)

Integrated Diploma in French/ German/ Japanese/ Russian (1 year)

Integrated Diploma in Italian (1 year)

M.A. Translation in German

## **DEPARTMENT OF HINDI**

M.A. Hindi Language and Literature (4 Semesters)

M.Phil Hindi (2 Semesters)

P.G. Diploma in Translation & Functional Hindi (1 year)

Certificate Programme in Communicative Hindi

Ph.D.

## **SCHOOL OF LEGAL STUDIES**

5 year BBA L.L.B. (Hons.) (10 Semesters)

5 year B.Com L.L.B. (Hons.) (10 Semesters)

3 Year L.L.B. Evening (6 Semesters)

L.L.M. (4 Semesters)

Ph.D.

## **INTER UNIVERSITY CENTRE FOR INTELLECTUAL PROPERTY RIGHTS STUDIES**

Master of Intellectual Property (MIP), Ph.D. (5 years)

L.L.M (IPR) Ph.D. (5 years)

PG Diploma in IPR (1 year)

L.L.M (1 year) with specialization in IPR

Ph.D.

## **SCHOOL OF INDUSTRIAL FISHERIES**

M.Sc. Industrial Fisheries (4 Semesters)

M.Phil Fisheries Science (2 Semesters) conducted in alternate years





M.F.Sc. Seafood Safety and Trade (4 Semesters)

Ph.D.

### **DEPARTMENT OF ATMOSPHERIC SCIENCES**

M.Sc. Meteorology (4 Semesters)

M.Tech. Atmospheric Science (4 Semesters)

Ph.D.

### **DEPARTMENT OF CHEMICAL OCEANOGRAPHY**

M.Sc. Hydrochemistry (4 Semesters)

M.Phil Marine Chemistry (2 Semesters)

Ph.D.

### **DEPARTMENT OF MARINE BIOLOGY, MICROBIOLOGY & BIOCHEMISTRY**

M.Sc. Marine Biology (4 Semesters)

M.Phil Life Sciences (2 Semesters)

Ph.D.

### **DEPARTMENT OF MARINE GEOLOGY AND GEOPHYSICS**

M.Sc. Marine Geology (4 Semesters)

M.Sc. Marine Geophysics (4 Semesters)

Ph.D.

### **DEPARTMENT OF PHYSICAL OCEANOGRAPHY**

M.Sc. Oceanography (4 Semesters)

M.Tech. Ocean Technology (4 Semesters)

Ph.D.

### **DEPARTMENT OF APPLIED CHEMISTRY**

M.Sc. Chemistry (4 Semesters)

M.Phil Chemistry (2 Semesters)

M.Tech Industrial Catalysis (4 Semesters)

Ph.D.

### **DEPARTMENT OF BIOTECHNOLOGY**

M.Sc. Biotechnology (4 Semesters)

Ph.D.



## **DEPARTMENT OF MATHEMATICS**

M.Sc. Mathematics (4 Semesters)

M.Phil Mathematics (2 Semesters)

Ph.D.

## **DEPARTMENT OF PHYSICS**

M.Sc. Physics (4 Semesters)

M.Phil Physics (2 Semesters)

Ph.D

## **DEPARTMENT OF STATISTICS**

M.Sc. Statistics (4 Semesters)

M.Tech Engineering Statistics (4 Semesters) conducted in alternate years Ph.D.

## **DEPARTMENT OF APPLIED ECONOMICS**

M.A. Applied Economics (4 Semesters)

M.Phil Applied Economics (2 Semesters)

Ph.D.

## **CENTRE FOR THE STUDY OF SOCIAL EXCLUSION AND INCLUSIVE POLICY**

Ph.D.

## **SCHOOL OF MANAGEMENT STUDIES**

M.B.A. (full time) (4 Semesters)

M.B.A. (part time) (6 Semesters)

M.Phil (Commerce) (2 Semesters)

Ph.D.

## **DEPARTMENT OF ELECTRONICS**

M.Tech Electronics (with specialization in Digital Electronics, Microwave & Radar Electronics) (4 Semesters)

## **DEPARTMENT OF INSTRUMENTATION**

B.Tech Instrumentation Technology (8 Semesters)

Lateral entry to the 3<sup>rd</sup> Semester of B.Tech Programme for Diploma holders

M.Sc. Instrumentation (4 Semesters)

Ph.D



## **DEPARTMENT OF POLYMER SCIENCE & RUBBER TECHNOLOGY**

B.Tech Polymer Science and Rubber Technology (8 Semesters)

Lateral entry to the 3<sup>rd</sup> Semester of B.Tech Programme for Diploma holders

M.Tech Polymer Technology ((4 Semesters)

M.Sc. Biopolymer Science (Offered at Centre for Bio-Polymer Science & Technology, CIPET)

Ph.D

## **DEPARTMENT OF SHIP TECHNOLOGY**

B.Tech Naval Arch. & Ship Building (8 Semesters)

M.Tech Comp. Aided Structural Analysis & Design (4 Semesters)

Ph.D

## **INTERNATIONAL SCHOOL OF PHOTONICS**

5 year Integrated M.Sc. in Photonics (10 Semesters)

M.Tech Opto-Electronics and Laser Technology (4 Semesters)

Ph.D

## **DEPARTMENT OF COMPUTER APPLICATIONS**

M.C.A.

Lateral entry to the 3<sup>rd</sup> Semester of MCA

M.Sc. Computer Science

Ph.D.

## **DEPARTMENT OF COMPUTER SCIENCE**

M.Tech Computer and Information Science (4 Semesters)

M.Tech Software Engg. (4 Semesters)

Ph.D

## **DEEN DAYAL UPADYAYA KAUSHAL KENDRA**

M.Voc in Mobile Phone Application Development

M.Voc in Technology and Management Consulting.

**EXAM RESULT**

Sl. No.	Courses	Registered No of students	Students Appeared	Dist	FC	SC	..
1	B.Tech(IT/CS/EC/EE/CE/SE/EB/FT/EI)	6128	6128	871	2221	1	<b>50.47</b>
2	MBA-SMS	61	60	10	30	-	<b>60.67</b>
3	MBA(PT)-SMS	17	17	1	11	-	<b>70.59</b>
4	MBA(TT)- SMS	33	33	1	22	-	<b>66.67</b>
5	MBA(IB)-SMS	37	37	2	22	3	<b>72.97</b>
6	M.Tech-Electronics & Communication Engineering	22	22	21	1	-	<b>100</b>
7	M.Tech-PS&RT	9	9	6	3	-	<b>100</b>
8	M.Tech-Ship Technology	19	19	6	13	-	<b>100</b>
9	M.Tech-Computer & Information Science–Dept. of Computer Science	17	17	14	3	-	<b>100</b>
10	M.Tech-Software Engineering	18	18	9	9	-	<b>100</b>
11	M.Tech-Ocean Technology–Dept. of Physical Oceanography	5	5	4	1	-	<b>100</b>
12	M.Tech(PT)-(ME)-SOE	15	15	15	-	-	<b>100</b>
13	M.Tech(PT)-CE-SOE	12	12	5	6	-	<b>91.67</b>
14	M.Tech(PT)-Chemical Engineering-SOE	13	13	6	7	-	<b>100</b>
15	M.Tech(PT)-Electrical & Electronics-SOE	16	16	13	2	-	<b>93.75</b>
16	MCA–DCA	54	54	17	28	-	<b>83.33</b>
17	MCA–CUCEK	57	57	12	25	-	<b>64.91</b>
18	5 Year Integrated M.Sc- Photonics-ISP	18	17	10	4	-	<b>82.35</b>
19	M.Sc-Electronics	18	18	5	12	-	<b>94.44</b>
20	M.Sc--Hydrochemistry	12	11	11	-	-	<b>91.67</b>
21	M.Sc-Meteorology	9	7	3	4	-	<b>77.78</b>



22	M.Sc-Marine Geology	8	8	6	2	-	<b>100</b>
23	M.Sc-Marine Geophysics	12	11	2	9	-	<b>91.67</b>
24	M.Sc-Oceanography	9	9	4	5	-	<b>100</b>
25	M.Sc-Applied Chemistry	22	22	19	3	-	<b>100</b>
26	M.Sc-Statistics	21	15	7	6	2	<b>71.4</b>
27	M.Sc-Maths	24	17	7	10	-	<b>70.8</b>
28	M.Sc-Instrumentation	8	6	3	3	-	<b>75</b>
29	M.Sc-Biotechnology-Department of Biotechnology, CUSAT	13	10	10	-	-	<b>77</b>
30	M.Sc-Biotechnology-KVM College	18	15	4	11	-	<b>83</b>
31	M.Sc-Physics	27	25	14	11	-	<b>93</b>
32	M.Phil- Fisheries Science	8	8	4	4	-	<b>100</b>
33	M.Phil-Physics	8	8	8	-	-	<b>100</b>
34	MA-Hindi	28	28	6	22	-	<b>100</b>
35	MA-Applied Economics	15	15	9	6	-	<b>100</b>
37	MBBS	12	4	-	-	4	<b>33</b>
38	Wireless Technology(ToCH)	3	3	-	3	-	<b>100</b>
39	Signal Processing (MEC)	1	1	-	1	-	<b>100</b>
40	Signal Processing (SIST)	2	1	-	1	1	<b>50</b>
41	Signal Processing (TKM-IT)	2	2	1	1	-	<b>100</b>
42	Signal Processing (Cherthala)	5	4	-	4	-	<b>80</b>
43	Signal Processing (Karunagappilly)	1	1	-	1	-	<b>100</b>
44	Signal Processing (Kalloppara)	1	1	-	1	-	<b>100</b>
45	Signal Processing (Poonjar)	1	1	-	1	-	<b>100</b>
47	VLSI & Embedded System (TKM-IT)	3	3	-	3	-	<b>100</b>
48	VLSI & Embedded System (ER&DCI)	2	1	-	1	-	<b>50</b>
49	Wireless Technology(Kidangoor)	4	3	-	3	-	<b>75</b>
50	Computer Science and Engg. With specialization in Network Computing (SOE)	11	11	7	4	-	<b>100</b>



51	Industrial Safety (Specialization: HSE Management) (SOE)	19	19	8	11	-	<b>100</b>
52	BBA LLB	46	46	2	25	4	<b>67.39</b>
53	M.Tech-Atmospheric Science	1	1	1	-	-	<b>100</b>
54	M.Tech(CE) SOE	18	18	17	1	-	<b>100</b>
55	M.Tech(ME) SOE	17	17	7	10	-	<b>100</b>
56	M.Tech(FT) Wireless Technology- SOE	18	18	10	6	-	<b>89</b>
57	M.Tech(FT)IT-SOE- Software Systems	18	18	15	3	-	<b>100</b>
58	B.Tech Instrumentation	31	31	10	6	1	<b>54.8</b>
59	BFSC	18	18	16	2	-	<b>100</b>
60	B.Tech in PS&E	23	23	6	11	-	<b>73.9</b>
61	B.Tech NA& SB	39	39	13	18	-	<b>79.48</b>



## LIST OF Ph.Ds. AWARDED

DETAILS OF Ph.D DEGREES AWARDED FROM 31/03/2016 TO 31/03/2017					
1	Jacob joseph	Law	School of legal studies	Release of genetically engineered plants into the environment :a study on the indian regulatory framework	31-03-2016
2	Sindhu m c	Marine sciences	School of industrial fisheries	Evaluation of stress reducing capacity of selected anaesthetics for the live transportation of green chromide <i>etroplus suratensis</i>	06-04-2016
3	Teena thomas	Technology	Ps &rt	Flexible conducting/magnetic nano composites based on natural rubber	08-04-2016
4	Jaya s	Science	Mathematics	Queues with interruption in random/markovian environment	08-04-2016
5	Jiby k gopinath	Science	Applied chemistry	Theoretical design and synthesis of donor acceptor conjugated polymers for photovoltaic and nld applications	16-04-2016
6	Anju s g	Environmental studies	Environmental studies	Sono,photo and sonophoto catalytic removal of chemical and bacterial pollutants from waste water	20-04-2016



7	Anand p b	Science	Physics	New studies on the versatile roles of polyaniline and its composites in polymer based optoelectronic and energy storage devices	22-04-2016
8	Sameera s	Science	Csir-niist	Synthesis and characterization of eco-friendly inorganic yellow pigments for coloring applications	25-04-2016
9	Neethu c s	Marine sciences	Marine biology, microbiology and biochemistry	A study on psychrotrophic bacteria from arctic region with special emphasis on cold active lipase production ,optimization and characterization	25-04-2016
10	Sivaprasad p	Marine sciences	Atmospheric sciences	Characteristics of aerosols over the indian region and their variability associated with atmospheric conditions	26-04-2020
11	Krishnaprasad p s	Science	Physics	Growth and characterization of polycrystalline and domain matched epitaxial oxide dielectric thin films for memory and tunable microwawe applications	02-05-2016
12	Rejeena i	Technology	Isp	Laser induced linear and nonlinear optical studies on certain metal halides and tartrate crystals for photonic applications	27-04-2016





13	Shalbi mohanan	Humanities	Hindi	Dayaprakash sinha ke natakam mein praygdharmita ke vividh ayam	27-04-2016
14	Vineetha gopinath	Marine sciences	Nio	Ecology of mesozooplankton community of the cochin estuary with special emphasis on planktonic copepods	03-05-2016
15	Sobha a p	Technology	Ps &rt	Development of functionalised multiwalled carbon nanotube/ polyaniline composites for electrical applications	05-05-2016
16	Shaju s s	Marine sciences	Cift	Studies on bio-geochemistry, bio optical properties and satellite validation of coastal waters of south eastern arabian sea	06-05-2016
17	Rajeev mukundan	Social sciences	Sms	Product and process innovation: antecedants and performance outcomes in small it firms in india	07-05-2016
18	Resmi t	Science	Mathematics	On multi- server queues with consultation by main server	11-05-2016
19	Preetha theresa joy	Technology	Computer science	Design and development of cooperative caching framework for improving data accessibility in wireless ad hoc networks	12-05-2016



20	Challa ravi kiran	Science	Csir-niist	Thermal degradation studies on edible oils during deep fat frying process	17-05-2016
21	Sakkir s	Marine sciences	Marine geology & geophysics	An integrated study on the holocene aquifer and the water resource potential of karamana river basin, southern kerala , india	19-05-2016
22	Noble k kurian	Science	Biotechnology	Melanins from marine bacteria : characterization, production and applications	21-05-2016
23	Harisree p nair	Science	Biotechnology	Metagenomics of marine and mangrove sediments: phylogenetic diversity and characterization of amylase obtained by functional screening	24-05-2016
24	Lisha raghavan	Science	Physics	Swift heavy ion irradiation and thermal annealing induced modification of structural, topographical and magnetic properties in monolayer and bilayer films based on fenimob and zinc ferrite	25-05-2016
25	Asha krishnan	Science	Csir-niist	Novel optical properties in size tuned cerium oxide crystals for functional applications	27-05-2016



26	Resmi p	Marine sciences	Chemical oceanography	Fingerprinting of mangrove ecosystems along northern kerala coast using biomarker approach	31-05-2016
27	B manikandan	Marine sciences	Nio	Assessment of the resilience potential of palkbay reef through key indicators	03-06-2016
28	Abhilash k r	Marine sciences	Marine biology, microbiology and biochemistry	Bacterial diversity in the benthic environment along kerala coast and their potential for extracellular enzyme production	10-06-2016
29	Laxmi m	Science	Biotechnology	Strategies for control of bacterial biofilms using bioagents	20-06-2016
30	Santhosh m v	Science	Physics	Improvement on the performance of spray deposited $\text{CuIn}_2\text{S}_3$ solar cell using extremely thin absorber layer with mixed phases of $\text{CuIn}_2\text{S}_3$ and $\text{Cu}_2\text{S}$	21-06-2016
31	Jose sebastian	Technology	Ps&rt	Effect of ii-vi semiconductor nanomaterials and electron irradiation on polystyrene (ps)& poly (ethylene-co-vinyl acetate) (eva)	27-06-2016
32	Abhilash p kailas	Marine sciences	Chemical oceanography	Characterization and quantification of major biochemical components and secondary metabolites of some green and red seaweeds from the kerala coast.	28-06-2016



33	M p vasudevan nambudiry	Science	Physics	Tailoring magnetic mechanical and dielectric properties of magnetorheological elastomers based on natural rubber and iron by magnetic fields assisted curing for possible applications	28-06-2016
34	Smt. Lija K. Joy	Science	Physics	Manifestation of colossal Thermoelectric power by charge ordered small and intermediate bandwidth manganites	04-07-2016
35	Sri. Abhilash G.	Technology	Polymer Science & Rubber Technology	Preparation of low protein latex: effect of different cure systems and fillers on its properties	05-07-2016
36	Sri. Afsal V.V.	Marine Science	Marine Bio, Micro bio, Biochemistry	Molecular and Functional characterization of antimicrobial peptides in crustaceans	05-07-2016
37	Smt. Suneetha Sebastian	Technology	International School of Photonics	Fabrication, optical analysis and photonic applications of certain metallic nanostructure-integrated dye doped polymer optical fibers	07-07-2016
38	Sri. Bineesh K.K.	Marine Science	Central Institute of Fisheries Technology	Molecular taxonomy of deep-sea fishes off the southern coast of India	08-07-2016



39	Sri. Biju John M.	Social Science	School of Management Studies	Financial inclusion of small and marginal farmers by the banking sector in Kerala	14-07-2016
40	Smt. Smitha George	Science	Applied Chemistry	Development of dendrigraft polymers as catalysts in organic synthesis	15-07-2016
41	Sri. Subin Thomas	Technology	Instrumentation	Microwave plasma assisted ALD development for the desposition of gate oxides & ALD of high-k dielectrics	18-07-2016
42	Smt. Dhanya Shajin	Science	Mathematics	On queueing-inventory models-product form solution; reservation, cancellation and common life time	21-07-2016
43	Bindu S.J.	Engineering	School of Engineering	Analysis and design of a single stage switch power factor corrected converter with high input power factor and tight output voltage regulation	22-07-2016
44	Sri. Rakesh N.	Science	Applied Chemistry	Nucleophilic addition of nitrones to electron deficient acetylenes and related studies	23-07-2016



45	Sri. Sreekumar K.	Social Science	School of Management Studies	Management accounting practices and organisation performance: a study of environmental and organisational antecedents as perceived by finance and accounting managers in the manufacturing sector in India	25-07-2016
46	Smt. Sarah Jacob	Technology	Electronics	Design and analysis of printed UWB antenna with dual band-notched characteristics	27-07-2016
47	Smt. Archana R.	Engineering	School of Engineering	Neural network based modeling, characterization and identification of chaotic systems in nature	28-07-2016
48	Smt. Praseetha P.	Science	Physics	Studies on cosmology and thermodynamics of holographic dark energy	28-07-2016
49	Smt. Yamuna S. Nair	Science	Chemical Oceanography	Spectral investigation and crystal structures of some transition metal complexes of aroylhydrazones	29-07-2016
50	Nisha K.	Science	Applied Chemistry	Transition metal complexes of ONS and NNS donor Thiosemi-carbazones: crystal structures and spectral studies	05-08-2016



51	Bindu C.J.	Engineering	School of Engineering	Design and development of compact planar filters for ultra wide band applications	06-08-2016
52	Biju Fransis	Science	CSIR- National Institute for Interdisciplinary Science and Technology	Synthesis characterization and photophysical properties of visible light excited Eu <sup>3+</sup> -beta-diketonate complexes	09-08-2016
53	Sr. Phiros Shah	Marine Science	Physical Oceanography	Study on upwelling and downwelling along the west coast of India- relative roles of local versus remote forcing	12-08-2016
54	Vani Sankar	Science	CSIR- National Institute for Interdisciplinary Science and Technology	Startegies for improved enzymatic hydrolysis of lignocellulose	19-08-2016
55	Byju K.	Marine Science	Chemical Oceanography	Chemistry and bioactivity of natural products from the Gorgonian coral subergorgia reticulata	05-08-2016
56	Sathian M.K.	Science	Mathematics	Control policies in repair of k-out-of n systems	26-08-2016
57	Abdul Nasar Vallasserri	Social Science	Applied Economics	Trends and patterns of agricultural credit in india during the post-reforms period	26-08-2016
58	Sabeela Beevi U.	Science	CSIR- National Institute for Interdisciplinary Science and Technology	Microalgal biomass and oil production in non-potable waters for potential applications in biofuels and nutraceuticals	19-08-2016



59	Sanil Kumar K.S.	Marine Science	Chemical Oceanography	Characterization, sources and potential risk assessment of aliphatic hydrocarbons and polycyclic aromatic hydrocarbons in surface sediments of chitrapuzha river on the southwest coast of India	06-09-2016
60	Bijesh Paul	Engineering	School of Engineering	Stochastic demand forecast of novel and shortlife products by using markov based algorithm	06-09-2016
61	Reynold Peter	Marine Science	CMFRI	Molecular studies on gonad inhibiting hormone (GIH) gene in india white shrimp (fenneropenaeus indicus, H. Milne Edwards, 1837) and tiger shrimp (penaeus monodon, Fabricius 1798) and expression of recombinant GIH (rPmGIH)	20-09-2016
62	Bindu K.R	Marine Science	Chemical Oceanography	Chemodynamics of heavy metals in Cochin estuary and its adjacent coast	20-09-2016
63	Doles P.E.	Science	Biotechnology	Lipase production by immobilized marine bacillus smithii BTMS11	23-09-2016
64	Anil Kumar P.	Social Science	School of Management Studies	A study on impact of information technology risk and risk management in banks in india	26-09-2016





65	Linu M.N.	Science	Statistics	Characterizations of probability models using some dynamic information measures	28-09-2016
66	Dhanya R.	Science	CSIR- National Institute for Interdisciplinary Science and Technology	Mechanistic role of citrus flavonoids and their glycoconjugates in the management of type 2 diabetes	30-09-2016
67	Daleesha M. Viswanathan	Technology	Computer Science	A computational framework for indian sign language recognition	03-10-2016
68	Sumi C. S.	Humanities	Hindi	Samakaleen hindi kahaniyom ka pravrutthigath anusheelan	03-10-2016
69	Vineetha N.A.	Humanities	Hindi	Nabbe Ke dashak ki kavayitriyon ki kavitaon mein stree vimarsh	04-10-2016
70	Nimisha I.V.	Humanities	Hindi	Sarrothar hindi natakam mein loknatya ka prabhav	04-10-2016
71	Praveen M.N.	Marine Science	Marine Geology and Geophysics	Geochemistry and petrogenesis of rhyolites hosting VMS mineralization in the eastern Betul Belt Central India	04-10-2016
72	Prasanth K.M	Environmental Studies	KFRI	Soil and water quality as influenced by land use in koratty kerala	07-10-2016



73	Subin C.S	Marine Science	CMFRI	Stress responsive gene bioprospecting studies from extremophilic and extremotolerant microalgae: Characterization and functional validation of genes involved in acid salt and thermal stress	07-10-2016
74	Bindia Ravindran	Environmental Studies	Environmental Studies	Adsorption Isotherm Studies on Activated Carbon prepared by activation With Cerium Compounds	14-10-2016
75	Deepu D.R	Science	Physics	Tailoring the properties of spray deposited SnO <sub>2</sub> and ZnO thin films for energy applications	17-10-2016
76	Veeva Mathew	Social Science	Management Studies	Brand Experience and True Brand Loyalty: An enquiry into Product and Customer dimensions	21-10-2016
77	Josekutty J. Ozhukayil	Marine Science	Chemical Oceanography	Dynamics and fractionation of heavy metals in the upper reaches of muvattupuzha – A Tropical River	27-10-2016
78	Rekha Lakshmanan	Engineering	Govt. Model Engineering College, Thrikkakara	Development of Algorithms for detecting Architectural Distortion and enhancing Microcalcification features from Pectoral muscle delineated Mammograms	21-11-2016



79	Sreejesh K.K	Environmental Studies	KFRI	Carbon sequestration potential of teak plantations of kerala	28-10-2016
80	Jolly V Antony	Technology	Polymer Science & Rubber Technology	In-situ Synthesis and Optical Nonlinearity of CdS and ZnS Quantum Dot-Functional Polymer Composites	31-10-2016
81	Hari Shankar B	Science	National Institute for Interdisciplinary Science and Technology	Fluorescent probes: synthesis and investigation of their use in recognition of anions, cations, and biomolecules	04-11-2016
82	G. Sugida	Humanities	Hindi	Paristhitik Streevad Ke Sandarbh mein Samakaleen Hindi Upanyas: Ek Adhyayan	07-11-2016
83	Preetha K	Marine Sciences	Central Marine Fisheries Research Institute	Phenetic Characterization, molecular phylogeny and bio-prospecting of selected saline microalgae from Indian subcontinent	11-11-2016
84	Aravind Madhavan	Science	National Institute for Interdisciplinary Science and Technology	Development of an expression system for heterologous protein expression in fungus	11-11-2016
85	Lal V Jose	Social Sciences	School of Management Studies	Strategic HR Factors Influencing Innovative Work behaviour of Managers – A Study with Special Reference to the Spices Exporting Companies in Kerala, India	16-11-2016



86	Thasneem T A	Marine Sciences	Marine Bio, Micro bio, Biochemistry	Productivity Pattern and its Dynamics in a Tropical estuary, South West coast of India	17-11-2016
87	Arun Bobby	Technology	National Institute for Interdisciplinary Science and Technology	Influence of Y on the microstructure, mechanical, wear and corrosion properties of modified AZ91 magnesium alloy	19-11-2016
88	Ramakrishnan R	Technology	National Institute for Interdisciplinary Science and Technology	Nanostructured semiconducting polymer – inorganic composites for opto – electronic applications	19-11-2016
89	Rekha Mol K R	Science	Biotechnology	Purification and characterization of antibacterial peptide MFAP9 with therapeutic potential from <i>Aspergillus fumigatus</i> BTMF9 isolated from marine sediment	24-11-2016
90	Reshma P. L.	Science	National Institute for Interdisciplinary Science and Technology	Beneficial effect of <i>Tribulus terrestris</i> L. against ischemia in H9c2 cells and isoproterenol induced cardiac dysfunctions in rats	29-11-2016
91	Raphika P.M	Engineering	School of Engineering	Design and Development of Planar Lowpass Filters with Sharp Roll-off and Wide Stopband for RF and Wireless Communication Systems.	02-12-2016
92	Gireesan K K	Science	Mathematics	Non-deterministic fuzzification using multilattices	05-12-2016



93	Vikas V Shenoy	Technology	Ship Technology	Development of web based decision support system for port planning, design and green port rating	05-12-2016
94	Shobha Menon	Social Science	SMS	Collaborative Destination marketing through trade shows-a study of Kerala Travel mart	09-12-2016
95	Jose Varghese	Social Science	SMS	Modeling the influences on Customer Orientation and sales performance-A financial services industry perspective	09-12-2016
96	Jasmine P M	Engineering	School of Engineering	Analysis and experiments on coupling enhancement of rectangular waveguide fed dielectric resonator antennas.	09-12-2016
97	Maya L Pai	Marine Science	Physical Oceanography	ANN based Data Mining Technique to achieve improved accuracy to predict ISMR from ocean-Atmosphere State variables	13-12-2016
98	Anjali Krishnan	Humanities	Department of Hindi	Kasinath Singh Ka Rachana Sansar	13-12-2016
99	Ashkarali P	Technology	Department of Electronics	Investigation on radiation characteristics and pattern reconfigurability of asymmetric coplanar strip antenna.	14-12-2016



100	Anusree M	Science	CSIR- National Institute for Interdisciplinary Science and Technology	Utilisation of agro residual biomass for L-Lysine production by <i>Corynebacterium glutamicum</i>	16-12-2016
101	Ansar M S	Social Science	Department of Applied Economics	Civil service pension system and expenditure in Kerala	20-12-2016
102	Noujas V	Marine Science	NCESS	Coastal Hydrodynamics and Sediment Transport Regime of the Central Kerala Coast in Comparison to Southern Kerala	20-12-2016
103	Suma C S	Science	Applied Chemistry	Photovoltaic and nonlinear optical studies of a few donar- $\pi$ -Acceptor molecules with s-triazine core	20-12-2016
104	Saji P K	Marine Science	Department of Physical Oceanography	Studies on the Annual Interannual and Climatic Variabilities of Indian Ocean Warm Pool	21-12-2016
105	Kala K Jacob	Marine Science	Department of Chemical Oceanography	Anticancer potential of sterols isolated from <i>Turbinaria conoides</i> against lung and liver cancer	30-12-2016



106	Anusree V Nair	Marine Science	Central Marine Fisheries Research Institute	Bioprospecting of novel antimicrobial metabolites from <i>Bacillus subtilis</i> MBTDCMFRI Ba37 and <i>Pseudomonas aeruginosa</i> MBTDCMFRI PsO4 of tropical estuarine habitats of Cochin, India and its application in fish health management	30-12-2016
107	Renju V S	Technology	Polymer Science & Rubber Technology	Utilization of waste expanded polystyrene in the processing of rubbers and unsaturated polyester.	30-12-2016
108	Ayana Johny	Social Science	SMS	Success of Implementation of Core banking Solutions-A Study of factors involved	06-01-2017
109	Joseph Mathews Cherukara	Social Science	School of Management Studies	Factors leading to Entrepreneurial Success-Study based on MSMEs of Kerala	09-01-2017
110	Bejoy Varghese	Science	International School of Photonics	Theoretical investigations of delay induced effects in semiconductor lasers with optical and optoelectric feedback	09-01-2017
111	Renju Ravi	Marine Science	Central Institute of Fisheries Technology	Studies on structural changes and life cycle assessment in mechanised trawl fishing operations of Kerala	12-01-2017



112	Silpa B L	Marine Science	National centre for Earth Science Studies	Morphodynamics in Tropical beaches of varying energy regimes.	13-01-2017
113	Pradeep Chandran C	Technology	International School of Photonics	Studies on deoxyribonucleic acid based photonic materials and their applications.	16-01-2017
114	Sri. Arun Augustine	Environmental Studies	School of Environmental Studies	Production optimization of the marine microalga <i>picochlorum maculatum</i> MACC 3 as source of polyunsaturated fatty acids	18-01-2017
115	Deepthi Sankar	Social Science	SMS	Pre owned car market in Kerala: A model linking attitudes, product and dealer related factors to post purchase behaviour	21-01-2017
116	Manju Dominic	Technology	Department of Ship Technology	Investigations on strength and sustainability of nonmetallic Laminated composite ship structures	27-01-2017
117	Gayathree Devi P K	Marine Science	Department of Chemical Oceanography	A Breakthrough Investigation on the Assessment of Aerosol Constituents in the Realm of Kochi.	30-01-2017





118	Mridula V.G	Science	Biotechnology	Comprehensive molecular approaches to explore Bacteriophage Insensitive Mutants(BIMs) generated by Phage infections in Salmonella Enteritidis S37 and S49	02-02-2017
119	Shiny C M	Social Science	SMS	Factors influencing the behavior of consumers in selecting modern retail stores with special reference to grocery and apparel stores in Ernakulam District	03-02-2017
120	Bindumol T V	Technology	Department of Ship Technology	Investigations on the effect of randomness in thickness and young's modulus on strength and response variability of plates using finite element method.	04-02-2017
121	Deborah Gnana Selvam A	Marine Science	Marine Bio, Micro bio, Biochemistry	Bacterial shrimp pathogens from Pokkali-cum-prawn fields along cochin backwaters-role of environmental stressors in disease outbreak	09-02-2017



122	Anu Baburaj P.V	Science	Centre for Earth Science Studies	An investigation on coral fluorescence and the effect of elevated temperature in corals using laser-induced point monitoring and multi-spectral imaging	10-02-2017
123	Anupama Surendran	Technology	Computer Science	Program slicing Techniques for Software testing	10-02-2017
124	Urmila K.S	Science	Department of Physics	An investigation on the optoelectronic and thermoelectric properties of reactive evaporated degenerate and non degenerate p-type semiconducting compound selenide thin films for photovoltaic and thermoelectric applications	13-02-2017
125	Saju P John	Technology	Computer Science	Trust based key management framework for MANET	13-02-2017
126	Dennymol P.V	Technology	Polymer Science & Rubber Technology	Hydroxyapatite, exfoliated graphite reinforced polyolefins for high performance applications	17-02-2017
127	Sreejith S S	Science	Applied Chemistry	Bicompartmental salen-type schief base complexes with antithetic diimine spacer groups: inclusion,pseudo-inclusion and heterometallic compounds	18-02-2017



128	Sreejesh P.R	Technology	Polymer Science & Rubber Technology	Biocomposites of regenerated cellulose with conducting materials for nonlinear optical application.	20-02-2017
129	Ayswarya E P	Technology	Polymer Science & Rubber Technology	Development and Evaluation of Ash Filled Polymer Composites.	01-03-2017
130	Aiswarya N	Science	Applied Chemistry	Crystalline architectures of Copper(II) complexes derived from halogen substituted carbonyl compounds: interplay of covalent and non-covalent forces	02-03-2017
131	Navaneeth P	Science	Physics	Search for sterile neutrino at MINOS using Antineutrino Disappearance	06-03-2017
132	Sri.Baby Paul	Engineering	School of Engineering	Design and Optomization of Wavelet for detecting life menacing events from Electrocardiogram.	06-03-2017
133	Arun K B	Science	National Institute for Interdisciplinary Science and Technology	Development of evidence based novel synbiotic components for the prevention and management of lifestyle associated diseases.	16-03-2017
134	Vinod R	Science	Physics	Photoluminescence investigation of hydrothermally grown ZnO and 3d transition metal(Mn/Co/Ni/Cu) doped ZnO nanostructures	17-03-2017



135	Sajan P	Science	Physics	Solvo-hydrothermal growth and photoluminescence studies of micro and nano structured zinc sulfide for bio-imaging applications.	17-03-2017
136	Jishnu Suresh	Science	Physics	Thermodynamics and Geometrothermodynamics of black holes in modified theories of gravity.	23-03-2017
137	Annadurai P	Technology	Naval Physical & Oceanographic Laboratory	Studies on rubber nanocomposites based Encapsulants for underwater applications	24-03-2017
138	Smt. Asha P.	Environmental Studies	School of Environmental Studies	Novel Cellulases through Culture – dependent and metagenomics based approaches : Discovery and Characterization	13-03-2017
139	Sri. Prasad R.	Marine Science	National centre for Earth Science Studies	Sediment Dynamics, Heavy Mineral Depletion and Morphological Changes of a Placer Mining Beach of SW Coast of India	24-03-2017
140	Smt. Kala K.	Science	Applied Chemistry	Studies on the Photovoltaic and Metal Ion Binding Properties of a few Heterocyclic Donor- $\pi$ -Acceptor Systems	28-03-2017



## PRIZES/ AWARDS/ MEDALS

Forty one Merit Awards/ Memorial Prizes instituted in the University in commemoration of important personalities provide encouragement/ financial support to eligible candidates:

Sl. No.	Name of Endowment/Prize	Corpus Ammount (Rs.)	Department/ School and Course of Study	Criteria for the Award
1.	N.C. John Memorial Prize	8466	School of Management Studies MBA	Awarded to the student who secures the highest mark at M.B.A (P.T) Degree Exam. and completes the programmes within the minimum period prescribed. Awarded to the student who secures highest mark during the first year of M.B.A. (Full-Time).
2.	Dr. N.K. Panicker Memorial Endowment	3300	Atmospheric Sciences M.Sc. Meterology	Awarded to the best student passing out of the M.Sc. programme in Meterology/ adjudged by the total marks in all semesters added together.
3.	Antony James Memorial Prize	3535	School of Management Studies - MBA	Awarded to the student who secure the First Rank in the MBA Degree Full-Time Programme.
4.	Sri. Robert Bristow Endowment Prize	11761	Ship Technology B.Tech NA & SB	Awarded to the student who secures the First Rank at B.Tech Degree Exam. (NA & SB).
5.	Prof. Wazir Hassan Abdi Endowment Prize	27000	Mathematics M.Sc.	First Rank Holder of the final examination of M.Sc. (Mathematics, Statics, OR & CA).



6.	Prof. C.V. Kurian Endowment Prize	11300	Marine Sciences M.Sc.	First Rank holder of the M.Sc. Degree Exam in Marine Biology Meteorology, Marine Geology and Oceanography.
7.	Prof. K. Venkateswarulu Shastiabdapoorthy Prize	4144	Physics – M.Sc.	First Rank Holder at the M.Sc. Physics Degree Exam, on the basis of overall results.
8.	Dr. Justice T.K. Thomman Prize in Maritime Law	5936	School of Legal Studies, LL.M.	Awarded to the best outgoing student in Marine Law.
9.	Prof. C.C. John Memorial Endowment Prize	11541	Marine Biology M.Sc.	Awarded to the student who secures First Class and First Rank in aggregate in the M.Sc. Degree Examination in Marine Biology at the first appearance
10.	M.M. Cherian Memorial Labour Law Prize	17558	School of Legal Studies – LL.M	Student who secure the highest mark in the aggregate in the papers on labour law in the LL.M. Degree Examination.
11.	Prof. Joy George Endowment Prize	100000	Physics M.Sc.	Awarded to M.Sc. student of Department of Physics who secures the highest marks in the first year/ first two semesters taken together
12.	Bommareddy Venketadireddy Memorial Prize	7846	Physical Oceanography M.Sc.	Best student of M.Sc. (Oceanography) in the Department of Physical Oceanography with First Class and First Rank in aggregate after passing all the examinations in first appearance
13.	Prof. P.N. Rajendraprasad Endowment Prize	12933	-	-
14.	Prof. C.T. Samuel Endowment Prize	14461	Industrial Fisheries M.Sc.	Student who secures First Rank in M.Sc. Industrial Fisheries



15.	Kelappan Memorial Endowment Prize	11756	Hindi – M.A.	Student who secures the first rank in the M.A. Degree exam in Hindi every year
16.	Dr. S. Lakshmanan Memorial Endowment Prize	13520	Marine Geology M.Sc.	Student who secure First Rank in the II Year M.Sc. Degree Examination in Marine Geology Division in every year
17.	Dr. L.M.Singhvi Endowment	11258	Multi disciplinary	Annual Essay competition on Endowment, open to teachers of any University, College of Academic or Research institute and doctoral or post-graduate scholars
18.	D. Sunil Memorial Prize	13090	Physics M.Sc.	Award to the a winner in a Physics Quiz conducted each year for the M.Sc. student of the Department of Physics
19.	V.N. Padmanabha Pillai Memorial Prize	14290	Legal Studies, LL.M.	Awarded to the student who secures first class and First Rank at the LL.M. Degree Examination
20.	R.V. Kelkar Memorial Endowment Prize	10000	Legal Studies, LL.M.	Highest mark in LL.M. (Criminal Law every year)
21.	K.A. Damodara Menon Memorial Endowment Prize	80000	Inter-disciplinary	Oration
22.	Lt. Arpan Banerjee Endowment prize	15450	Ship Technology B.Tech., NA & SB	All round meritorious student of B.Tech Naval Architecture and Ship Building assessed by the academic performance in all semesters with extra curricular activates
23.	K.C. Menon Memorial Prize	10000	School of Legal Studies, LL.M.	Awarded to the First Rank holder in the LL.M Degree Examination
24.	The Leyka Olefms Endowment	10000	Polymer Science and Rubber Technology – Bt.Tech	First Rank holder of B.Tech Polymer Science and Rubber Technology



25.	Dr. Terry Adams Prize	28510	-	
26.	The Kanichai Thomas Jose Endowment	50000	Physics - M.Sc.	First Rank holder of M.Sc Physics
27.	CRL Chair	1000000	-	-
28.	Dr. P. Madhavan Pillai Gold Medal	30000	Applied Chemistry M.Sc	Student who secures First Rank in M.Sc. (Applied Chemistry)
29.	Prof. Dr. P.N. Krishnan Nambisan Memorial Prize	25000	Chemical Oceanography M.Sc	Student who secures First Rank in M.Sc. (Hydrochemistry) every year
30.	C.P. Menon Memorial Endowment	50000	Physics	Popular Oration on a Scientific or Technical Topic
31.	Antony James Memorial Scholarship	5050	School of Management Studies – MBA (Full-Time)	Awarded to the student who secure the highest mark added together in the papers of Organizational Behaviour I & II at the MBA Programme
32.	Kerala Management Association Scholarship	9840	School of Management Studies – MBA (Full-Time)	Awarded to the student who secures the highest mark, not less than 60% during the first year of MBA (F.T)
33.	A.B.S. India Merit Awards	54126	Ship Technology B.Tech NA & SB	Meritorious students in the I, II, V, VII & VIII Semesters of the B.Tech Degree Programme in NA & SB
34.	Late Dr. Sathianandan Memorial Endowment	100000	Physics – M.Sc.	Topper in M.Sc Physics
35.	Late Dr. T.S.A. Padmanabhan Memorial Endowment	35200	Mathematics M.Sc.	Awarded to the First Rank holder of M.Sc Maths and M.Sc (OR & CA) Course at CUSAT
36.	Prof. N.R. Menon Endowment	60000	-	-
37.	CLASSIC-83 [Endowment constituted by 1980-83 batch of B.Tech (PS & RT) students]	150000	Polymer Science and Rubber Technology B.tech	Awarded to the First Rank holder/CGPA Topper of B.Tech Course in PS & RT
38.	Prof. (Dr.) M.V. Pylee Endowment	1000000	Best Academician in India	As Adjudged by an Expert Panel





39.	Prof. K.K. Mohammed. Yusuff Endowment	240000	Applied Chemistry	Lecture Series
40.	Prof. S. Sugunan Endowment	222000	Applied Chemistry M.Sc Applied Chemistry and M.Tech Industrial Catalysis	Toppers in M.Sc & M.Tech
41.	Vishnu Prasad Memorial Endowment	150000	School of Engineering Safety and Fire Engineering Division	Topper in B.Tech Safety and Fire Engineering Division and Best Male Singer in University Youth Festival.

**RECOGNISED RESEARCH CENTRES OF CUSAT**

1	CIFT	<b>Central Institute of Fisheries Technology</b> Willington Island, Matsyapuri P.O., Kochi – 682 029
2	CMFRI	<b>Central Marine Fisheries Research Institute</b> P.O. Box 1603, Ernakulam North P.O., Kochi – 682 018
3	CIFNET	<b>Central Institute of Fisheries Nautical and Engineering Training Division</b> Diwans Road, Kochi – 682 016
4	NCESS	<b>National Centre for Earth Science Studies</b> P.B. No. 7250, Akkulam, Thiruvananthapuram – 685 031
5	CCRI	<b>Central Coir Research Institute</b> Coir Board, Kalavoor, Alappuzha – 688 522
6	FSI	<b>Cochin Base of Fishery Survey of India</b> Post Box No. 853, XIII/488, Kochangadi, Kochi – 682 005
7	KFRI	<b>Kerala Forest Research Institute</b> Peechi, Thrissur – 680 653
8	KILA	<b>Kerala Institute of Local Administration</b> Thrissur 680 581
9	MPEDA	<b>Marine Products Export Development Authority</b> (Ministry of Commerce, Government of India) Kochi – 16
10	NPOL	<b>Naval Physical and Oceanographic Laboratory</b> Government of India, Ministry of Defence, Department of Defence Research and Development, Thrikkakara P.O., Kochi – 682 021
11	NIO	<b>National Institute of Oceanography Regional Centre</b> P.B. No. 1913, Dr. Salim Ali Road, Kochi – 682 018
12	NIIST	<b>National Institute of Interdisciplinary Science and Technology</b> Industrial Estate P.O., Pappanamcode, Thiruvananthapuram – 685 019
13	RRII	<b>Rubber Research Institute of India</b> Rubber Board P.O., Kottayam – 686 009
14	VSSC	<b>Vikram Sarabhai Space Centre</b> Department of Space, Government of India, Thiruvananthapuram – 695 022
15	SPL ,VSSC	<b>Space Physics Laboratory</b> Vikram Sarabhai Space Centre, Thiruvananthapuram – 695 022
16	MEC	<b>Model Engineering College</b> B.M.C. P.O., Thrikkakara
17	CWRDM	<b>Centre for Water Resources Development and Management</b> Kunnamangalam, Kozhikode – 683 571



18	NIFPHATT	<b>National Institute of Fisheries Post Harvest Technology and Training</b> (Formerly Integrated Fisheries Project)
19	CMLRE	<b>Centre for Marine Living Resources and Ecology</b> Block C, 6 <sup>th</sup> Floor, Kendriya Bhavan, P.B. No. 5415, CSEZ P.O., Kakkanad, Kochi – 37
20	CBPST	<b>Centre for Biopolymer Science &amp; Technology</b> A unit of CIPET, Central Institute of Plastics Engineering & Technology, Ministry of Chemicals & Fertilizers, Udyogamandal, Eloor – 683 501
21	IIITMK	<b>Indian Institute of Information Technology &amp; Management, Kerala,</b> Nila, Technopark, Thiruvananthapuram – 695 581



## DETAILS OF ENDOWMENTS, PRIZES, AWARDS, MEDALS/FELLOWSHIPS AND SCHOLARSHIPS

### ENDOWMENTS/ AWARDS

Sl. No.	Name	Receptient		
1.	Prof. P. Madhavan Pillai Gold Medal	Shri. Jais Kurian Dept. Applied Chemistry		
2.	Prof. S. Sugunan Endowment	Shri. Jais Kurian Shri. Sreejith S. Smt. Fathima A.A. (Dept. of Applied Chemistry)		

### FELLOWSHIPS

		Funding Agency	Rate (Rs.)	No. of Receptients
1.	University Junior Research Fellowships	CUSAT	Fellowship – 12,500/- PM Contingency – 10,000/- PA	69
2.	University Senior Research Fellowships	CUSAT	Fellowship – 15,000/- PM Contingency – 10,000/- PA	22
	University Post Doctoral Fellowship	CUSAT	Fellowship – 25,000/- PM Contingency – 20,000/- PA	8
<b>SCHOLARSHIPS</b>				
1	University M.Phil Scholarships	CUSAT	10,000/- for 10 months	55
2	University Merit Scholarships	CUSAT	1,200/- PA	52
3	B.Tech Merit Scholarship in Self Financing Sector	CUSAT	10,000/-	52

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