



# TEJUS

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*Prof. Tapan K. Sarkar, President IEEE Antennas and Propagation Society, U.S.A is inaugurating the International Symposium on 'Antennas and Propagation organized by the Department of Electronics. (from left) Cusat Vice Chancellor Dr. J. Letha, Dr. C.K. Aanandan, Dr. P. Mohanan, Dr. K. Poulose Jacob, (Pro-Vice Chancellor) and Dr. K.G. Nair are also seen.*

## Advances in technology: Implications to be discussed - Cusat VC

Along with the benefits offered by the advances in technology, the negative implications should also be subjected to thorough discussions, according to Cusat Vice Chancellor Dr. J. Letha. The contributions of internet and antennas towards the fields of communication and information interchange and the way they affect the intensity of human relationships should also be analyzed in depth. She added that Universities should ensure that syllabi and curricula are updated in tune with the rapid developments in science and technology.

Dr. Letha was delivering the presidential address at



*Cusat Vice Chancellor Dr. J. Letha delivering the inaugural speech at the International Conference on Energy, Environment, Materials and Safety organized by School of Engineering, Cusat. Dr. James Varghese, Organizing Secretary is also seen.*

the 14<sup>th</sup> International Symposium on Antennas and Propagation, organized by Dept. of Electronics, Cusat on 17 December 2014.

Prof. Tapan K. Sarkar, President, Antennas and Propagation Society of IEEE, USA inaugurated the Symposium. The proceedings of the Symposium was released by Dr. K. Poulose Jacob, Pro-Vice Chancellor who handed over a copy to Prof. Sarkar. Dr. C.K. Aanandan, Dr. K.G. Nair, Dr. P. Mohanan and Dr. K. Vasudevan spoke on the occasion. Around 100 research papers on various topics like antennas, mobile phones, radiation, microwave radiation, band-width and wireless communication were presented.

## Editorial...

With the Right to Education Act (2009) ensuring free and compulsory education to children between 6 and 14 years under Article 21A of Indian Constitution. India has become the 135<sup>th</sup> country in the world to make education the fundamental right of every child. A positive step in the right direction, this could cer-



tainly pave the way for the creation of a fully literate nation. But to what extent can complete literacy aid our country in its thirst for growth?

search begins here. As we know, our country has several institutions of higher learning that exist to provide higher/techni-

### Enrich by Sharing Research Findings

cal education as well as promote research in all areas of academic interest. But the general feeling is that the precious research findings will remain idle as a majority of the academic population is not interested in communicating the same to peer groups or the public at large. Research findings are of no use, when kept safe in the almirah, especially at a time when the funds for research are pouring in from the public exchequer. It is the primary duty of each University to ensure that the fruits

of such research reach the public in a comprehensible manner, with the emphasis that their application should prove to be of benefit to the society. It is not enough to have scores of research projects, but their utility to the general public and the nation as a whole should be ensured. Research papers and publications are as important as patents in the realm of scientific research. The

distinction between individual and institution is to be avoided in these undertakings in order to achieve the common good. We should also honour the researchers for their efforts as they rightfully deserve.

It is generally felt that the pedagogues and researchers rarely communicate the fruits of research, which is highly necessary for the reputation of the institution and the professional enrichment of the scientist. The impact and impact factor of such papers should also be taken into ac-

count since various reputed Govt. agencies like UGC and NAAC give paramount importance to papers published in refereed journals with high impact value. In order to achieve and retain a reputation on a global level, excellence in teaching and producing good results are simply not sufficient.

Here I would like to emphasize that ethical behavior in all academic activities is essential. Plagiarism in research should be avoided at all costs, not through the use of software but by the application of conscience. Let our ethics and cultural heritage be our anti-plagiarism software. The publishing of all research findings on a regular basis will ensure our University a good academic reputation and any institution that hesitates to do so stands to perish. It will bring accolades not only to the individual & the institution, but also to the whole scientific community.

**Dr. J. Letha**

### Research for Sustained Development - Cusat VC

The acute shortage for natural resources caused by climate change can be solved only through research for sustained development, according to Cusat VC Dr. J. Letha. She was delivering the inaugural speech at the three day International Conference on Energy, Environment, Materials and Safety (ICEEMS'14) organized by School of Engineering, Cusat

on 10<sup>th</sup> Dec. 2014. Dr. S. David Peter, Registrar, Dr. A.B. Bhasi, Controller of Examinations, Dr. G. Madhu, Principal, School of Engineering, Dr. James Varghese, Organising Secretary and Dr. M.N. Vinod Kumar spoke on the occasion.

Experts from various prestigious institutions in India and from abroad, including

U.K., U.S.A and Australia presented their research works during the three days of the conference. Nearly 100 research papers were presented on areas like Disaster Mitigation & Management, Corrosion, Energy storage, Fire & Safety, Green building Technologies, Hybrid Energy Systems and Solid Waste Management.



Cusat Vice Chancellor Dr. J. Letha is being honoured by Dr. Paulose Jacob, Pro-Vice Chancellor during the inaugural function of the National Workshop on Science Communication, Scientific Awareness and Science Journalism for Media Students organised by the Directorate of Public Relations & Publications and Centre for Science Communication.

Pro-Vice-Chancellor, who presided over the inaugural function. In addition to topics on Science-writing, sessions will be held on intellectual property Rights patents, Cyber Laws and space travel, according to Dr. S. Anil Kumar, workshop Co-ordinator who welcomed the gathering. Dr. V. Ajith Prabhu, Joint Director, KSCSTE, Prof. Dr. K. Girish Kumar, Dept. of Applied Chemistry, Dr. K.A. Simon, Director, KM

## Media and researchers to focus on Science Writing : Cusat VC

# Science Communication & Journalism : 11<sup>th</sup> National Workshop held

News reporters and researchers should be more enthusiastic in Science reporting to popularize Science writing among the public, according to Cusat Vice-Chancellor Dr. J. Letha. Although science should be written in a simple and comprehensive manner, it is essential to avoid ambiguities and mistakes, otherwise we will fail in making the people understand the essence of Science. Dr. J. Letha was delivering the inaugural address at the 11<sup>th</sup> National Workshop on Science Communication, Scientific Awareness and Science Journalism at K.M. School of Marine Engineering on Tuesday 10 February 2015.

Science Communication is a noble venture as well as a need of the times, in the opinion of Dr. K. Poullose Jacob,

Although science and technology should be written in a simple and comprehensive manner, it is essential to avoid ambiguity and mistakes, otherwise we will fail in making the people understand the essence of Science - VC

School of Marine Engineering, and Sri. G. Suresh Kumar, Section Officer, Directorate of Public Relations and Publications spoke on the occasion. "Sasthramezhuthu Malayalathil" and "Nattarivum Kettarivum" two books authored by Dr. S. Anil Kumar were released by the Vice-Chancellor during the function. ■



Cusat Vice Chancellor Dr. J. Letha is releasing two popular science books published by Cusat, titled "Sasthramezhuthu Malayalathil" and "Nattarivum Kettarivum" authored by Dr. S. Anil Kumar, Director, Public Relations and Publications during the function. Dr. Ajit Prabhu is receiving the books. Dr. K.A. Simon, Dr. K. Girishkumar, Dr. K. Poullose Jacob (Pro-Vice Chancellor) and Dr. S. Anil Kumar are also seen.

Though she is the first woman Vice Chancellor of Cochin University of Science and Technology, Dr. J. Letha with her clear academic vision and boldness has proved that she will complete the tenure unlike many of her predecessors. Many of the reputed academicians who held that post did not or could not complete the term.

I have had the chance to interview almost all VCs right from Dr. MV Pailee (of course except K Gopalan). Among those

the present VC also resembles the competence of the above two persons.

Here are some excerpts from the interview.

Q : You have been in this seat for the last three months. What is your experience in Cusat?

A : I am studying each and everything. Now having dept. visits to study the atmosphere and culture.

Q : Years back NAAC peer committee had observed that the

Q: What are they?

A : One is digital valuation and the other is academic calendar. In digital valuation of exam papers all the answer sheets will be scanned and the concerned teacher will at his convenience to value the paper with computer. With marking for a question the entire process is done automatically like tabulation, putting the tabulated marks in marksheets etc. We will have to scan around one and half lakh answer papers in an exam for

## With a clear mission and vision

only Dr. Babu Joseph and Dr. Ramachandran Thekkedath did complete the term. Well known academicians like Dr. Harsh K Guptha, Dr. Maheswari, Dr. KG Adiyodi, Dr. Unnikrishnan Nair, Dr. Abdul Azeez and Dr. Gangan Prathap did not complete the term. KG Adiyodi left Cusat after getting nomination as member of UPSC. So also Dr. Azeez left Cusat to join as VC of AMU.

Usually I ask a particular question to all of them. Have you expectation of completing the term? Among the above mentioned VCs I did feel Dr. KG Adiyodi was the most powerful man. Next comes Dr. Abdul Azeez. And now

depts. are fragmented. That was a minus point then for getting high score.

A : I too feel so. Fragmented depts. I am trying to bring them united and have a cordial relationship. The NAAC peer committee will have their visits to Cusat shortly. We have to do a lot before that.

Q : What is your academic vision and plans ?

A : Two major plans are going to be introduced. We will introduce it in the Syndicate and after the ratification of the Syndicate we plan to introduce them from next academic year.

this. The next thing is academic calendar. This is not exam calendar. We will divide all the class hours into six and the last two hours will be for electives. Any student studying for any subject should be allowed to take two electives at his discretion. For this a calendar is a must. For B.Tech classes, sem 1 and sem 2 results should be released before they register for sem 3 exam.

**- Rajendran Puthiyedath**

(Asst. Editor, Mathrubhumi Daily & Educational Columnist)

Published in Mathrubhumi Online on 27 January, 2015.

## Regulatory Regime of Free Speech workshop held

Justice V.R. Krishna Iyer Chair on Human Rights at School of Legal Studies has organised a national workshop on *Inroads into Freedom of Speech and Expression: A Study on Regulatory Regime of Free Speech* during 29-31 January 2015 at the School of Legal Studies auditorium. The programme was inaugurated by Prof. C.K. Ramachandran a close associate of

Justice Krishna Iyer and Prof. M.K. Sanu who know the versatility and commitment of Justice Iyer towards human rights.

The theme of the workshop was introduced by Dr. K.N. Chandrasekharan Pillai, Former Director, School of Legal Studies, Cusat, Indian Law Institute, New Delhi and National Judicial Academy

Bhopal. In his opening remarks, Prof. K.N. Chandrasekharan Pillai said that though Indian constitution stands for the protection of freedom of expression, it has its own limitations in a constitutional democracy. Cusat Vice Chancellor Dr. J. Letha presided over the function.

Dr. N.S. Soman, Director, School of Legal Studies, Dr. V.S. Sebastian, Dean, Faculty of Law, Cusat and Dr. P. S. Seema, Assistant Professor offered felicitations.

# Solving the needs of the times – the basic function of Budgets: K.M. Mani



Sri. K.M. Mani, Hon'ble Minister for Finance, Govt. of Kerala is delivering the inaugural speech at the Pre-Budget discussion on State Budget 2015-16 organized by K.M. Mani Centre for Budget Studies, Cusat. Dr. K. Sajan, Member, Syndicate, Cusat, Cusat Vice Chancellor Dr. J. Letha, Dr. Jose Jacob, Director, GIFT, Dr. S. Anil Kumar, Director, Public Relations & Publications and Dr. Sabu Thomas, Co-ordinator, KMMCBS, Cusat are also seen.

The basic function of budgets is to solve the needs of the times, according to Sri. K. M. Mani, Hon'ble Minister for Finance, Govt. of Kerala. Budgets should provide answers to social needs, he added. He was

delivering the inaugural address at the Budget discussion organized by K. M. Mani Centre for Budget Studies (KMMCBS), Cusat in association with Kerala State Commercial Taxes Dept. and Gulati Institute on

22 December 2014.

Although resources are limited, needs are numerous and priorities have to be fixed with a focus on balanced growth, the Minister opined. The present times require development to reach the masses.

Cusat Vice Chancellor Dr. J. Letha presided over the discussion while Dr. Jose Jacob, Director, Gulati Institute, Dr. K. Sajan, Member, Syndicate & Dean, Faculty of Marine Sciences, Dr. S. Anil Kumar, Director, Public Relations and Publications and Dr. Sabu Thomas, Co-ordinator, KMMCBS spoke. A book on the Welfare schemes in the Eleven Budgets presented by Sri. K. M. Mani, authored by Dr. Sabu Thomas was released by Dr. Letha who handed over a copy to Dr. K. Sajan. ■

## Aravind Ravikumar tops the Regional Mathematical Olympiad-2014

Aravind Ravikumar (Saraswathi Vidyanikethan School, Elamakkara, Cochin) has topped the Regional Mathematical Olympiad co-ordinated by the Dept. of Mathematics, Cusat and organized by the National Board for Higher Mathematics, Dept. of Atomic Energy, Govt. of India, held at 12 centres in Kerala on 7 December 2014. Adith Vishnu P.M. (Harisri Vidyanidhi School, Poonkunnam Trichur), Amrith Chand (Bhavans, Elathur, Calicut), Sandeep S. (KEHSS, Mannanam,

Kottayam), Joe Boby (Bhavans Munshi Vidyasram, Thiruvankulam) have been ranked second to fifth respectively. They all will be awarded 'KSCSTE Cash awards' and Prof. C.S. Venkataraman memorial Prizes.

Ajay S. Dinesh, Mathews Boban, Kavitha Elizabeth Varghese, Bharadhwaj Nayanar, Madhav Binesh, Mekhna Hari and Sumedha (all from Saraswathi Vidyanikethan School, Elamakkara), Alan Varghese (Bhavans Munshi Vidyasram, Thiru-

vankulam), Sailesh Chandan (K.V., INS Dronacharya, Cochin), Jomal Jochan (Placid Vidyavihar, Changanaserry), Arya Gayathri M. (Chinmaya Vidyalaya, Tripunithura), K. Sree Vaishnavi (Bhavans, Eroor), Vignesh S. Pillai (Bhavans Adarsha Vidyalaya, Kakkanad), Balu. V. (KEHSS, Mannanam, Kottayam), Ajay Damodhar (Naval Childrens School, Kochi) have also been selected for INMO-2015 to be held on 1 February 2015 at Cusat Campus. INMO is the second stage in the selection of an Indian team for International Mathematical Olympiad to be held in Thailand in July 2015.

## Power of ICT in life is significant: T.P. Sreenivasan



Sri. T.P. Sreenivasan, IFS, Executive Vice-Chairman, Kerala State Higher Education Council inaugurating the International Conference on Information and Communication Technologies organized by School of Engineering, Cusat. Dr. S. David Peter, Registrar, Cusat, Cusat Vice Chancellor Dr. J. Letha, Dr. K. Poullose Jacob, Pro-Vice Chancellor, K.A. Zakkariya, Syndicate Member, and Dr. G. Madhu, Principal, SOE are also seen.

Information and Communication Technology (ICT) has a significant power to change personal and professional life of people, according to Sri. T. P. Sreenivasan, IFS, Executive Vice-Chairman, Kerala State

Higher Education Council. He was inaugurating the International Conference on Information and Communication Technologies organized by School of Engineering, Cusat on 3 December 2014. The

three day Conference is being conducted at Bolgatty Palace and Island Resort. The inaugural session was presided over by Cusat Vice Chancellor Dr. J. Letha. Dr. K. Poullose Jacob, Pro-Vice Chancellor, Dr. K.A. Zakkariya, Syndicate Member, Dr. S. David Peter, Registrar, Dr. G. Madhu, Principal, SOE and Dr. Philip Samuel, Conference Chair spoke on the occasion. The conference witnessed the presentation of 245 research papers (from India and abroad). The conference proceedings would be published by Elsevier Proceedia Series. Delegates from Tunisia, Sweden, Australia, and USA were participated in the event. A book on Data Mining authored by Dr. Sudeep Elayidom was also released on the occasion. ■

## Annual Photonics Workshop at ISP

The International School of Photonics, Cusat organized the 19<sup>th</sup> Annual Photonics Workshop during 26-28 February 2015 with the focal theme "Recent Trends in Optics". Dr. K. Poullose Jacob, Pro-Vice Chancellor inaugurated the workshop which was presided over by Dr. M. Kailasnath, Director, ISP, Cusat.

'Photonics News', the annual news magazine of the School was released by Dr. A. Mujeeb, Syndicate Member and Director, LBS Centre for Science and Technology. Dr.



Dr. A. Mujeeb, Syndicate Member and Director, LBS Centre is releasing the Photonics News by handing over a copy to the Pro-Vice Chancellor, Dr. David Peter, Registrar is looking on

Poullose Jacob presented mementos to Prof. P. Radhakrishnan and Prof. C.G. Devaki on the occasion. Dr. S. David

Peter, Registrar, Prof. V.P.N. Nampoori and Dr. Sreelekha G., Workshop Co-ordinator, spoke on the occasion.

Talks were delivered on latest trends in Optics by Dr. Simon Officer, Robert Gordon University, UK and Mr. Sajan Ambady, Research Scientist, C-DiT. The National Science Day as well as 20<sup>th</sup> birthday of International School of Photo-

tics were celebrated on the same day with lectures by Prof. K. Gopalakrishnan Nair and Prof. V.P.N. Nampoori. ■

## Maintain quality in research : Dr. Gangan Pratap

The quality of research in Indian Universities, especially those in Kerala is going downhill, according to Dr. Gangan Pratap, distinguished Scientist, CSIR-NIIST & former Vice Chancellor of Cochin University of Science and Technology.

He was delivering the inaugural address at the two day National Workshop on Ensuring Quality in Scientific Research organized by The School of Marine Sciences, Cusat in association with Centre for Information Literacy Studies, University of Kerala and Kerala Library Association



*Dr. Gangan Pratap, distinguished Scientist, CSIR-NIIST & former Vice Chancellor of Cusat inaugurating the National Workshop organized by School of Marine Sciences, Cusat. (left) Prof. N. Unnikrishnan Nair, former Vice Chancellor, Cusat is also seen.*

on 7 January 2015. Prof. K. Mohan Kumar, Director, School of Marine Sciences, presided over the function.

Prof. N. Unnikrishnan Nair, former Vice Chancellor, Cusat, Dr. K. Sajan, Syndicate Member & Dean, Faculty of Marine Sciences, Prof. K.T. Thomson, Director, School of Industrial Fisheries, Dr. K.P. Vijayakumar, Head, Dept. of Library and Information Sciences, University of Kerala, Sri. V.S. Kunjumammed, President, Kerala Library Association and Sri. P.J. Manuel spoke on the occasion. ■



*Dr. Janaki Sreedharan, noted feminine literateur is delivering the keynote lecture at the National Seminar organized by the Department of English and Foreign Languages, Cochin University of Science and Technology. Dr. S. Anil Kumar, Director, Public Relations & Publications, Dr. A. Achuth Menon, former Head, Department of English & Foreign Languages and Smt. Brinda Bala Sreenivasan, Head, Department of English and Foreign Languages are also seen.*

## Ensure justice for women through Cultural Forums: Dr. Janaki Sreedharan

We can ensure justice for women through the various cultural forums like literature,

according to Dr. Janaki Sreedharan, University of Calicut & noted feminine literateur.

She was delivering the keynote lecture at the two day National Seminar on “Distant Thunder: Voice of the Silenced” organized by the Dept. of English and Foreign Languages, Cusat on Thursday 11 December.

The function was inaugurated by Dr. K. Poullose Jacob, Pro-Vice Chancellor, Cusat. Smt. Brinda Bala Sreenivasan, Head, Dept. of English and Foreign Languages presided over the function.

Dr. S. Anil Kumar, Director, Public Relations & Publications, Cusat, Dr. A. Achuth Menon, former Head, Dept. of English & Foreign Languages, Cusat, Smt. Preethi Pillai and Smt. Jubimol K.G. spoke on the occasion. Dr. Sunil P. Elayidom, Prof. Prathibha, Dr. Mathew Joseph and Dr. Ranga- rajan were the Resource persons at the seminar. ■

## Smart phones & sensor networks pose challenge in defence: Dr. Tessy Thomas



Dr. Tessy Thomas, Director, Advanced Systems Laboratory, DRDO, Hyderabad delivering the inaugural address at the International Conference conducted by the Dept. of computer science, Cusat. Dr. Sumam Mary Idicula, Dr. K. Poulouse Jacob, Pro-Vice Chancellor and Dr. K. Sajan, Syndicate member are also seen, among others

Dr. Tessy Thomas, Director, Advanced Systems Laboratory, DRDO, Hyderabad inaugurated the IEEE 2014 International Conference on Data Science and Engineering (ICDSE 2014) held during 26-28 August 2014 hosted by the

Dept. of Computer Science, Cusat. Dr. K. Poulouse Jacob, Pro-Vice Chancellor presided over the function.

High volume of data of the order of peta and zeta bytes generated from various applications, smart phones and

sensor networks pose many challenges in almost all the fields including defence, weather and finance, said Dr. Tessy Thomas in her inaugural address. There were seven keynote addresses including tutorial sessions led by pioneers in the field of Data Science and Big Data. 43 participants presented their research findings in eight sessions. Foreign delegates from Australia, USA, Tehran and Malaysia presented their paper through skype sessions. The proceedings of the conference have been published by IEEE and are available through IEEE Digital Library. This was the second edition of the conference organized by the Dept. Dr. Sumam Mary Idicula was the organizing chair and Dr. Santhosh Kumar G. and Mini Ullanat were the conference co-ordinators. ■

## Monsoon workshop held at Cusat Atmospheric Dept.

Dr. A. Chandrasekar, noted climatologist inaugurated the National Workshop on *Characteristics of Monsoon-Factors responsible for Contrasting Features* organized by the Dept. of Atmospheric Sciences, Cusat on 11 December 2014.

Dr. K. Poulouse Jacob, Pro-Vice Chancellor, Cusat presided over the function. Dr. K. Sajan, Syndicate Member and Dean, Faculty of Marine Sciences, Dr. C.A. Babu, Head, Dept. of Atmospheric Science and Sri. B. Chakrapani spoke on the occasion.



Dr. A. Chandrasekar, noted climatologist is delivering the inaugural address at the National Workshop organized by The Dept. of Atmospheric Sciences, Cusat. Dr. C.A. Babu, Head, Dept. of Atmospheric Science, Dr. K. Poulouse Jacob, Pro-Vice Chancellor, Cusat, Dr. K. Sajan, Syndicate Member and Dean, Faculty of Marine Sciences and Sri. B. Chakrapani are also seen. ■



## Cusat: STIC installs High Resolution Transmission Electron Microscope



The Sophisticated Test and Instrumentation Centre (STIC) in the Cusat has installed a High Resolution Transmission Electron Microscope imported from Japan. The installed model JEM 2100 is having 0.24nm resolution with an acceleration voltage of 200kV. This equipment was with Sophisticated Analytical Instrument Facility (SAIF), at a cost of Rs. 3.5 Crore received from DST, Govt. of India. DST has been supporting the SAIF by providing funds for procuring instruments like Scanning Electron Microscope (SEM), Single Crystal XRD, FT NMR etc. So far 15 analytical instruments have been installed in SAIF which are extensively used by the research community.

The Transmission Electron Microscope (TEM) operates based on the same principle of light (optical) microscope but uses electrons instead of light to image

a sample. Due to smaller wave length of the electrons, the magnification possible in TEM is more than 10,00,000 times, which enables the user to examine the sample structure in fine detail. Applications of TEM include Cancer Research, Virology, Material Science, Pollution, Nanoparticles, Nanotubes, Semi - conductor Research etc. At present, with the installed facility in STIC, Powder, Polymer and Biological samples are accepted for analysis.

A joint venture of KSCSTE, Govt. of Kerala and Cusat, STIC has a world-class calibration facility for Electro-technical, Thermal and Mechanical parameters. These laboratories are accredited by National Accreditation Board for Testing and Calibration (NABL) based on the standard ISO/IEC 17025: 2005.

website [www.sticindia.com](http://www.sticindia.com).

## International Conference on energy harvesting

The International Conference on Energy Harvesting, Storage and Conversion organized by Dept. of Physics and SPIE and ECS Students' Chapters was inaugurated by Padmashri Prof. A.K. Barua. Cusat Vice Chancellor Dr. J. Letha presided over the function.

In his inaugural speech, Prof. Barua said that it is necessary urgent to develop and deploy on a large scale sustainable sources of energy to replace depleting and polluting fossil fuels. Solar energy is the largest sources of sustainable energy. ■

## IUCAA Seminar at Physics Department

The Dept. of Physics, Cusat in collaboration with IUCAA Resource Centre-Kochi and SPIE-Cusat Student Chapter organized a one day seminar as part of "Centenary Year of General Relativity" and "International Year of Light".

Dr. K. Babu Joseph, former Vice Chancellor, Cusat, Prof. A.N. Ramaprakash, IUCAA, Pune, Prof. P.P. Divakaran, formerly of TIFR, Mumbai and Prof. Ramesh Babu T., Dept. of Physics, Cusat spoke on the occasion. ■

## Workshop on Electron Microscopy

The Sophisticated Test and Instrumentation Centre (STIC) at Cusat is organizing a 4-day Workshop on Electron Microscopy from 4<sup>th</sup> March, 2015. ■

## Reunion

# Mathematical Olympiad Silver Jubilee (1990-2014)

A reunion of INMO Awardee - those who have been qualified to appear for Indian National Mathematical Olympiad based on their performance in the Regional Mathematical Olympiad - during the period 1990 to 2014 was organized by the

ees to share their experience. Mr. Gokul. G.R. IAS, currently Sub Collector, Devikulam, who won II rank in the RMO-2004, narrated his experience on how the success in the Mathematical Olympiad gave him the confidence to appear for the



Re-union of Maths Olympiad winners at Cusat Maths Dept.

Dept. of Mathematics which is co-ordinating the Mathematical Olympiad organised by the National Board for Higher Mathematics, a unit of DAE, Govt. of India since 1990. The function was presided by Dr. J. Letha, Hon'ble Vice Chancellor, Cusat and was initiated with the speech of Prof. A. Vijayakumar, Regional Co-ordinator, INMO. The Chief Guest was Dr. Christy Fernandez, Secretary to Former President of India and Dr. Babu Joseph, former Vice Chancellor, Cusat was the Guest of honour.

After the brief inaugural meeting, the floor was open to the former INMO award-

Civil Service examinations and the interview.

Dr. Sandeep Varma who had secured the first rank in 1997 has a unique record in the history of Mathematical Olympiad in the country. In the INMO-1998, he was the topper, securing 100% marks, which none has secured so far. Currently he is a faculty in the School of Mathematics, TIFR, Mumbai, after obtaining a Ph.D. from Purdue University, USA.

The meeting came to a close with a vote of thanks proposed by Dr. K.V. Pramod, President of OSADMS - The Alumni Association of the Dept. of Mathematics.

## Best Paper Award at Science Congress

Ms. Lakshmi M., Research Scholar, Dept. of Bio Technology (under the supervision of



Dr. Saritha G Bhatt, Associate Prof. Dept of Bio-Technology) has won the best paper award for her paper on Bio-control of Biofilm forming bacterial food pathogens using the bioactive compounds from strain *Pseudomonas aeruginosa* (BTRY1) presented at the Kerala Science congress held at Alappuzha on 27 - 29 January 2015. The award consisted of a cash prize of Rs. 10,000/- and a contingency grant of Rs. 1 Lakh for the forthcoming two years of research. ■

## Best Paper Award in Life Sciences



Ms. Mridula V.G., Research Scholar, Dept. of BioTechnology (under the supervision of Dr. Saritha G Bhatt, Associate Prof. Dept. of BioTechnology) has won the best paper award for her paper presented at the International Conference on Earth, Environment and Life Science held at Dubai during Dec., 2014. ■

## Paucity of youth in scientific research dangerous: Prof. George Varghese

National development will be impeded by the lack of youth in scientific research, according to Prof. George Varghese, Director, Kerala State Council for Science, Technology and Environment (KSCSTE). The United States has 4000 scientists for every 10 lakh people and China has 850, while India has only 137, he added. Dr. Varghese was delivering the Science Day Oration at the National Science Day Celebrations organized by the Directorate of Public Relations & Publications and Centre for Science Communication, Cusat. India conducts space research and experiments to eradicate poverty and elevate the



Prof. George Varghese, Director, Kerala State Council for Science, Technology and Environment is delivering the National Science Day Oration organised by the Centre for Science Communication and Directorate of Public Relations and Publications also seen are Prof. N. G. Nair & Dr. S. Anil Kumar.

common man's standard of living. Such activities cannot be considered as extravagant. The development of technology and achievement of excellence in a particular area should not be construed as squandering, he opined. The function supported by KSCSTE and Dept. of Science

and Technology, Govt. of India was presided over by Prof. N.G. Nair, Course-in-charge, K M School of Marine Engineering, Cusat. Dr. S. Anil Kumar, Director, Public Relations & Publications and Sri. Suresh Kumar G., Section Officer, DPR&P spoke on the occasion.

## Use Polymers judiciously - Dr. K. Poulose Jacob



Dr. K. Poulose Jacob, Pro-Vice Chancellor, Cusat inaugurating the seminar on Nano and Bio-Materials. Also seen are Dr. Thomas Kurian, Dr. Sunil K. Narayanankutty & Dr. G. Madhu

Polymers as Bio-materials must be recognized for their huge potential to improve the quality of human life. The need of the hour is to make judicious

use of polymers as human life is increasingly becoming dependant on it, according to Dr. K. Poulose Jacob, Pro-Vice Chancellor, Cusat. He was

inaugurating the one day seminar on Nano and Bio-Materials organized jointly by the Dept. of Polymer Science and Rubber Technology (PS & RT) and the Society of Polymer Technologists (SPOT). Dr. N. M. Manoj, Scientist, NPOL, Kochi and Dr. Sailaja G.S., Scientist, NIIST, Thiruvananthapuram presented invited lectures. Around twenty papers and posters were presented during the seminar. Dr. Sunil K. Narayanankutty, Head of the Dept. welcomed the participants. Dr. Thomas Kurien, Professor, PS&RT and Mr. Ananthu Nair, Secretary, SPOT spoke on the occasion. ■

## Cusat: National Seminar on Organic Synthesis held



Cusat Vice Chancellor Dr. J. Letha inaugurates the National Workshop on Perspectives in Organic Synthesis at Dept. of Applied Chemistry. Dr. K. Girish Kumar, Dr. M. R. Prathapachandra Kurup and Dr. N. Manoj are also seen.

Cusat Vice Chancellor Dr. J. Letha has inaugurated a National Seminar on Organic

Synthesis organised by Dept. of applied Chemistry, Cusat on 20 Feb. 2015. In her speech

the Vice Chancellor stressed the importance of seminars and workshops in the area of advanced research.

Dr. K. Girish Kumar, Dr. Prathapachandra Kurup and Dr. Manoj spoke. Dr. V.N. Rajashekharan Pillai, Former Vice Chancellor, IGNOU delivered Dr. K.K. Muhammed Yussuf endowment lecture. Ms. Smitha George, Research Scholar of the Dept. who won best paper award during the Kerala Science Congress was felicitated. Dr. D. Bahuleyan, Dr. N. Renuka and Dr. S. Prathapan took classes around 100 delegates participated. ■

## Discussion on Union Budget

The K. M. Mani Centre for Budget Studies (KMMCBS), Cusat is organizing a discussion on Union Budget 2015-16 on 5 March 2015. Prof. (Dr.) Narendra Jadhav, eminent economist and former Member, Planning Commission will talk about the prospects and impact of Union Budget 2015-16.

Prof. (Dr.) K. Paulose Jacob, Pro-Vice Chancellor, Cusat will preside over the function. Dr. Narendra Jadhav is a leading educationalist, eminent economist & policy maker and a well-known social scientist. Currently he is Professor at Durgabai Deshmukh Chair, Council for Social Development (CSD), New Delhi. ■

## Cusat Marine Engg. gets Outstanding Rating

The K.M. School of Marine Engineering, Cusat has been rated A1-Outstanding level Institution by the Indian Register of Shipping on behalf of the Director General of Shipping, Govt. of India. The rating was provided after a Comprehensive

Inspection Programme conducted during 13-15 January. The inspection is mandatory for all pre-sea maritime training institutions and covers infrastructure, quality of training to ensure international standards in all aspects.



K.M. School of Marine Engineering, Cusat

## Language Computing: rural population to benefit - Cusat PVC



Dr. Shivaji Bandhopadhyay inaugurating the National Workshop on Indian Language Computing organized by the Dept. of Computer Applications, Dr. K.A. Zakkariya, Member, Syndicate, Dr. B. Kannan, Head, Dept. of Computer Applications, Dr. K. Poulse Jacob, Pro-Vice Chancellor, Dr. S. David Peter, Registrar, Dr. K.V. Pramod, Workshop Convenor, Commdr. P. Koshy Varghese and Dr. Vishal Goyal, are also seen.

With computers providing the capability to handle regional languages with ease, even the rural population can reap the benefits of the digital era, according to Dr. K. Poulse Jacob, Pro-Vice Chancellor,

Cusat. Language computing, the modern branch of science will enable the smooth execution of various functions including translation of regional languages, he added. He was delivering the presidential

address at the National Workshop on Indian Language Computing organized by the Department of Computer Applications, Cusat on Saturday. Noted Language Computing expert Dr. Shivaji Bandhopadhyay (Jadhav University) inaugurated the Workshop. Dr. K.A. Zakkariya, Member, Syndicate, Dr. B. Kannan, Head, Dept. of Computer Applications, Dr. K.V. Pramod, Workshop Convenor, Dr. S. David Peter, Registrar, Commdr. P. Koshy Varghese, President, Cochin Chapter, Computer Society of India, Dr. Sumam Mary Idicula, Head, Dept. of Computer Science and Dr. Vishal Goyal, Punjab University spoke on the occasion. ■

## National Seminar at Hindi Department



Dr. Dwarika Prasad Charumitra (Delhi) is inaugurating a National Seminar on the literary works of Bheeshma Sahney. Dr. N.G. Devaki, Dr. K. Ajitha, Prof. Nedumudi Harikumar, Dr. P.V. Vijayan, Dr. K. Vanaja are looking on.

The Dept. of Hindi, Cochin University of Science and Technology has organi-

zed a National Seminar on the literary works of Bheeshma Sahney from 12

Feb. Dr. Dwarika Prasad Charumitr (Delhi) inaugurated the national seminar. Dr. Virpal Singh Yadav, Dr. Preethi Sagar (Mahatma Gandhi International Hindi University, Wardha), Dr. P V. Vijayan (President, Bharatiya Sahitya Prathisthan, Dr. Shameem Aliyar (Emeritus Professor), Dr. N. Mohanan (Dean), Prof. V. Raveendran (Kannur University), Dr. P. Ravi (Sanskrit University), Dr. Isaac (M G University), Dr. P. Praneetha (M G University) and Dr. P.J. Herman (Calicut University) presented papers during the seminar.

## Ph. D Awardees

**Siju M. Varghese** Integron Study Molecular Typing and Characterization of Salmonella Serotypes Isolated from Seafood and Poultry (Dr. Sarita G. Bhat)

**Sasidharan K.K.** Natural Rubber Latex Filler Masterbatch by Soap Sensitised Coagulation-preparation, Processing and Evaluation (Dr. Thomas Kurian)

**Anit M. Thomas** Algal Blooms and Associated Bacteria Along The South West Coast of India (Dr. A.V. Saramma)

**Alphonsa Vijaya Joseph** Characterization and Pathogenicity of Vibrio Cholerae and Vibrio Vulnificus from Marine Environments (Dr. Sarita G. Bhat)

**Renjini D.** Market Orientation and Organisational Performance of Nonprofit Organisations in Kerala (Dr. Mary Joseph T.)

**Smitha V.S.** Sol-gel Photocatalytic Titanium Dioxide Multifunctional Nanocomposites and Coatings (Dr. K.G.K. Warriar)

**Jayaprasad P.N.** Maximal compactness, minimal hausdorffness and reversibility of frames and a study on Automorphism group of frames (Dr. T.P. Johnson)

**Anil Kumar N.** A study on the quality of life of the members of self help groups assisted by nongovernmental organisations in Kerala (Dr. P.R. Wilson)

**Midhu N.N.** Modelling and analysis of life time data using quantile functions (Dr. P.G. Sankaran)

**Archana S.N.** Resource Sharing Among Engineering College Libraries Affiliated to Mahatma Gandhi University, Kerala: A proposed model (Dr. Humayoon Kabeer S.)

**Prem Gopinath** Mosquito larvae borne viruses from the central travancore region of Kerala: Isolation and characterization (Dr. I.S. Bright Singh)

**Prashob Peter K.J.** Modulation of hydrophobic partitioning affinity of humic acid from mudbank sediments and its potential applications (Dr. S. Muraleedharan Nair)

**Ignatius Kunjumon K.V.** Computa-

tional techniques in the study of protein folding and the design of drugs (Dr. Babu Philip)

**Jisha Jose** Biochemical effects of cadmium salinity and temperature on the catabolism of proteins and purines in oreochromis mossambicus (Peters) (Dr. Babu Philip)

**Seena Kurian** Samakaleen hindi kavita mein lok tatv (Dr. K. Vanaja)

**Rajasree K.P.** Beta-glucosidases from aspergillus unguis nii 08123: molecular characterization properties and applications (Dr. Rajeev K. Sukumaran)

**Naijil George** Adrenergic and muscarinic receptor subtypes functional regulation during diabetogenesis: Effect of curcumin and vitamin d3 pre-treatment (Dr. C.S. Poulouse)

**Preetha Nair K.** Studies on the use of nanokaoline, mwcnt and graphene in nbr and sbr (Dr. Rani Joseph)

**Mothi Krishna Mohan** Synthesis, characterization and applications of modified tio2 systems (Dr. S. Sugunan)

**Hamza V.K.** Cumulative approach to customer satisfaction with respect to compact segment car users (Dr. Zakkariya K.A.)

**Dhanya Alex** Risk disclosure practices in Indian companies

and the impact of risk disclosures on the cost of equity (Dr. K.B. Pavithran)

**Hari Sankar H.S.** The major digestive enzymes in etroplus suratensis and oreochromis mossambicus distribution and characteristics (Dr. Babu Philip)

**Johnson Zacharia** Evolution and dynamics of the Lakshadweep cold pool and Lakshadweep low in the Arabian sea (Dr. C.K. Rajan)

**Preeth M.** Properties of equilibrium distributions of order n (Dr. N. Unnikrishnan Nair)

**Neetha J. Eapen** Service provider switching:a study on the switching process in retail banking (Dr. K.B. Pavithran)

**Girish Kumar K.K.** Samakaleen hindi kavita mein nav upanivesh ka pratirodh (Dr. N. Mohanan)

**Nifty John** Distribution extra cellular virulence factors and anti biogram of mobile aeromonads in fresh water ornamental fishes and immune response of cyprinus carpio against aeromonas hydrophila infection (Dr. A.A. Muhammed hatha)

**Pamy Sebastian** A study on semi group action on fuzzy subsets, inverse fuzzy automata and related topics (Dr. T.P. Johnson)

**Priya Rani M.** Investigation on phytochemical constituents and biological potential of some traditional medicinal plants (Dr. K.P. Padmakumari Amma) ■

### Best Paper Award for Cusat Research Scholar

Mr. Jos Prakash A.V., a Ph.D. Research Scholar of Division of Electronics, School of Engineering, Cusat has received the best paper award for the engineering and technology discipline in the 27<sup>th</sup> Kerala Science Congress held at Alleppey during 27 to 29 January 2015. The 27<sup>th</sup> Kerala Science Congress was organized by Kerala State Council for Science, Technology & Environment (KSCSTE) jointly with National Transportation Planning and Research Centre (NATPAC). The Best Paper Award carries a Certificate of merit and a cash prize of Rs. 10,000/-. Mr. Jos Prakash A.V. is pursuing his Ph.D. under the guidance of Dr. Babita Roslind Jose, Assistant Professor, Division of Electronics, School of Engineering, Cusat.



## Campus Notes

### Prof. R.N. Pillai award

Ms. Pree-  
thi John, Res-  
earch stud-  
ent, Dept. of St-  
atistics, Cusat  
won the Prof.  
R.N. Pillai  
Young Statistician Award  
conducted as part of the  
annual conference of the  
Kerala Statistical Association  
held at Sree Kerala Varma  
College, during Jan. 2015. She  
is doing her research under  
the guidance of Prof. P.G.  
Sankaran, Dept. of Statistics.



won the Dr.  
M.N. Gopalan  
award of Indi-  
an Society for  
Probability  
and Statistics,  
by securing  
second position in the Young  
Statistician Award competition  
conducted as part of the  
annual conference of Indian  
Society for Probability held at  
S.V. University during Nov-  
Dec. 2014. She is doing  
research under the guidance  
of Prof. P.G. Sankaran, Dept.  
of Statistics, Cusat.



temperature on the structural,  
topographical and magnetic  
properties of zinc ferrite thin  
films" at the ISAS Conference  
on Advanced Technologies for  
Materials processing and dia-  
gnostics.

### Dr. S. Bijoy Nandan Selected As Fulbright Scholar

Dr. S. Bij-  
oy Nandan,  
Associate Pr-  
of., Dept. of  
Marine Bi-  
ology, Micro-  
biology & Bio-



chemistry, was one among  
the 17 scholars selected for  
the prestigious Fulbright-  
Nehru Visiting Lecturer  
Fellowship. He was attached  
to the Environment & Aquatic  
Animal Health Dept. of the  
Virginia Institute of Marine  
Science, College of William  
and Mary, teaching in the  
area of Science & Techno-  
logy (Marine Biology: Marine  
Ecotoxicology, Ecosystem  
level monitoring, Assessment  
& Management) for graduate,  
undergraduate and doctoral  
students. Dr. Bijoy was also  
selected for the coveted "Out-  
reach Lecture Fund Award"  
of Council of International  
Exchange of Scholars (Ful-  
bright) to deliver the special  
CMBC lecture in Scripps  
Institution of Oceanography,  
University of California.

### Research Scholar Bags Award

Ms. Lisha  
Raghavan,  
Research  
Scholar at the  
Dept. of Phy-  
sics has bagg-  
ed the Best  
Poster Award at the Interna-  
tional Conference on Magnetic  
Materials and Applications -  
ICMAGMA 2014. Ms. Lisha  
Raghavan, who is pursuing  
her Ph.D. under the guidance  
of Prof. M.R. Anantharaman  
won the award for the paper  
entitled "Tailoring topographi-  
cal and magnetic properties of  
zinc ferrite thin films by 100  
MeV Ag<sup>7+</sup> ions" at the confere-  
nce held during Sept. 2014 at  
Pondichery University. She  
also won the third prize for  
Best Paper award for a paper  
entitled "Effect of substrate



### A.R. Kamath award

Dr. Shiji  
K., Dept. of St-  
atistics, recei-  
ved the Profe-  
ssor A.R. Ka-  
math award  
for best docto-  
ral thesis-2014 instituted by  
Indian Society for Probability  
and Statistics. The award pre-  
sented to her at the 34<sup>th</sup> annu-  
al conference of ISPS held at  
S.V. University during Nov-  
Dec. 2014. She carried out the  
research under the guidance  
of Dr. N. Balakrishna, Dept. of  
Statistics, Cusat.



### Dr. M.N. Gopalan award

Ms. Anjana S., Research  
student, Dept. of Statistics,

### Tejus Editorial Advisory Board

The Vice Chancellor	:	Editor: Dr. S. Anil Kumar, Director, Public Relations and
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# ISRO Pavilion at Cusat C-SiS

A space pavilion set up by the Indian Space Research Organization at the Centre for Science in Society (C-SiS) at Thrikkakkara Campus of the Cusat will greet young science enthusiasts getting ready to attend Cusat's Science Talent and Total Capacity Development Programme this summer vacation.

Sri. M.C. Dathan, Director, Vikram Sarabhai Space Centre (VSSC) inaugurated the facility on 14 January 2015. In his address on the occasion, Sri. Dathan said the ultimate goal of scientific research should be the benefit of mankind and nature.

Cusat Vice Chancellor Dr. J. Letha urged the stakeholders in higher education to work together to obtain patents for their scientific findings. Sri. P. Ratnakara

Rao, Dy. Director, V.S.S.C., Dr. K. Poulouse Jacob, Pro-Vice Chancellor, Cusat, Dr. S. David Peter, Registrar, Cusat and Dr. K.G. Nair Director, C-SiS spoke on the occasion. The pavilion has showcased models of various rockets and artificial satellites launched by I.S.R.O. and busts of renowned scientists.

Participants at the science talent programme and other visitors will be exposed to the lives and achievements of renowned scientists and inventors through actual demonstrations and vivid descriptions of stories behind such discoveries. The aim is to inculcate the basic principles of science among students in an interesting manner especially through observations and experiments.

## Science Day Celebrations at STIC

The Sophisticated Test and Instrumentation Centre (STIC) at Cusat celebrated the National Science Day. The laboratories at STIC opened to the public on that day. Dr. T.O. Varghese, Centre for Bio-Polymer Science and Technology, Kochi delivered a talk on Bio-Polymers and Biodegradable Plastics.

## Workshop on Poverty and Inequality

The Centre for the Study of Social Exclusion and Inclusive Policy, Cusat is organizing a Workshop on 'Poverty and Inequality' during the first week of March. The Workshop intends to provide a platform for discussing various issues concerning social exclusion, poverty and inequality in India.

## Science Talent Programmes

The Centre for Science in Society (C-SiS), Cusat has commenced admissions to the Midsummer Science Talent & Total Capacity Development Programmes for school children (4<sup>th</sup> to 9<sup>th</sup> standard). The one-month programme will have two batches beginning from 1<sup>st</sup> April and 4<sup>th</sup> May, 2015. The programme facilitates the planning and execution of a science project by each student. The newly installed ISRO Space Pavilion and Artificial Space Station are the additional attractions this year, according to Dr. K. G. Nair, Director, C-SiS.



Sri. M.C. Dathan, Director, Vikram Sarabhai Space Centre (V.S.S.C.), delivering the inaugural address at the dedicating function of Space Pavilion by The Indian Space Research Organization (I.S.R.O) at Centre for Science in Society (C-SiS), Cusat. (from left) Dr. S. David Peter, Registrar, Cusat, Sri. P. Ratnakara Rao, Dy. Director, V.S.S.C., Cusat Vice Chancellor Dr. J. Letha, Dr. K. Poulouse Jacob, Pro-Vice Chancellor, Cusat and Dr. K.G. Nair, Director, C-SiS, Cusat are also seen.