



TEJUS

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NEWSLETTER OF COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY



Token of admiration: Cusat Vice-Chancellor Dr.J.Letha is presenting a citation to Sri.Sreekumaran Thampi, the legendary Music Composer during Cusat Day Celebrations, Dr. M.K. Muneer, Hon. Minister for Social Welfare is looking on.

Cusat honors legendary music composer

The staff and students of Cusat celebrated Cusat Day with much fanfare on 19 September 2015. Various cultural programmes were presented by the University staff and students. The famous poet, lyricist and film-maker Sri. Sreekumaran Thampi was honoured on the occasion.

Noted poet V. Madhusudhanan Nair said in his keynote address that Kerala as a geographical entity was inflicting damage on itself. A culture that had lost its basis would be rendered meaningless. It is the duty of an artiste to help retain the cultural heritage. It is in such a context that Sreekumaran Thampi's works assume significance, he

said. They exude the simplicity and generosity of Kerala's

Cusat Day 2015

culture. A life based on moral values contributes to his

immortality, he added.

Cusat Vice-Chancellor Dr. J. Letha, who presided over the function, honoured Sri. Sreekumaran Thampi by presenting him with a memento as a token of respect. Sri. Sreekumaran Thampi in his acceptance speech said that the poet in him was awakened by his education in science and technology. According to Indian belief, the Universe originated from sound- and music is the language of sound, he added.

Post graduate students of Cusat who topped in their respective departments, teachers and non-teachers who had made commendable achievements in various sectors as



Cusat Vice-Chancellor Dr. J. Letha handing over a Memento to Sri. Sreekumaran Thampi, during the Cusat Day programme. Dr. N. Mohanan, Dr. K. A. Zakkariya, Dr. A. N. Balchand and Sri. Irfan Habeeb (Syndicate Members), Dr. Poulouse Jacob (PVC) & Prof. Madhusoodanan Nair are looking on.

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Editorial...

It is commonly said that in these times of constant change, change is the only constant. Change is universal and resistance to change can cause one's downfall through sheer stagnation alone. This is applicable to individuals as well as industries. Universities also have to change in order to keep



plying for and obtaining a patent is a herculean task, since it is infinitely lengthy and strenuous. The IPR Facilitation Cell at the Cusat Inter Uni-

Changing with the times

versity Centre for Intellectual Property Rights Studies (IUCIPRS) has been established with the singular purpose of facilitating the filing of patent applications by University researchers and innovators. This is a uni-que and innovative initiative being introduced free of cost initially, aimed exclusively at inventors affiliated to all Universities in Kerala to achieve their patent aspirations.

As Patents count among the hottest topics of discussion today, 'patent or perish' has become a hot catch phrase. The process of ap-

plying for and obtaining a patent is a herculean task, since it is infinitely lengthy and strenuous. The IPR Facilitation Cell at the Cusat Inter Uni-

As you are already aware, the first phase of the Technology Business Incubator (TBI) in Com-

munication Technologies will be fully functional by this academic year itself. The 5000 sq. ft. facility in the main campus will be developed at a cost of Rs. 5 Cr. and managed by the Centre for Innovation, Technology Transfer and Industrial Collaboration (CITTIC). The TBI will incubate ideas on multifunctional and broadband filters, couplers and power dividers, bro-

adband and multiband antennas, metamaterials and periodic structures, radio-frequency identification, wireless and mobile communication technologies, etc.

The ST Radar facility installed in the campus, in addition to the normal research activities, will start providing weekly weather bulletins that can equally benefit farmers and the common man, making our University by far, the most unique in the state. The Centre for Science in Society (C-SiS)'s pioneering effort to instill

scientific awareness and scientific temper among the school children with Science park, butterfly garden, ISRO Pavilion, Space Pavilion, e-Scintia and children's laboratories has attracted around 2 lakh school children till now.

The Sophisticated Test and Instrumentation Centre (STIC) established in the University with State Govt. collaboration boasts an academic research facility with ultra-modern equipments and cutting-edge technology. It provides consultancy services to industry and research institutions. The sophisticated analytical instruments facility for elemental detection and analysis is a boon to the industry as well as individual researchers.

Such diverse activities make our University different from the rest, standing head and shoulders above the crowd. After all we are unique, by design.

Dr. J. Letha

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well as arts and sports talents who had won national level contests were also felicitated at the function.

Dr. A.B. Bhasi, Controller of Examinations, Cusat introduced the Chief guest. Dr. Poullose Jacob, Pro-Vice Chancellor, Cusat, Dr. David Peter, Registrar, Cusat, Dr. K.A. Zakkariya, Dr. A. Mujeeb, Dr. N. Mohanan, Dr. M.R. Anantharaman, Dr. A.N. Balchand, Irfan Habeeb (Syndicate Members, Cusat) also spoke.

"Pournamichandrika", a musical evening comprising the



melodies of Sreekumaran Thampi followed the formal meeting. Dr. M.K. Muneer initiated the musical evening with a Sreekumaran Thampi song. The Hon. Minister presented an *Angavasthra* to the legendary composer Sreekumaran Thampi during the function.

The nostalgic musical programme of lyrics titled "*Pournamichandrika*", entranced the Cusat Campus audience was directed by Dr. Suresh Manimala. Playback singer Kallara Gopan, Chithra Arun, Reena Murali and a few stars from Cusat also sung.

Nano: The time for tiny batteries has come- Prof. Pulikkal Ajayan



Noted Nano-Scientist Dr. Pulikkal Ajayan is addressing a gathering at the Department of Physics, Cusat

Batteries as thin as paper and batteries that you can see through are some of the wonders that are going to be part of our lives in the near

future. Although tiny in stature, these batteries can store immense amounts of energy. This happy news was shared by none other than the world famous nano-scientist Prof. Pulikkal M. Ajayan. He was delivering a talk at the KSCSTE sponsored Erudite programme organized by the Dept. of Physics, Cochin University of Science and Technology on August 10, 2015. Nano-technology has created wonders through its application in various fields like energy storage, sensors, medicines, defence and agriculture. The invention of nano-scale building blocks has brought about revolutionary

changes in Material Science or Particle Science. Research is reaching its final stages in cancer treatment for identifying cancerous cells and treating them, he added. Our country should prepare to welcome nano-technology by providing the necessary infrastructure. China, our neighbouring country has already made great advances in this field.

Dr. K. Poullose Jacob, Pro-Vice Chancellor, Cusat inaugurated the programme. Prof. M. R. Anantharaman, Co-ordinator, Erudite Programme and Prof. S. Jayalakshmi, Head, Dept. of Physics also spoke on the occasion.

GST Bill: Amendment Necessary - Pinaki Chakraborty

Constitutional amendment is necessary for introduction of GST. As the deficit caused by the introduction of GST will be borne by the Central Govt., the states will not face any

substantial losses, according to Dr. Pinaki Chakraborty, Professor, National Institute of Public Finance and Policy, Govt. of India and Economic Advisor to the Fourteenth Finance

Commission.

Dr. Chakraborty was delivering the key-note address at the National Seminar on "GST Reforms: Implications for States" organized by K. M. Mani Centre for Budget Studies, Cochin University of Science and Technology on 7 September 2015. Cusat Vice Chancellor Dr. J. Letha inaugurated the Seminar which was presided over by Prof. M. A. Oommen, Hon. Director, KMMCBS. Dr. Jose Sebastian, Associate Professor, Gulati Institute of Finance and Taxation, Dr. S. David Peter, Registrar, and Dr. Sabu Thomas, Co-ordinator, KMMCBS, spoke on the occasion. ■



Dr. Pinaki Chakraborty of the National Institute of Public Finance and Policy is explaining the nuances of the proposed GST Bill during a National Seminar organized by KMMCBS at Cusat.

Cusat bags Rs. 4 Cr. UGC KAUSHAL Centre

The University Grants Commission has sanctioned the Deen Dayal Upadhyay Centres for Knowledge Acquisition and Upgradation of Skilled Human Abilities and Livelihood (KAUSHAL) aimed at arming youth with entrepreneurial skills to Cusat. The University will receive a grant of Rs. 4 Cr. during the course of two years.

Although 700 proposals were received from different parts of the country, only 48 were approved by the UGC. The proposal was prepared and presented at the UGC by Dr. K. A. Zakkariya, Syndicate member and Associate Professor at School of Management Studies. Cusat is the only University from the state of Kerala to be granted the KAUSHAL Centre. Cusat Vice Chancellor Dr. J. Letha congratulated Dr. K. A. Zakkariya for the achievement.

A continuation to the community colleges and vocational degree courses introduced by the central govt., the KAUSHAL Centre will empower students by imparting entrepreneurship skills as well as enhance their employability through personality development training. It will have authority to conduct a whole spectrum of courses from job-oriented short-term certificate courses to full-time post-graduate ones, as well as research programmes.

In addition to strengthening the ties between the higher education sector and industry, it will work as a centre of excellence in skills development and an employment-industry know-

ledge base. Liberal admission norms and semester system based on credits will be followed here.

The KAUSHAL Centre in Cusat will conduct two M.Voc courses in Mobile Phone Application Development & Technology and Management Consulting, according to Dr. K. A. Zakkariya. Another salient feature of these four semester Masters programmes are the freed-



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om provided to the students to leave the course after successful completion of two semesters with Post-Graduate diploma if they wish, Dr. Zakkariya added.

The main objective of these centers is to create skilled manpower for industry requirements at various levels. The scheme provides for vertical mobility from short term certificate courses to full-fledged post graduate degree programme, and further research in specialized areas. The courses would be planned/

designed to have provision of multiple entry and exit at various levels culminating up-to a research degree level. Another objective is to formulate courses at postgraduate level keeping in mind the need of i) Industry in specialized areas; ii) Instructional design, curriculum design and contents in the areas of skills development; iii) Pedagogy, assessment for skills development education and training; iv) trained faculty in the areas of skill development; and v) Entrepreneurship; besides work for coordination between the higher education system and industry to become a Centre of Excellence for skill development in specialized areas. ■

Cusat Campus Selection: TCS Recruits 201 Students

Cusat School of Engineering has created a record in campus recruitment by having 201 students placed at a single IT company. It was Tata Consultancy Services, the leading Indian IT services company, which conducted the record campus recruitment, according to Sri. C.V. Prem Kumar, Placement Coordinator, School of Engineering. A total of 262 students have already been placed through campus selection this academic year. Last year 279 engineering graduates from SOE had gotten employment in 36 companies.



The newly built DST Sponsored Cusat ST Radar Complex

Cusat ST Radar: Weather bulletin for farmers from November 2015

The ultra-modern Stratosphere Troposphere Radar facility installed at Cochin University's main campus will begin issuing weather bulletins aimed to benefit farmers and commoners alike from November 2015, according to Cusat Vice Chancellor Dr. J. Letha. The bulletins analysing the previous week's weather and interpretation for the next week will be available on a weekly basis on the University website www.cusat.ac.in as well as the Advanced Centre for Atmospheric Radar Research (ACARR)'s website <http://acarr.cusat.ac.in/>.

The ST Radar project, set up with a Rs. 20 Crore aid from Dept. of Science and Technology, Govt. of India, can analyze

and predict wind direction, storms and monsoon from the atmospheric conditions, contributing immensely towards diverse sectors like atmospheric research, defense, air transport and weather analysis, according to Prof. K. Mohan Kumar, Project Director.

The project being installed in Cusat works on the 205MHz. frequency band, the only one of its kind in India. The Central Team led by Dr. B. M. Reddy which inspected the installation has expressed satisfaction in the project's progress and estimated its completion in six months. An additional funding of Rs. 4 Cr. is also being made to speed up the process, according to Dr. K. Mohan Kumar, Director, ACARR.

₹ 1.4 Crore Special Assistance to the Dept. of Polymer Science

The University Grants Commission (UGC) has selected the Dept. of Polymer Science and Rubber Technology for assistance of Rs. 1.4 Crore under the Special Assistance Programme (SAP). The assistance is based on a project proposal submitted by Prof. Thomas Kurian (Co-ordinator). Ms. Abhitha K. (Asst. Professor) is the Deputy Co-ordinator of the project. The UGC assistance is for a period of five years during 2015 to 2020.

Dr. S. Bijoy Nandan elected to NIE

Dr. S. Bijoy Nandan, Associate Professor, Dept. of Marine Bio-



logy, Micro-biology and Biochemistry Cusat has been elected to the Executive Council of the National Institute of Ecology in recognition of his significant contributions to Ecology and Environmental science for a period of three years. National Institute of Ecology, India is the premier interdisciplinary association in the field of ecology and environment.

Statistics originated in India - Dr. N. Unnikrishnan Nair

The origin of Statistics can be traced to the Saankhya philosophy popularized by Kapila Maharshi, a great Indian philosopher, according to Dr. N. Unnikrishnan Nair, renowned

Statistician and former Vice Chancellor of Cusat. He was delivering the inaugural address at the function organized to felicitate the topper at Indian Statistical Service Examination,

the Christian era. Statistics, which influenced commercial activities in the princely kingdoms and earned a place in Chanakya's Arthashastra, had achieved tremendous growth during British rule, he added.



Dr. N. Unnikrishnan Nair, former Cusat Vice Chancellor is presenting a memento to Dona Francis, First Rank holder of ISS Exam of UPSC, at the Dept. of Statistics. Dr. P. J. Sankaran, Head and Dr. S. Anil Kumar, Director, PR & P, Cusat are also seen.

Ms. Dona Francis, a former student of Dept. of Statistics, Cusat. The Saankhya school of philosophy had a wide following in India even before

Dr. Unnikrishnan Nair handed over a memento of appreciation to Ms. Dona Francis on the occasion. Dr. S. Anil Kumar, Director, P R & P, Dr. K. C. James, Dr. S. M. Sunoj and Dr. Geetha Jayasankar, (Faculty, Dept. of Statistics), spoke on the occasion. Dr. P. G. Sankaran, Head, Dept. of Statistics presided over the function. ■

The CIP certificate grading KM School of Marine Engineering, Cusat as A1-Outstanding Institution was handed over to Cusat Vice Chancellor Dr. J. Letha at a function held on July 28, 2015. Smt. Mahua Sarkar, IRS who handed over the certificate said that although conditions are favourable in the state for marine engineering, the lack of facilities available for maritime training is creating hurdles for new entrants. The lack of passion for studies will create professionals without



Smt. Mahua Sarkar, IRS is handing over the CIP certificate of 'A1' Grade to Cusat Vice-Chancellor Dr. J. Letha. Sri. Roy V. Paul, Sri. Sajith, Dr. K. A. Simon and Dr. P. V. Sasikumar are looking on.

Cusat's Marine School rated 'A1'

vision, said Cusat Vice Chancellor Dr. J. Letha in the inaugural address.

A National Seminar on "LNG for ships-Today & Tomorrow" followed. Replacing conventional shipping fuel with liquefied natural gas (LNG) makes it possible to greatly reduce the environmental impact of shipping. LNG as ship's fuel has a great potential for development in the years to

come, and will have to be the viable solution to reach ambitious emission targets set by national, regional and international authorities and bodies. Sri. Sajith, Senior Surveyor, Indian Register of Shipping, Dr. K. A. Simon, Director, KMSME, Prof. P. V. Sasikumar, Seminar Convenor and Sri. Roy V. Paul, Course Co-ordinator spoke on the occasion. Prof. Dr. P.V. Sasikumar, presented an

overview of the seminar and Mr. Roy V. Paul proposed vote of thanks. In the technical sessions that followed after the inaugural function, five papers were presented covering various aspects of the seminar topic by Mr. Shammy, Principal Surveyor, IRS, Kochi, students of M/s Euro Tech Maritime Academy, Cochin, M/s METI, CSL, Cochin and the students from KMSME respectively.



Cusat Vice-Chancellor Dr. J. Letha lighting the lamp marking the inauguration of The International Conference on Semi groups Algebras and Application organized by the Department of Mathematics. Dr. A. Vijayakumar, Dr. A. R. Rajan, Dr. Godfrey Louis, Dean, Prof. P. G. Romeo and Dr. K. A. Zakkariya are also seen.

Recognition evades Mathematicians: Cusat VC

Mathematicians who make significant contributions towards development of mathematical science are not getting the recognition they deserve, according to Cusat Vice Chancellor Dr. J. Letha. She was delivering the inaugural address at the International Conference on Semigroups, Algebras and Applications (ICSA 2015) orga-

nized by Dept. of Mathematics, Cusat on September 16. Mathematics plays an important role in the development of basic sciences. The academic community should not delay in accepting and appreciating this aspect, Dr. Letha added.

Dr. Godfrey Louis, Dean, Faculty of Science presided over

the inaugural function. Prof. P. G. Romeo, Head, Dept. of Mathematics, Prof. John C. Meakin, University of Nebraska-Lincoln, USA, Prof. A. N. Balchand, Syndicate Member, Prof. K. A. Zakkariya, Syndicate Member, Prof. A. R. Rajan, Emeritus Professor, University of Kerala and Prof. A. Vijayakumar, Dept. of Mathematics, Cusat addressed the gathering. Around 50 research papers were presented at the Conference.

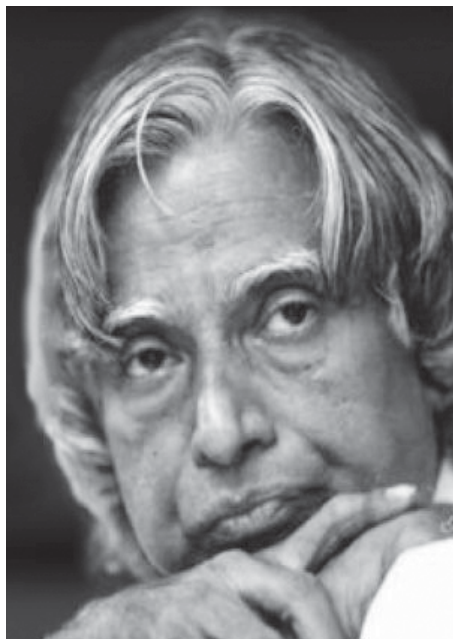
Prof. K. S. S. Nambooripad, the internationally famous

mathematician with enormous contributions in the field of semigroup theory, who has attained eighty years of age felicitated on 18th at 5.00 pm during a function presided over by Dr. K. Poullose Jacob, Pro-Vice Chancellor. Dr. Suresh Das, Executive President, KSCSTE, Dr. A. M. Mathai, Director, CMSS and President, Indian Mathematical Society, Dr. P. G. Romeo, Head, Dept. of Mathematics and Dr. B. Lakshmi, Dept. of Mathematics spoke on the occasion. ■

Seminar on Modern Trends in Organic Farming

The Dept. of Polymer Science and Rubber Technology organized a seminar on "Modern Trends in Organic Farming" on October 5, 2015 as part of the activities of the newly formed ECO CLUB of the Dept. Mr. Bimal Roy S., Deputy Manager, VFCKP was the main resource person. Dr. Thomas Kurian, Dr. Sunil K. Narayanankutty and Prof. Honey John were the other speakers. ■

Condolence Meeting Held



A condolence meeting was organized on July 30, 2015 at the administrative office of Cusat to condole the sad demise of former Indian President Dr. A. P. J. Abdul Kalam. Cusat Vice Chancellor Dr. J. Letha delivered the condolence message. Dr. K. Poullose Jacob, Pro-Vice Chancellor, Dr. K. A. Zakkariya, Syndicate member, Dr. S. David Peter, Registrar, Sri. Sebastian Ouseph, Finance Officer and Dr. S. Anil Kumar, Director, Public Relations and Publications also attended.

One- stop solution for food waste treatment

Ten years of research and M. Anand is now ready to transfer the technology for developing an effective all-weather decentralised waste management system.

A faculty member of the School of Environmental Studies at Cusat, Anand's in-vessel composting apparatus is offering a one-stop solution for treatment of food waste on-site at the household level.



"The objective of my decade-long research was to develop a highly efficient integrated aeration system for the treatment of food waste characteristic of high moisture content and physical structure and to make composting apparatus more tolerant of variations in source material," he said.

The invention utilizes a continuous two-step process, which has approximately four-week duration. The apparatus is self-contained to provide for continuous input of raw waste, generating a bulk compost material of significantly less total volume and weight than the input material.

Mr. Anand pointed out that the unique double walled arrangement of the unit enhances the composting process, with a positive and negative aeration system, using suction and blower devices. "Air inlet is provided at the centre of each perforated vessels, and the chambers are interconnected in such a way that the exhaust air from the first chamber is passed through the compost material in the second chamber to capture the gases.

The waste material can be loaded intermittently in the first

Former student bags ISS first rank



Ms. Dona Francis, Former M.Sc. student of Cusat has secured first rank in Indian Statistical Service (ISS) Examination 2015. Miss. Dona is the first Keralite reached the top of ISS Examination according to Dr. P.G. Sankaran, Head, Dept. of Statistics, Cusat. She was an M.Sc. Statistics student of the Dept. during 2012-2014. She passed the M.Sc. Examination with first position from Cusat in 2014.

chamber and vice versa for continuous stabilization and curing activity after which the matured compost can be harvested. Email : anandm@cusat.ac.in

Cusat to streamline patent filing process

Now, a common platform offered by Cusat will facilitate researchers and innovators in varsities across the State in filing their patent applications. The initiative is part of the efforts being made by the Inter-university Centre for Intellectual Property Rights Studies of Cusat to de-mystify the process of patent application among the researchers and faculty members.

This facility can be availed

by the teachers of any of the Universities in Kerala, alone or jointly with any other person from the varsity or any other entity. Dr. N.S. Gopalakrishnan, MHRD Chair Professor on IPR at Cusat, said that the Centre for Intellectual Property Rights has engaged an IPR consultant to undertake the responsibility of filing and processing patent application and the cost will be met from the funds of IUCIPRS. The

current facility is limited to filing patent application in India alone. He said.

The process starts with sharing details of the invention in the Invention Disclosure Form (IDF) format and countersigned by the Registrar of the university concerned. Details can be had from;

Dr. I.G. Rathish : Email-Iprrcell.iuciprs@gmail.com
(Mob: 8108074199, 9167719907)

Independence Day Celebrated at Cusat

On August 15, the Cusat fraternity celebrated the Independence Day with much fanfare. Dr. K. Poulouse Jacob, Pro-Vice Chancellor, in-charge of Vice Chancellor hosting the National Flag in front of the administrative office, followed by a parade of the students of K. M. School of Marine Engineering.



Dr. Poulouse Jacob, Pro-Vice Chancellor is saluting the National Flag during the Independence Day Celebration. Dr. T. B. Suresh Babu, Security Officer is also seen. ■

Cusat K M School Celebrate World Maritime Day

The K M School of Marine Engineering, Cusat celebrated World Maritime Day-2015 on 23 September 2015. The function was carried out at K M School campus, Prof. Dr. K A Simon, Director of the School welcomed the gathering. Shri. Ajithkumar Sukumaran, Principal Officer, MMD delivered the key note address and the inaugural address was given by Shri. V. J. Jose, Chief Mechanical Engineer (Rtd.), Cochin Port Trust. Capt. Naveen Vinod, Principal, Eurotech Maritime Academy,

Cochin felicitated and Prof. Dr. P V Sasikumar, Course Professor, K M School of Marine Engineering presented the technical session out-line. The inaugural function ended with vote of thanks by Prof. N G Nair, Course-in-Charge, K M School of Marine Engineering.

This was followed by technical sessions. Two groups each from K M School of Marine Engineering, METI, Cochin Shipyard Ltd., Cochin, Eurotech Maritime Academy, Cochin participated in

the group discussions on selected topics based on the IMO's theme "Maritime Education and Training". Capt. Josekutty Thomas, CEO, M/s Expedo Ship Management Company and Shri. S. Krishnan Kutty, Ex. DGM of Shipping Corporation of India were the judges for the group discussions. ■

CUSAT C-SiS: One day Attachment Programme

The *One Day Attachment Programme* being conducted by Centre for Science in Society (C-SiS), Cusat will be offered at 50% discount in admission fee for students from Govt. and Aided Schools. The scheme, supported by Kerala State Council for Science, Technology and Environment (KSCSTE), also offers other benefits like payment of transportation expenses and special workshops for teachers accompanying the students. The students will have access to laboratories, library, Science Park and Computer awareness programmes. Ph: 0484-2575552 ■



Sri. Ajith Kumar, Senior Principal Officer MMD is delivering the keynote address, during the World Maritime Day Celebration organized by K. M. School of Marine Engineering. Dr. P. V. Sasikumar, Sri. V. J. Jose, Capt. Naveen Vinod, Dr. K. A. Simon and Prof. N. G. Nair are on the dais.

Biographies of great personalities will motivate our youth - Cusat Vice-Chancellor



Releasing of the Autobiography 'Stop singing while the voice is good': Cusat Vice-Chancellor Dr. J. Letha is releasing the book by handing over a copy to Dr. K. Poulose Jacob, Pro-Vice Chancellor. Dr. N. Unnikrishnan Nair, former Cusat Vice-Chancellor, Dr. M. Bhasi, Prof. M. V. Paylee, Dr. K. A. Zakkaria, Prof. P. R. Poduval and Dr. Moly P. Koshi, Director SMS, are looking on.

The biographies of great personalities will infuse self-confidence and passion among the youth, according to Cusat Vice Chancellor Dr. J. Letha. The young generation should

focus more on biographies and autobiographies, rather than other literary creations, she added. Dr. Letha was speaking after releasing the book "Stop Singing While The Voice is Good"

an autobiography of renowned Management expert and former Cusat Vice Chancellor Dr. M. V. Pylee. The first copy was received by Dr. K. Poulose Jacob, Pro-Vice Chancellor. "Empirical Research in Social Science," a Guide Book for Research Scholars authored by Prof. P. R. Poduval, former Director, School of Management Studies and Dean, Faculty of Social Sciences was also released on the occasion by Dr. N. Unnikrishnan Nair, former Cusat Vice Chancellor, by handing over a copy to Dr. Molly P. Koshy, Director, SMS. Dr. K. A. Zakkariya, Syndicate Member and Dr. M. Bhasi, Professor, SMS participated in the function held at SMS Auditorium on 30 September 2015. ■

National Symposium on Ozone Layer conducted

Dept. of Atmospheric Science, Cusat has organized a National Symposium on Ozone Layer on Track to Recovery: Montreal Protocol a Success Story 13 September 2015, at the School of Marine Sciences auditorium. Cusat Vice Chancellor Dr. J. Letha inaugurated the Seminar. Sri. V. Chakrapani, Head, Dept. of Atmospheric Sciences, Dr. K. Mohan Kumar, Dean, Faculty of Environmental Sciences, Dr. A. N. Balchand, Dean, Faculty of Marine Sciences and Syndicate Member and Dr. V. Madhu, Convenor also spoke. Dr. K. Sajan, Director, School of Marine Sciences,

presided. Various sessions were led by Dr. K. Mohan Kumar, Dr.

K. P. Thrivikramji and Dr. Venu G Nair.



Cusat Vice-Chancellor Dr. J. Letha inaugurating the National symposium. Looking on are Dr. K. Sajan, Dr. K. Mohan Kumar, Sri. Baby Chakrapany, Dr. V. Madhu and Dr. A. N. Balchand

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(Rep. by)

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International Year of Light: Celebrations begin at Cusat

The International Year of Light celebration at International School of Photonics (ISP), Cusat was inaugurated by Dr. K. Poullose Jacob, Pro-Vice Chancellor, Cusat on July 30, 2015. He said that silicon photonics technology will create revolutionary changes in all areas of human life and enhance high speed computing technology. Prof. V. Ramakrishnan,

Director, IISER, Thiruvananthapuram was the Chief Guest at the function. Dr. M. Kailasnath, Director, ISP, Dr. K. G. Nair, Director, C-SiS, Prof. V. P. N. Nampoori, Emeritus Professor, Dr. Girija Vallabhan, former Director, ISP and Prof. P. Radhakrishnan, Emeritus Professor, spoke on the occasion.

The demonstration and distribution of Optics Kits to deve-

lop interest in study of optics among school children also commenced at International School of Photonics (ISP). Thirty selected govt. schools will be given optics kits and the optics training programme will extend upto one year. The first Optics Kit was handed over to Sri. Vinod from Nayathode Govt. High School during the function. ■

Cusat Marine Engineering: Passing-out Ceremony

The Passing-Out Ceremony for the Eighth Batch of B.Tech Marine Engineering students at K.M School of Marine Engineering, Cusat was conducted with much fanfare on Tuesday 20 October 2015. Mr. A. K. Gupta, Chairman and Managing Director, Shipping Corporation of India, who was the Chief Guest on the occasion, said that training is essential with maritime education. Shipping Corpora-

tion of India selects two of the Marine Engineering top scorers every year and the number will be increased from next



Mr. A. K. Gupta is addressing the cadets. Capt. Paul N. Joseph, Dr. J. Letha, Dr. K. Poullose Jacob and Dr. K. A. Simon on the dais.

Cusat Engineering School offers 15 special services

The School of Engineering of the Cusat at Trikkakkara Campus is offering 15 special services to the general public, according to Dr. G. Madhu, Principal.

The services offered are,

1. Cube compressive testing
2. Tensile test of steel rod
3. Tests on bricks, paven block, tiles etc.
4. Design of buildings and structures
5. Design of foundation
6. Stability checking of buildings and towers

7. Design of Industrial Effluent Treatment Plants
8. Environmental audit
9. Solid waste management
10. Water quality monitoring
11. Air quality monitoring
12. Energy audit
13. Safety audit
14. Hazard identification and Risk assessment
15. Environmental impact assessment

Details can be had from 0484-2862650, Email : principal_soe@cusat.ac.in

year onwards, he added. The Passing-out ceremony was held for thirty-nine cadets.

Cusat Vice-Chancellor Dr. J. Letha presided over the function. Capt. Paul N. Joseph, Deputy Conservator, Paradip Port Trust was the Guest of Honour. Dr. K. Poullose Jacob, Pro-Vice Chancellor, Dr. S. David Peter, Registrar, Dr. K. A. Simon, Director, K.M. School of Engineering and Prof. N.G. Nair, Course in-charge, spoke during the occasion. The programme initiated with a ceremonial march past of cadets. ■

Ph. D Awardees

Antu K. Antony "Investigation on key molecular targets responsible for antidiabetic properties of symplones *Cochin chinensis* (lour) S. Moore" Dr. K.G. Raghu.

Remya A.R. "Efficient water marking schemes for speaker verification guaranteeing non-repudiation." Dr. A Sreekumar.

Blessy V. "Samakaleen hindi kahaniyom mein vrudh jeevanl K.A. Yatharth" Dr. K. Vanaja.

Shelbi Joseph "Reliability estimation of open source software based computational systems." Dr. Jagathy Raj V.P.

Jobin Varghese "Fabrication of microwave substrates and formulation of dielectric inks for micro electronic applications" Dr. M.t. Sebastian.

R. Manjula "Protease production by laloarchaen *nutrine ma sp bishio* isolated from salt prun of South India" Prof (Dr) M. Chandrasekaran.

Reshma G. "Investigation on electron transfer reactions of a few anthracenemethyl sulfides with suitable electron acceptors and related studies" Dr.S. Prathapan.

Teena Tomy "Samakaleenkahani mein sampradayikata ke bahuaayami sandarbh" Dr. M. Shanmughan.

Umesh P.A. "Validation and inter-comparison of wave hindcasts using third generation models in the North Indian ocean" Dr. J. Swain.

Roji J. Kunnath "The ligating versatility of halides and pseudo-halides in copper (ii) complexes - monomers dimers and chains" Dr. M R Prathapachandra Kurup.

Anoop N. A. "Energetic polymers" Dr K. Sreekumar

Martin G. D. "Biogeochemical and ecological feedbacks on eutrophication in Cochin backwaters" Dr. N. Chandramohanakumar.

Rajeshmon V. G. "Prospects of sprayed czts thin film solar cells from the perspective of material characterization and device performance" Dr. K. P. Vijayakumar.

Manoj Mathew "Managerial Performance - An analysis of

selected antecedents and mediators" Dr. James Manalel.

Nitin Agarwala "Acoustic - structure interaction for floating structure under moving load" Dr. E. M. Somashekharan Nair.

Shivaprasad Amaravayal "Tide and river runoff interactions in the Cochin estuary" Dr. C. Revichandran.

Sunil Kumar V. "Pure water geo chemistry of the wetlands along the coastal tracts of Kochi, South-west coast of India" Dr. K. Sajan.

Binu mole K. "Law on transboundary movement of hazardous substances through sea" Dr. A. M. Varkey.

Binu P. Paul "Income, livelihood and education of tribal communities in keral - exploring inter community disparities" Dr. D. Rajasenan.

Anila Alex "Spatio-temporal variability of atmospheric ozone over indian subcontinent and its relation to meteorological parameters" Dr. K. Mohankumar.

Vrinda S. "Development of chh family recombinant hormones and rna1 for induced maturation of *penaeus monodon*" Dr. Rosamma Philip.

Ushakumary E. R. "Waste water treatment using low coast natural adsorbents" Dr. G. Madhu

Thomas Varghise "Determinants of consumer purchase decisions of health insurance in Kerala" Dr. Moly P. Koshy.

Abraham Mathew "Studies on glucose tolerant? - Glucosidases from a novel *byssochlamys fula* and their applications in biomass to ethanol conversion" Dr. Rajeev Kumar S.

Jinsa Mary Jacob "Crystal structures and spectral aspects of mixed ligand transition metal chelates derived from aldehyde based donor thiosemi carba zones" Dr. M. R. Prathapachandra Kurup.

P. Karthikeyan "Studies on halocin

production by *haloarchaea natrinema sp. Btsh 10*" Dr. M. Chandrasekharan.

Sandhya R. "Studies on developing a facile route for the synthesis of highly substituted quinoline and indole derivatives" Dr. S. Prathapan

Chithra M. R. "Studies on some topics in product graphs" Dr. A. Vijayakumar.

Vineetha S. "Reconstruction of gene regulatory network from expression profile of plasma rna data of colorectal cancer patients using soft computing techniques" Dr. Sumam Mary Idicula.

Manikandan R. "Investigations on stochastic storage systems with positive service time" Dr. A. Krishna-moorthy.

Shine U. P. "Fatigue studies of structural steel" Dr. E.M. Somasekharan Nair.

Swapna K. M. "Impact of environmental hazards on the quality and safety of shrimps and mussels" Dr. P.T. Lakshmanan.

Ansy Sebastian "The aesthetics of paul verlaine and Changampuzha Krishnapillai - A comparative perspective" Dr. Mariamma Vincent Panikkulangara.

Latha R. Nair "Studies on a syntax based approach for translation between structurally different languages and the development of a prototype for malayalam to english translation" Dr. S. David Peter.

Deepthi A.S. Samakaleen kahani mein kisani samvedana Dr. K. Ajitha.

Ranjitha Raveendran "Biochemical aspects of shell mineralisation in the estuarine mollusc-villorita *cy-prinoides var cochinensis* (mollusca:bivalvia)" Dr. Sujatha C.H.

Shaju P. "Ecological interpretation of trace metal contents and contaminant source characterization of sediments of Cochin back waters" Dr. S. Muraleedharan Nair

Krishnan Kartha K. "Exploring oligo (p-phenylenevinylene) gelators as sensors and stimuli responsive materials" Dr. A. Ajayaghosh

Poornima N. "Non-destructive evaluation of photovoltaic materials

and solar cells using photoluminescence" Dr. Sudha Kartha

Sindhu K.P. "Driving forces of investment decisions in mutual funds" Dr. S. Rajitha Kumar

Cini Kurian "Analysis of unique phonemes and development of automatic speech recognizer for malayalam language" Dr. B. Kannan

Simily Joseph "Classification and content based retrieval of digital mammograms and placental sonograms" Dr. B. Kannan

Akhil K. Nair "Design of metal architectures; synthesis and study of their photophysical and biomolecular recognition properties" Dr. D. Ramaiah

Sebastian Thomas "Efficacy of cluster-based approach for the revival of handloom co-operative societies in Kerala with special reference to Thiruvananthapuram and Kannur districts" Dr. M Meerabai

Sasanka Kumar S. "Diagnosis of laser induced plasma using lib langmuir probe and the development of an automated laser blow off set-up for cleaning optical windows of tokamak and vacuum systems" Dr. M.K. Jayaraj

James K.K. "Synthesis and characterisation of wide band gap oxides for transparent electrode and multiferroic applications" Dr. M.K. Jayaraj

Bhavya B. "Study of young stellar objects in star forming regions and open clusters" Prof. V.C. Kuriakose

V. Manju Bashini "Samakaleen hindi upanyas main upabhog sanskriti ke vibhinn ayam" Dr. R. Sasidharan

Igy George "A study on Cochin International Airport Limited-competitiveness, performance and passengers 'perception'" Dr. K. C. Sankaranarayanan

Raji George "A study on ultra l-topologies and lattices of l-topologies" Dr. T. P. Johnson

Prabha C. "Underwater target localization, tracking and classification" Dr. P.R.S. Pillai

S. Rajkumar "A study of management of inheritance in family businesses in Kerala" Dr. M. Bhasi

C.K. Subramania Prasad "A study on the utilisation of plastic wastes in stabilised masonry blocked" R. Benny Mathew Abraham

Teresa Tincy T. G. "Hindi ki stree atmakatha : Ek anuseelan" Dr. K. Vanaja

Sreejith M. Nair "Design and development of coplanar strip fed planar antennas" Dr. P. Mohanan

Deepa J. "Development of a fully automated image analysis method for high density c dna and array cgh microarray based genomic studies" Dr. Tessamma Thomas

Sanal K. C. "Development of p-type transparent semiconducting oxides for thinfilm transistor applications" Prof. M. K. Jayaraj

Ananda Resmi S. "Development of techniques for the automatic extraction and grade detection of glioma tumors from conventional brain magnetic resonant images" Dr. Tessamma Thomas

Shaji P. N. "Arbitrage pricing theory and return generating process: A macroeconomic approach to Indian stock market" Dr. K. George varghese

Aneesh Kumar K. V. "Investigations on longline fishing in lakshadweep sea with special reference to by catch issues, bait and hook selectivity" Dr. B. Meenakumari

Anuja S. "Rights of women against domestic violence - the law and emerging challenges" Dr. D. Rajeev

Jomy John "Pattern analysis techniques for the recognition of unconstrained handwritten malayalam character images" Dr. K. V. Pramod

Cimi A. "Daniel synthesis, characterization and catalytic activity of nanocrystalline ceria modified with zirconia" Dr. S. Sugunan

Sindhu M. S. "A data mining approach for the identification of adverse drug events (ade) resulting from drug-drug interactions (ddi) to improve pharmacovigilance" Dr. B. Kannan

Uma S. "Thermal, dielectric, pyroelectric and related properties of selected nano-crystalline multiferroics and polymer ceramic nano composites" Dr. Jacob Philip

Baiju K. K. "Institutional analysis of marine fisheries management practices in Kerala, India" Dr. K. T. Thomson

Bindiya M. Varghese "Development of hierarchical clustering techniques for gridded data from mixed data sequences" Dr. A. Unnikrishnan

Resmi Varghese "Studies on inventory with positive service time under local purchase driven by n/t - policy" Dr. B. Lakashmy

Magesh G. "Ecological studies of the Parambikulam tiger reserve in the western ghats of India, using remote sensing" Dr. A. R. R. Menon

Kavitha K. "Smakaleen hindi upanyasom mein viswa vidyalay jeevan ke vibidh aayam" Dr. K. Vanaja

Neetha Mohan "Molecular electrostatics for probing hydrogen bonds, halogen bonds and lone pair- ? Interactions and design of receptors for lone pair bearing molecules" Dr. C. H. Suresh

Siraj K. K. "A study on non performing assets of public sector banks in India with special reference to state bank of travancore" Dr. Sudarsanan Pillai

Reji A. P. "Development of directionally adaptive techniques for single image super-resolution" Dr. Tessamma Thomas

Nobert Thomas Pallath "4d graphical visualisation based on rotation invariant moments and video object fusion for computer assisted spine surgery" Dr. Tessamma Thomas

Ullas G. Kalappura "Development and microwave characterization of selected biocompatible materials and conducting polymers" Dr. K. T. Mathew

Sujitha Kumari G. "Adhunik hindi natak aur upanyas mein abhivyakt kalakar ki srijanatmakata ek anusheelan" Dr. P. A. Shemim Aliyar.

Essay writing: Cusat student wins prize

Ms. Vidya S. Warriar, an M.Sc Statistics student at Dept. of Statistics, Cusat has won the second prize at the All India "On the Spot Essay Writing Competition" for Post-Graduate Students of Statistics conducted by Ministry of Statistics and Programme Implementation, Govt. of India. The competition was held in connection with the 9th Statistics Day celebrations.

Three day workshop on acting

Department of Youth Welfare, Cusat in association with Pattanam Rasheed School of Acting is organized a three day Acting Workshop from August 7, 2015 at University Campus.

Cusat Photonics; One day workshop

International School of Photonics, Cusat will organize a one day Workshop on "Recent trends in Fibre Optics and Nonlinear Optics" on 19 October at C.V. Raman Auditorium, ISP. The Workshop in celebration of the International Year of Light will be led by Prof. Thyagarajan, IIT Delhi and Dr. R. Rajesh, Scientist, NPOL.



Drive against cancer : A scene from the hair donation camp organized by NSS, Cusat. Dr. J. Letha, Dr. Poulouse Jacob, Sri. Kochouseph Chittilapally, Dr. K. A. Zakkariya & Sri. M. B. Santhosh Kumar are looking on.

Best Paper award to Akhilesh Vijay

Mr. Akhilesh Vijay, Senior Research Fellow, perusing Ph.D under the supervision and guidance of Dr. S. Bijoy Nandan, Dept. of Marine Biology, Micro-biology and Biochemistry, Cusat has won the Best Poster award for the poster entitled "Carbon emission potential and dynamics from the paddy wetlands of Kerala-India" in the 5th National Research Conference on Climate Change conducted at Indian Institute of Technology Delhi on December 19-20, 2014.



Dr. G. Santhosh Kumar CIRM Director

Dr. G. Santhosh Kumar, Assistant Professor of Dept. of Computer Science has been appointed as Director, Cusat Centre for Information Resource Management (CIRM). Dr. Santhosh can be contacted at san@cusat.ac.in

NSS Yoga Camp commenced

The five day Yoga Camp organized by National Service Scheme of Cusat commenced on July 27, 2015. The classes are being held for teaching and non-teaching staff at the Students' Amenity Centre according to Dr. M. B. Santhosh Kumar, NSS Programme Co-ordinator.

World Statistics Day at Cusat

The Centre for Population Studies, Dept. of Statistics, Cusat will be conducting a Workshop on Official statistics - Indian Context as part of the World Statistics Day celebrations on Tuesday, 20 October. Sri. Daljeet Singh, Deputy Director General of Labour Bureau, Ministry of Labour and Employment, Govt. of India and Sri. C.R. Viswanathan, Deputy Director, Economics and Statistics, Kerala State Land Use Board, Govt. of Kerala will deliver talks on 'Consumer Price Index Numbers' and 'Statistics for Governance'. ■

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Blissfull Moments at Pournamichandrika.....

