



In Altum...

The NBCEET News Letter

Mar Baselios College of Engineering and Technology
Mar Ivanios Vidyapeeth, Nalanchira, Thiruvananthapuram - 695 015.



Mar Baselios Youth Excellence Award 2015



Padmavibhushan Dr. E. Sreedharan presents the award to Mr. Anandu S. B.



Top 100
The NBCEET team presenting the award to the finalists on stage.



Alka Ajith
Winner of Richard E.
Heenan Scholarship



Ashakiranam : Sri. Gommen Chandy inaugurates the Career Awareness Programme

Message from the Bursar

We are going through a period of change, a new phase in the history of our College. It is significant in two ways – firstly because of the birth of the Kerala Technological University which has initiated steps to bring about drastic changes in the field of Engineering Education with a view to improve the quality of the education imparted to our students. We have to learn to keep abreast of the developments across the globe if we are to address the challenges in store for us in the years to come and to keep ourselves in tune with the scheme of things in the society of tomorrow. Otherwise we will become outmoded and will be relegated into the background. Secondly, the Institution in its commitment to ensure quality in education is moving forward with the accreditation process.

All these endeavours should enable us to assimilate the quality of self-assessment, to understand ourselves in a better manner, identifying our merits and demerits. It will help us to strengthen ourselves so as to relate ourselves to the society in a meaningful way, giving our existence a new dimension. Thus we should transform ourselves as the builders of a society which respects noble values, the builders of future, the makers of history. Let us put in all efforts to evolve as the young men who make India, making in India, without forsaking the legacy history has bestowed on man – his dignity.



**Fr. Wilson
Thattarathundil**

Principal's Desk

The potential growth in new technologies has been phenomenal in recent times and it is vitally important for Institutions and R&D Centres to make their Technology and Information Transfer mechanisms as effective as possible. In order to transform an innovative idea into a product, it often requires an institutional structure, mentoring, financial support and encouraging policies. Such an ecosystem creates the necessary climate for innovation; for sharing of ideas, experience and facilities and opens up avenues for students, teachers, researchers and personnel from industries to grow in a common trans-disciplinary culture, each understanding and depending on others' inputs for successful start-up ventures. The upcoming Innovation and Incubation centre in the College is such a workspace for nurturing and supporting early stage growth of Technologies, which is envisaged to provide modern communication and information services, R & D support, design, fabrication and testing facilities and various forms of business planning as well as managerial advice and legal services.

Yet another feather in the cap of MST towards excellence.



Dr. T. M. George

Vision : To be an Institution moulding globally competent professionals as epitomes of Noble Values

Mission : To transform the Youth as technically competent, ethically sound and socially committed Professionals by providing a vibrant learning ambience.

EDITORS
NOTE

Quo va dis...? Where are you going? The Risen Christ, on encountering a timid Peter, responded to his question thus: "I'm going to Rome to be crucified again".

This answer made Peter, St. Peter. This question echoes even today, but is addressed to humanity engaged in a mad race on the road to anarchy; to man engaged in cut-throat competition. Whither humanity? Roads are the sign of change, progress and evolutionary growth. In the Greek myth, Oedipus was on crossroads, which led to his crime, self-blinding as a retribution and the consequent transformation and realization. The Road to Rome changed Peter, the Road to Damascus changed Saul to Paul. Yes. Roads are the symbols of change and transformation. But as we proceed, we should ask ourselves – quo va dis? There should be a "somebody" to ask humanity – quo va dis?, at least on seeing the refugees; their increasing number; when the soil cannot withstand the smell of the innocent blood of 'Abels' across the globe, when the use and throw-away culture breeds litter, where old-age homes become a new business A time when arrogant ignorance reigns supreme

Technology sharpens the intellect, invigorates the senses, prolongs death keeping it on the fingertips with microscopic precision ... In this mad race will it not be wise to pause for a while and ask: quo va dis? Let our Education enable and prompt us to ask such questions.

Dr. George Zachariah

Mar Baselios Youth Excellence Award

Mar Baselios Youth Excellence Award has been instituted in honour of the Founder of the Mar Baselios College of Engineering and Technology, the Late His Beatitude Moran Mor Cyril Baselios, Major Archbishop Catholics. True to the spirit of the Founder's vision, the award is intended to identify and promote the pursuit of excellence among the Engineering Colleges of Kerala, selected by an expert committee. The winner is selected on the basis of all round excellence in Academics, Leadership, Arts & Sports, Personal Conduct & Ethics and Social Service Activities. A judging panel comprising eminent professionals and educationists will shortlist the entries for the award. The winner has been selected from the short listed candidates after a personal interview. The award comprises a prize money of Rs.1, 00,000/-, Certificate and Memento

Mr. Anandu S. B. the winner of the Award 2015 did his B.Tech. studies in Mechanical Engineering from the Government Engineering College, Barton Hill, Thiruvananthapuram.

Alka Ajith wins Richard E Merwin Scholarship Award

Alka Ajith, S8 IT, has been awarded the Richard E Merwin Scholarship given by the IEEE Computer

Society, in recognition of her exemplary involvement in student chapter activities and excellent academic achievement. Alka is one among eighteen students chosen from Colleges and Universities throughout the world for this scholarship. She is also the only one to receive this award in Kerala Section.

This scholarship was created in honor of the late Richard E Merwin, past president of the IEEE Computer Society, to recognize and reward student leadership and it includes a memento and cash award of \$1200. The selected winners of this award will have the opportunity to serve as IEEE Computer Society Student Ambassadors for the particular IEEE region to which they belong. Duties as Student Ambassadors will include collecting and disseminating information to student branches or chapters in their region and serving as a liaison between the IEEE Computer Society Member and Geographic Activities Board (MGAB) and student members in their region.

Alka was also selected among 250 participants from Asia-Pacific region to attend the Region 10 Student/Young Professionals/Women in Engineering Congress 2015 held in Colombo, Sri Lanka in July 2015. She currently works as the Electronics & Communication Coordinator of IEEE Travancore Hub in the IEEE Kerala Section.

Campaign Against Cancer Programme

Shri. Oommen Chandy, Hon'ble Chief Minister of Kerala, inaugurated the "Ashakiranam Programme, introduced by the Malankara Social Service Society of the Major Archdiocese of Trivandrum on 17 Sept. 2015 at the College. His Beatitude Moran Mor Baselios Cardinal Cleemis Catholicos, the Major Archbishop of Trivandrum presided over the function. His Excellency Most Rev. Dr. Samuel Mar Irenios, the Auxiliary Bishop of Trivandrum, Fr. Frederick Disusa, Executive Director, Caritas India, Fr. Paul Munjeli, Asst. Director, Caritas, Dr. Paul Sebastian, Director, RCC and Fr. Bovas Mathew, Director, Malankara Social Service Society spoke in the occasion. The programme was hosted by the College.

Tech Top 2015

The College hosted the Tech Top 2015 on 25 & 26 June 2015. The two day's Innovation Workshop provided opportunity for selected students to learn about innovation process. Students from all over India and 10 from the Massachusetts Institute of Technology attended the workshops.

The 10th edition of the National Innovation Contest also was conducted alongwith it to identify the best innovative talent from among the Engineering Students. 340 project proposals were received on the theme "Smart Designs for Healthy Living". The third prize was won by MBCET Team for their Project "Upasana : Diagnostic Toolkit for ASHA Workers". Vivek Sureshkumar, Joji John Varghese and Arun Krishna were the members of the Project Team. The prizes were distributed by Justice (Retd.) P. Sathasivam, Hon'ble Governor of Kerala. His Excellency Most Rev. Dr. Samuel Mar Irenios, the Auxiliary Bishop of Trivandrum presided over the function. Sri. Rajesh R. Nair, Director, Innovation & Entrepreneurship, Asian School of Business, KUALALUMPUR, gave the key note address.

Archbishop Benedict Mar Gregorios Centenary Lecture

In connection with the centenary celebrations of Archbishop Benedict Mar Gregorios, a commemorative Lecture was given by Shri. P. B. Sajjan, Jt. Director, COSTFORD at the College on 11 Sept. 2015. His Excellency Most Rev. Dr. Samuel Mar Irenios, the Auxiliary Bishop of Trivandrum presided over the function.

DEPARTMENT OF CIVIL ENGINEERING

New Faculty

The following staff joined the Civil Department (1) Ms. Linda Jose, M.Tech in Environmental Engineering (CET) (2) Ms. Saira G. Chandy, M.Tech. in Environmental Engineering (Manipal Institute of Technology) (3) Ms. Uthra S. Kumar, M.Tech. in Environmental Engineering (NIT, Surathkal) (4) Ms. Anita A, M.Tech. in Geotechnical Engineering (IISc, Bangalore) (5) Ms. Abhaya, M.Tech. in Transportation Engineering (CET) (6) Mr. Devarajan, M.Tech. in Hydraulics Engineering (CET) (7) Mr. Shemin, M.Tech. in Structural Engineering (NIT, Rourkela) (8) Ms. Anceena Babu, M.Tech. in Structural Engineering (M. A. College)

Events in the Department

Metamorphosis 2015 - A short term course in "How to kick start your Civil Engineering Career" was organized by Centre for Continuing Education for pass out students from 19 - 23 May 2015. The course was inaugurated by Mr. D. Madhu, Director, Design Research & QC, PWD - (Retd.) Experts such as Dr. A. Komalavalli Amma, Dr. Lalit Mangal, Mr. Renu Varghese, Ms. Sangeetha Vaidyanathan also gave talks. The afternoon sessions included site visit to Muttathara Sewage Treatment Plant, hands-on-experience on Total Station and setting out of building.

Activities of Thanal

Mr. Akhil Raj, Mr. Arun V. M., Mr. Akhil Muraliedharan and Mr. Tom George along with the Eighth Semester B.Tech. students, constructed a bathroom for the underprivileged at Venkode during May 2015.

Thanal in association with Pallium India visited 35 families and distributed Onam kits in 7 Panchayats in Vizhinjam - Muttakkadu region. About 30 Students from S3 CE1 and CE2 were accompanied by Mr. Akhil Muraliedharan, Mr. Akhil Raj, Ms. Linda Jose and Ms. Chandni Basu.

Workshops attended by Faculty Members

Ms. Jayasree S, Ms. Bindu Biju and Ms. Jean Molly Simon attended the M.Tech Syllabus revision at Burton Hill and



CET. Ms. Bindu Biju and Ms. Nandini S. Nair along with M.Tech. students visited NIT, Calicut as part of their industrial visit. They also interacted with Prof. Ganesan to understand the research activities. Ms. Sherin and Ms. Sonali attended the workshop on "Microteaching" at Barton Hill from 20 to 21 October, 2014. Ms. Anoesa Babu attended a one week workshop on Finite Element Methods at RIT, Kottayam during May 2015.

Faculty Achievements

Ms. Jayasree S., gave the final presentation of KSCSTE sponsored project on "Investigation on the Corrosion Performance of Blended Cement Concrete by incorporating recycled concrete aggregates" on 12 August 2015.

Ms. Uthra S. Kumar, presented a paper on "Adsorption of Phosphates using Laterite Soil and Blend of Laterite with Activated Carbon" at the International Conference conducted at VIT, Vellore under ASCE in March 2015.

Ms. Saira G. Chandy, published a paper on "Comparative Analysis of Soil Quality in sacred and non-sacred grove forests of Central Western Ghats" in Lake Conference at Sirsi Karnataka in November 2014

The research work of Ms. Lekshmi Chandran M. and Ms. Jaya S. Pillai is in progress.

Student Achievements

- o The M4, Structural Engineering students secured the First, Second and Third positions for the Second Semester M.Tech. Degree University Exam.
- o Gopika S.V. and Gayathri C.S. of S3 CE-1, won 1st prize for Thiruvathira and 2nd prize for Margamkali respectively, conducted at S.N. College, Kollam in March, 2015.
- o Rahul Raj, Roshini Jayaraj and Leah Sara of S3CE-2, won 1st prize for Fashion Show, Deserto, conducted at Lourde Matha College of Engineering.
- o Mobin Koshy of S3CE-2 won 1st prize for Flash Mob Dance conducted at T.K.M. College of Engineering.

Industrial Visit

The fifth Semester B.Tech Civil Engineering students were taken for an industrial visit from 17 to 25th of August 2015 to Bangalore and Hyderabad. They visited the Geological Survey of India, Bangalore, where they were shown geological samples and photogrammetric surveying and attended a lecture by an official regarding the influence of rock formation in the construction of structures such as dams. They could visit the Traffic Management Centre at Bangalore, where they learnt the basics of signal designing and traffic control of the urban city. In Wonder La, an amusement theme park in Bangalore, an official explained to them the various aspects of their Sewage Treatment Plant.



Lecture session at Geological Survey of India

Workshop on Sustainable Development

The Department of Civil Engineering in association with COSTFORD conducted a Workshop on "The Vision of Archbishop Benedict Mar Gregorios on Sustainable Development and His association with Padmasree

Laurie Baker" in connection with the Centenary Celebrations of Archbishop Benedict Mar Gregorios on 11th September 2015. His Excellency Most Rev. Dr. Samuel Mar Irenios, Auxiliary Bishop of the Major Archdiocese of Trivandrum, presided over the function. Commemorative Lecture was given by Shri. P. B. Sajan, Joint Director, COSTFORD. The event also included a Lecture on "Laurie Baker's Philosophy on Cost Effective Construction" by Shri. R. D. Padmakumar, Architect, COSTFORD and "Cost Effective Construction Aspects" by Shri. P. B. Sajan, Joint Director, COSTFORD. The afternoon session included hands-on training for the students on brick arch construction. A photo exhibition on Laurie Baker's philosophy was also arranged.



Rev. Dr. Samuel Mar Irenios addressing the students



Shri. P. B. Sajan delivering the commemorative lecture



Rev. Dr. Samuel Mar Irenios along with Mr. P. B. Sajan, Mr. R. D. Padmakumar and Fr. Joshua Kochuvilayal at the photo exhibition



Shri. R. D. Padmakumar addressing the students



Masonry arch constructed by the students



Shri. S. N. Raghuchandran Nair addressing the students and staff

How to kick-start a career in Civil Engineering construction industry

Talk on "How to kick-start a career in Civil Engineering Construction Industry" by Shri. S. N. Raghuchandran Nair, Managing Director, SI Property (Kerala) Pvt. Ltd. on 19th of September 2015.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Participation in Conferences/Symposia/Workshops/ Seminars :

- Ms. Anitha Sandeep attended Two days workshop on "Python Programming" conducted by Mar Baselios College of Engineering and Technology on 24 and 25 July 2015 and One week workshop on "Design and Analysis of Algorithms" conducted by IITMK, from 24 to 29 April 2015.
- Mr. Robin Joseph attended Short Term Training Programme on Python & Ruby from June 29 to July 1, 2015 at Govt. Engg. College, Barton Hill.
- Ms. Tesy Mathew, Ms. Sunitha Krishnan K. S., Ms. Anupriya Vysala, Ms. Merin Kuriakose, Ms. Krishna Girish and Mr. Robin Joseph attended a workshop on "ISTE STTP on Introduction to Design of Algorithms" during 25 to 30 May 2015 at MBCET.

- Mr. Shibu V. S. and Mr. Binu Jose A. worked as the Teaching Assistants for the workshop on "ISTE STTP on Introduction to Design of Algorithms" during 25 – 30 May, 2015 at MBCET.
- Ms. Aswathy Ravikumar attended a Short Term Training Program on "Python & Ruby" organized by Department of Information Technology, Government Engineering College, Trivandrum, June 29 - July 1, 2015 and Two days workshop on "Python Programming" conducted by Mar Baselios College of Engineering and Technology on 24 and 25 July 2015

Publications:

- Ms. Anjali C. and Shini Renjith published a paper titled "A Personalized Mobile Travel Recommender System using Hybrid Algorithm", Computational Systems and Communications (ICSCS), pp.12-17, 2014.
- Ms. Aswathy Ravikumar and Deepthi S. published a paper titled "A Study from the Perspective of Nature Inspired Metaheuristic Optimization Algorithms", IJCA vol. 113, March 2015
- Ms. Aswathy Ravikumar and Kiran Baby published a paper titled "Big Data –An Ultimate Solution in Health Care", IJCA- 106, Nov. 2014.
- Mr. Robin Joseph and Adheena Santy published a paper titled "Segmentation Methods for Computer Aided Melanoma" IEEE Global Conference on Communication Technologies 2015.
- Mr. Raju K. Gopal and Anilekha Thampi published a paper titled "Different Encryption Algorithms used in Wellness tracking system - A review" IEEE Global Conference on Communication Technologies 2015.
- Mr. Raju K. Gopal and Arunima S. Kumar published a paper titled "Data Mining Based Crime Investigation Systems: Taxonomy and Relevance" IEEE Global Conference on Communication Technologies 2015
- Ms. Tessy Mathew and Bini B. S. published a paper titled "Study of Clustering Approach for Stock Market Prediction" National Conference on Innovation in Communication and Network ICONET'15, 31 March 2015.
- Dr. R. Vikaraman Nair, Ms. Aswathy Ravikumar and Deepthi S. published a paper titled "Risk Analysis for Astronaut Selection during Space Flight Cardio Vascular Problem - Classification using Random Forest Algorithm" IEEE Global Conference on Communication Technologies 2015
- Dr. R. Vikaraman Nair and Ms. Aswathy Ravikumar published a paper titled "Risk Prediction during Astronaut Selection for Space Flight Cardiovascular Problem" International Journal of Applied Engineering Research- SCOPUS Index 2015.
- Ms. Anjali C and Grishma B. R. published a paper titled "Software Root Cause Prediction Using Clustering Techniques" IEEE Global Conference on Communication Technologies 2015
- Ms. Anu Priya and Kiran Baby published a paper titled "Multicloud Architecture for Augmenting Security in Clouds" IEEE Global Conference on Communication Technologies 2015
- Ms. Anitha sandeep and Madona Rachel published a paper titled "e-voting System: Technologies and Implementation" IJCA May 2015
- Ms. Sunitha Krishna and Resu Mary Jose published a paper titled "Cardiomogram Grading- A Solution Through Machine Learning Techniques" IEEE Global Conference on Communication Technologies 2015.
- Mr. Robin Joseph and Sruthi Ignatious published a paper titled "Computer Aided Lung Cancer Detection System" IEEE Global Conference on Communication Technologies 2015.
- Ms. Anjali C. and Veena Vijayan V. published a paper titled "Decision Support Systems for Predicting Diabetes Mellitus - A Review" IEEE Global Conference on Communication Technologies 2015.
- Ms. Anjali C. and Veena Vijayan V published a paper titled "Comparative Investigation Between Distinct Category of Robotic Surgical Systems" National Conference on Applications of Engineering for Green Technology, Feb, 2015

Short-Term Courses conducted by Faculty Members :

- Ms. Tessy Mathew conducted Latex Workshop for M.Tech. Students.
- Dept. Association conducted a B.Tech. Project Exhibition of 58 Students.



Industry-Institute collaboration Initiatives:

- Internship in Ernst & Young, Technopark for students has been organized under the guidance of Ms. Tessy Mathew.
- More project proposals are submitted by students to CeDS and KSCSTE. KSCSTE: Project proposal entitled "CCTV Image processing and Security System" submitted under the INNOVATE scheme of TECHFEST 2016 has been provisionally selected for a financial assistance of Rs.15,000/-

Accolades won by students:

- The project titled "UPASANA, A Diagnostic Tool Kit for ASHA workers" by Arun Krishna (S5 CS2), Jogi John Varghese (S6 EC2) and Vivek Suresh Kumar (S8 EC) won the third prize for Tech Top 2015, held at Mar Baselios College of Engineering and Technology. The project also won Rs 50,000 first prize in the Marian Award for Technology Excellence (MATE) 2015, held at Marian Engineering College, August 17, 2015.
- Arjun G. K. (S7 CS) was selected as Best player in Inter-University Basketball Tournament held in August 2015.
- Samuel Punnoose John (S5CS2) and Joann Rachel Jacob (S5CS2) won 3rd prize for Western Vocal Group – (South Zone Inter University held at Tunkur University in Dec 2014)
- Akhil R and Kiran Mathew Mohan (S5CS2) won third prize in the State Level Quiz Programme in connection with Digital India Week on 3rd July



conducted at Government College, Barton Hill, Thiruvananthapuram.

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

EEE International Conference on Power Electronics, Drives and Energy Systems (PEDES2016)

Memorandum of Understanding (MoU) was signed between IEEE New York and MBCET on 21 April 2015 for the prestigious hosting 'PEDES2016' to be held during December 14-17, 2016. started in 1996, the bi-yearly conference has been so far held only in IITs and IISc.

The members of the Conference Committee will be from IEEE, IITs the host Institution and other reputed Academic and Research Institutions.

Research Activities

Ms. Nisha G. K., Associate Professor, was awarded Ph.D. for her thesis "Induction Machine as a General Purpose



Prime Mover by Characteristics Control". The work was carried out under the supervision of Dr. Z. V. Lakaparampil

and Dr. Ushakumari at the College of Engineering Trivandrum, University of Kerala.

Ms. Soumya A. V. registered for her PhD. in July 2014 at Vellore Institute of Technology, Vellore under the guidance of Dr. J. Belwin Edward, Associate Professor SELECT School VII. Her area of research is Power Quality.

Publications

Dr. Nisha G. K. and Ms. Stella Kurien published a research paper titled "Open Loop Control of Switched Reluctance Motor Using Theta Position Sensing" in the International Journal of Innovative Science, Engineering and Technology, ISSN 2348-7968, Vol. 2, Issue 3, March 2015.

Ms. Elizabeth Varghese and Mr. Jithin Babu published a research paper titled "Stabilization of Rotary Arm Inverted Pendulum using State Feedback Techniques" in the International Journal of Engineering Research & Technology, ISSN-2278-0181, Vol. 4, Issue 7, July 2015.

Ms. Elizabeth Varghese and Mr. Augustin published research paper titled "Design of Controllers for Liquid Level Control" in the International Journal of Electrical Engineering and Technology, Vol. 6, Issue 7, July 2015.

Ms. Shyja Susan Mathew and Vineetha A.V. published a research paper titled "Displacement Control Of Conjugated Polymer Actuator Using Self Tuning Regulator" in the International Journal of Engineering Research & Technology (IJERT)

(ISSN: 2278-0181), Volume. 4, Issue. 07, July 2015.

Ms. Shyju Susan Mathew and Veena Janardhanan published a research paper titled "Improvement of Operational Performance of Active Magnetic Bearing using Nonlinear LQG Controller" in the International Journal of Engineering Research & Technology (IJERT) (ISSN: 2278-0181), Volume 4, Issue 07, July 2015.

Ms. Anu Gopinath and Arun Raj presented a research paper titled "Maximum Power Point Tracking Using Beta Method for Photovoltaic Systems" in the International Conference on Emerging Trends in Engineering and Technology held at Trivandrum.

Ms. Anu Gopinath and Lekha N. K. presented a research paper titled "Position Control of Nonlinear Magnetic Levitation System using Feedback Linearization" in the International Conference on Emerging Trends in Engineering and Technology held at Trivandrum.

Ms. Shalu George K. and Celia Pradeep presented a research paper titled "Acquisition and Classification of SEMG Signals" in International Conference on Emerging trends in Engineering & Technology organized by IFERP held on 2 August 2015.

Ms. Shalu George K. and Vishnu R.S. published a research paper titled "Modelling of Surface EMG signals using System Identification Techniques" in the International Journal of Engineering Research & Technology, ISSN-2278-0181, Vol. 4, Issue 7, July 2015.

Prof. B. Prasannakumari and Lekshmi M. A. presented a research paper titled "Compensator Design for Position Control in a Multiphase BLDC Motor" in the International

Conference on Emerging trends in Engineering & Technology organized by IFERP held on 2 August 2015.

Prof. B. Prasannakumari and Keerti S. Nair published a research paper titled "Kinematic Modeling & Analysis of a 5 axis articulated Robot Arm Model VRT-502" in the International Journal of Engineering Research & Technology, ISSN-2278-0181, Vol. 4, Issue 7, July 2015.

Mr. Arun S. Mathew and Rini George published a research paper titled "Speed Control of PMSM using Backstepping Control" in the International Journal of Engineering Research & Technology, ISSN-2278-0181, Vol. 4, Issue 7, July 2015.

Mr. Arun S. Mathew and Reshma B. R. published a research paper titled "Gain Scheduling Implementation in DC-DC Buck Converter using PID Controller" in the International Journal of Engineering Research & Technology, ISSN-2278-0181, Vol. 4, Issue 7, July 2015.

Ms. Manju G. and Bijily Rose Varghese presented a research paper titled "Flight Vehicle Aerodynamic Parameter Estimation using Filter Error Method" in the International Conference on Emerging trends in Engineering & Technology organized by IFERP held on 2 August 2015.

Mr. Aswin R. B. and Jisha T. P. published a research paper titled "Pitch Control of Flight System using Dynamic inversion & PID Controller" in the International Journal of Engineering Research & Technology, ISSN-2278-0181, Vol. 4, Issue 7, July 2015.

Ms. Sheenu P. published a research paper titled "Advance Prediction of Tsunami by Radio Method" in the International Journal of Innovations in Engineering & Technology, Vol. 5, Issue1, February 2015.

She published another research paper titled "Advance Prediction of Tsunami by Surface Wave Radars" in the International Journal of Advanced Research Trends in Engineering & Technology, Vol.2, Special Issue 10, March 2015.

Conferences/Workshops

Dr. Nisha G. K. was a resource person for the FDP held on 11 to 16 May 2015 organized by Rajadhani Institute of Engineering and Technology in association with the Rajadhani Business School conducted at the RIET Campus, Trivandrum.

Ms. Manja Ann Mathews, Mr. Arun S Mathew, Mr. Aswin R. B. and Mr. Aneesh Kumar T. attended a short term course on "Power Electronics and Grid Connected Renewable Energy System" held at NIT Calicut from 14 to 16 May 2015.

Dr. Nisha G. K. attended Boot Camp Nodal Officers Conclave held at Amal Jyothi College of Engineering on 15 and 16 July 2015.

Ms. Jomole Joseph attended a 3 day workshop for Faculty Members on "Introduction to Sustainable Engineering from 18 to 20 June 2015, held at College of Engineering Trivandrum.

Interaction with Outside World/ Consultancy Services

A team led by Prof. M. K. Giridharan from Electrical & Electronics Department is actively involved in Consultancy Work of Electrical System Design and Estimation for various projects of the government and private undertakings. Other members of the team are Ms. Jomole Joseph P (Asst. Prof), Ms. Smiji Abhilash, Ms. Shabina N. & Ms. Suchithra Saija (Technical faculty).

The present work includes: Electrical Installation of the Different Buildings, Labs, Ladies Hostel in LBSITW (Lal Bahadur Shastri Institute of Technology for Women), Poojappura and Electrification of High Rise Apartment - Providence Plaza, in Keston Road.

In continuation of the MoU signed between Mar Baselios College of Engineering and Technology and Hindustan Latex Limited, two student groups led by the principal investigators Mr. Aswin R. B. and Mr. Aneesh Kumar T. attended training programme from 4 to 8 May 2015 and identified the following problems:

Detection of Breakage of moulds in RRT machines and Detection and separation of empty strips while packing.

The students groups were:

Student groups selected - S5 EEE: 1. Amal R. S. 2. Abhishek Bhatt 3. Jaisal Jacob 4. Pradeep Gopan 5. Sreejith R. Topic: Detection of Breakage of moulds in RRT machines. S7 EEE: 1. Joana Varghese 2. Shreuth 3. Gayathri M. 4. Sharone S. H. 5. Yadukrishnan G. Topic: Detection and separation of empty strips while packing.

Dr. Nisha G.K. Associate Professor was selected as

a regular reviewer by the editorial board of IEEE Transactions on Industrial Electronics and the 'National Conference on Technological Trends 2015' organized by Department of Civil Engineering, College of Engineering Trivandrum.

Funded Projects

Centre for Disability Studies, Poojapura, Trivandrum, sanctioned an amount of Rs.40,000/- for the research project titled "Hold on Glove", an ongoing project under the guidance of Mr. Aswin R. B.

Student investigators : 1) Roshan L. 2) Thomaskutty Jogy 3) A. J. Devika 4) Aby Antony & 5) Malavika S.

A research proposal titled "GRASP-IT" was submitted for a grant for student project in technological aspects in disability studies, a plan under Centre for Disability Studies, LBSITW Campus, Poojapura, Thiruvananthapuram. Estimated expenditure is around Rs. 50,000/-. Student Investigator(s) (SSEE): Natasha Mary George, Amaresh Gowri Shankar, Ann Mary Toms, Junga M. S., Merin Elsa Zachariah. Guide: Ms. C. Sojy Rajan, Asst. Professor.

Short Term Training Programme

ISTE approved Short Term Training Programme on 'Soft Computing Techniques and Applications in Electrical Engineering' was organised by the Department of Electrical & Electronics Engineering from 20 to 24 April 2015. Rev. Fr. Joshua Kochavilayil, Assistant Bursar, Mar Baselios College of Engineering & Technology. Dr. Sishaj P Simon, Assistant Professor, NIT Trichy was the Chief Guest. The STTP was coordinated by Ms. Shahu George K. and Ms. Anu Gopinath. The resource persons who handled the sessions were Dr. Sishaj P. Simon, Dr. Deepak Mishra, Associate Professor, IIST, Thiruvananthapuram, Dr. Bindu G. R., Associate Professor, College of Engineering, Thiruvananthapuram, Sri. Indulal Sreedharan, Associate Professor, College of Engineering, Thiruvananthapuram, Ms. Hema Ramachandran, College of Engineering, Thiruvananthapuram and Dr. N. Selvagesan, Associate Professor, IIST, Thiruvananthapuram. 20 candidates comprising 18 internal candidates & 2 external candidates successfully completed the course for the Award of certificates.

Photo- SCTA'15



DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

1. Publications

1. Linta Raj, Ms. Ancy S. Anselm, Dr. Sakuntala S. Pillai, "Performance Analysis of Speech Enhancement Techniques in Low Bit Rate Speech Coders", International Journal for Engineering and Advanced Technologies (IJEAT), ISSN: 2249-8958 (Online), Volume-4 Issue-5, June 2015.
2. Ms. Jofina Jose, Sameer S. M., "A New Unequal Error Protection Technique for Scalable Video Transmission over Multimedia Wireless Networks", IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (SPICES) 2015, held at the National Institute of Technology Calicut, from 19 Feb - 21 Feb 2015.
3. Sandhya Y. A., Ms. Swapna P. S., Dr. Sakuntala S. Pillai, "Analysis of Spectral Efficiency in Downlink OFDMA Femtocell Networks", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), ISSN: 2278-8875 (Online), ISSN: 2320-3765 (print), Vol. 4, Issue 7, July 2015.
4. Ms. Yamana K. Moorthy, "Adaptive Threshold Based Energy Detection under Noise Uncertainty", Global Conference on Communication Technologies, organized by the Department of Electronics and Communication (GCCT -2015), Noorul Islam University, from 23-24 April, 2015.
5. Sweetie Robins, Ms. Swapna P. S., Dr. Sakuntala S. Pillai, "Performance Analysis of Relay Aided TCOFDM", International Journal of Engineering and Innovative Technology (IJEIT), ISSN: 2277 -3754, Volume 4, Issue 12, June 2015.
6. Priya Mamachan, Mr. Jinu Baby, "Denoising of Images Using a Hybrid Image Fusion Algorithm", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), ISSN: 2278-8875 (Online), ISSN: 2320-3765 (print), Vol.4, Issue 7, July 2015.
7. Joena Pappachan, Mr. Jinu Baby, "Tinkerbell Maps based Image Encryption using Magic Square", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), ISSN: 2278-8875 (Online), ISSN: 2320-3765 (print), Vol.4, Issue 7, July 2015.
8. Perna S., Ms. Athira V., "Progressive Visual Cryptography Scheme without Pixel Expansion for Color Images", International Journal of Advanced Research in Computer and Communication Engineering (IJARCCCE), ISSN: 2278-1021 (Online), ISSN: 2319-5940 (print), Vol.4, Issue 6, pp. 186-191, June 2015.
9. Saira Thomas, Ms. Athira V., "Transform Domain Watermarking Based On Compressive Sensing and Scrambling", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), ISSN: 2278-8875 (Online), ISSN: 2320-3765 (print), Vol.4, Issue 7, July 2015.
10. Saira Thomas, Ms. Athira V., "A Review on Compressive Sensing Recovery Combined With Scrambling", International Journal for Graphics & Image Processing (IJGIP), ISSN 2249 - 5452, Volume 5, Issue2, June 2015.
11. Anju G. Nair, Mr. Paul Thomas "Feature Extraction and Classification of ECG Signal using Independent Component Analysis", International Journal of Research in Electronics and Computer Engineering (IJRECE), ISSN: 2321-3159 (Online), ISSN: 2321-3140, Vol.3 Issue 2, April-June 2015.
12. Anju G. Nair, Mr. Paul Thomas "A Novel Method for ECG Feature Extraction and Classification using ANN", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), ISSN: 2278-8875 (Online), ISSN: 2320-3765 (print), Volume 4, Issue 7, July 2015.

13. Anju Krishna V., Mr. Paul Thomas, "Classification Of EMG Signals Using Spectral Features Extracted From Dominant Motor Unit Action Potential", International Journal of Engineering and Advanced Technology (IJEAT), ISSN: 2249 – 8958, Volume-4 Issue-5, June 2015
14. Anu V. S., Mr. Paul Thomas, "Classification of Epileptic EEG Signals Based on Spectral Features using k-NN", International Journal of Research in Electronics and Computer Engineering (IJECE), ISSN: 2393-9028 (print), ISSN: 2348-2281 (Online), Vol. 3, Issue 2, April-June 2015.
15. Anu V. S., Mr. Paul Thomas, "An Improved Method for Classification of Epileptic EEG Signals based on Spectral Features using k-NN", SSRG International Journal of Electronics and Communication Engineering (SSRG-IJECE), ISSN: 2348 – 8549 (Online), ISSN: 2349 – 9184 (print), Vol. 2, Issue 7, July 2015.
16. Anupama P., Dr. Sakuntala S. Pillai, "Channel Equalization and Estimation for SC FDE Systems", International Journal of Advanced Research in Computer and Communication Engineering (IJARCCCE), ISSN: 2278-1021 (Online), ISSN: 2319-5940 (print), Vol. 4, Issue 6, June 2015.
17. Aparna Ashok, Ms. Deepa P. L., "Handling Noise And Outliers In Single Image Deblurring Using L0 Sparsity", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), ISSN: 2278-8875 (Online), ISSN: 2320-3765 (print), Vol. 4, Issue 7, July 2015.
18. Nandana U. S., Ms. Deepa P. L., "A Comparative Study on Pan-sharpening Methods", International Journal of Graphics & Image Processing (IJGIP), ISSN 2249-5452, Vol. 5, Issue 2, pp. 97-102, May 2015.
19. Nandana U. S., Ms. Deepa P. L., "Pan Sharpening using Modified Sparse FI Algorithm", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), ISSN: 2278-8875 (Online), ISSN: 2320-3765 (print), Vol. 4, Issue 7, pp. 6135-6142, July 2015.
20. Nanda Krishnan J, Ms. Roshni G. Kumar, "Security Enhanced Image Encryption using Password based AES Algorithm", International Journal of Engineering Research and Technology (IJERT), ISSN: 2278-0181, e-ISSN: 2278-0181 Volume. 4, Issue. 06, June – 2015.
21. Nimisha Susan Jacob, Ms. Anicy S. Anselam, Dr. Sakuntala S. Pillai, "Performance Analysis of CS-ACELP Speech Coder", International Journal of Engineering and Advanced Technology (IJEAT), ISSN: 2249 – 8958, Volume-4, Issue-5, June 2015.
22. Nithesh C. N., Ms. Anshy C. Haran V., "Reversible Data Hiding Method based on Two-dimensional Difference Histogram and Block Division", International Journal of Engineering Research And Technology (IJERT), ISSN: 2278-0181, Vol. 4, Issue-06, June-2015.
23. Sreelakshmi S., Mr. Anoop K. Johnson, "Comparison of Contrast Enhancement Techniques", International Journal of Graphics and Image Processing (IJGIP) Vol. 5, Issue 2, page no: 70-74, ISSN 2249 – 5452, May 2015.
24. Sreelakshmi S., Mr. Anoop K. Johnson, "Image Contrast Enhancement using Pyramidal Transforms and SVD", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), ISSN: 2278-8875 (Online), ISSN: 2320-3765 (print), Vol. 4, Issue 7, July 2015.
25. Nayana A., Mr. Anoop K. Johnson, "High Dynamic Range Imaging- A Review" in International Journal of Image Processing (IJIP), Vol. 9, Issue 4, 2015.
26. Nayana A., Mr. Anoop K. Johnson, "Ghost Removal in High Dynamic Range Images using SVD and Disparity Map" in International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), Vol. 4, Issue 7, July 2015.
27. Suhail Yousuf, Ms. Ann Mary Alex, "Audio Watermarking Using Colour Image Based On EMD and DCT", International Journal of Advanced Research in Computer and Communication Engineering (IJARCCCE), ISSN (Online): 2278-1021, ISSN (Print): 2319-5940, Vol. 4, Issue 6, June 2015.
28. Vishnu M., Mr. Arun P. S. "A Comparative Study on Medical Image Denoising in Hybrid domain", International Journal of Scientific and Research Publications (JSRP), ISSN 2250-3153, Vol.5, Iss.7, July 2015.

29. Yamuna J., Ms. Arathy C. Haran V., "NSCT Domain Image Fusion, Denoising & K-Means Clustering For SAR Image Change Detection", International Journal of Engineering Research and General Science (IJERGS), ISSN 2091-2730, Volume 3, Issue 3, Part 2, May-June 2015.
30. Brenda M., Mr. Arun P. S., "A Comparative Study and Review for Human Action Recognition", International Journal of Advanced Research in Computer and Communication Engineering (IJARCCCE), ISSN (Online): 2278-1021, ISSN (Print): 2319-5940, Vol.4, Issue 6, June 2015.
31. Geethu S. S., Mr. S. Narayanan, "BER Performance Analysis of Powerline Communication using Turbo Code", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), ISSN: 2278-8875 (Online), ISSN: 2320-3765 (print), Vol.7, Issue 7, July 2015.
32. Kaethi J. S., Mr. S. Viswanatha Rao, Dr. Sakuntala S. Pillai, "Impact of IEEE 802.11 MAC Packet Size on Performance of Wireless Sensor Networks," International Organization of Scientific Research Journal of Electronics and Communication Engineering (IOSR-JECE), ISSN: 2278-2834, Vol. 10, Issue 3, Ver. IV, pp. 23-27, May-June 2015.
33. Madhuri P. L., Ms. Anu Anna John, "SDSELMS - A Simplified Adaptive Channel Estimation Algorithm for MIMO-OFDM System," International Organization of Scientific Research Journal of Electronics and Communication Engineering (IOSR-JECE), ISSN: 2278-2834, Vol. 10, Issue 4, Ver. I, pp. 39-45, July-Aug. 2015.
34. Merin Susan Philip, Ms. M. J. Jayashree, Satyabhushan Shukla, "Performance Evaluation of Ultra Wideband Slot Antenna", International Journal of Engineering and Innovative Technology (IJEIT), ISSN: 2277-3754, Vol.5, July 2015.
35. Mini S.P, Mr. S. Viswanatha Rao, Dr. Sakuntala S. Pillai, "Throughput Enhancement of Wireless Sensor Networks with IEEE 802.15.4 MAC based on Channel Allocation", International Journal of Electrical and Computer Engineering (IJECE), ISSN: 2088-8708, Vol.2, Issue 7, July 2015.
36. Minu Maria Joseph, Mr. Nandan S., "Uncoordinated Cooperative Jamming with Phase Shift Beam Forming For Physical Layer Security", International Journal Of Engineering And Advanced Technology (IJEAT), ISSN: 2249 - 8958, Vol. 4, Issue 5, pp. 187-190, June 2015.
37. Neenu Raju, Ms. Sakuntala S. Pillai, "Performance Evaluation of PAPR Reduction Techniques in Filter Bank based Multicarrier Systems under AWGN and Fading Channels", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE), ISSN: 2278-8875 (Online), ISSN: 2320-3765 (print), Vol. 4, Issue 7, July 2015.
38. Sheem Mary Jacob, Mr. Nandan S., "Performance of Different Spectrum Sensing Techniques in Cognitive Radio under Different Fading Channels", International Journal of Advanced Research in Computer and Communication Engineering (IJARCCCE), ISSN (Online): 2278-1021, ISSN (Print): 2319-5940, Vol. 4, Issue 6, June 2015.
39. Sherry Varghese George, Ms. Luxy Mathews, Dr. Sakuntala S. Pillai, "A New Approach for the Modeling of LTE/LTE-A Downlink/Uplink Systems based on LTE System Toolbox", International Journal of Research in Electronics and Computer Engineering (IJRECE), ISSN: 2393-9028 (print), ISSN: 2348-2281 (Online), Vol. 3, Issue 3, pp. 48-51, July 2015.
40. Sherry Varghese George, Ms. Luxy Mathews, Dr. Sakuntala S. Pillai, "Physical Layer Frame Structure in 4G LTE/LTE-A Downlink based on LTE System Toolbox", International Organization of Scientific Research Journal of Electronics and Communication Engineering (IOSR-JECE), ISSN: 2278-2834, Vol. 10, Issue 3, Ver. 4, pp. 12-16, June 2015.
41. Syama Sasikumar, Mr. S. Narayanan, "Optimisation of Bit Loading in Broadband Power Line Communication Network," International Organization of Scientific Research Journal of Electronics and Communication Engineering (IOSR-JECE), ISSN: 2278-2834, Vol.10, Iss.3, Ver IV, pp 23-27, May-Jun 2015.
42. Varna L. Babu, Ms. Luxy Mathews, Dr. Sakuntala S. Pillai - "A Codebook Selection based Precoding in LTE Systems", International Journal of Research in Electronics and Computer Engineering (IJRECE), ISSN: 2393-9028 (print), ISSN: 2348-2281 (Online), Vol. 3, Issue 3, July 2015.
43. Varna L. Babu, Ms. Luxy Mathews, Dr. Sakuntala S.

Pillai - "Performance Analysis of Linear and Nonlinear Precoding in MIMO Systems", International Journal of Advanced Research in Computer and Communication Engineering (IJARCCCE), ISSN (Online): 2278-1021, ISSN (Print): 2319-5940, Vol.4, Issue 6, June 2015.

2. Seminar/Conferences attended by faculty

1. Prof S. Viswanatha Rao gave a talk on the topic "Wireless Sensor Networks - Challenges and Opportunities", STTP on Recent Advances in Wireless Communication at LBS Institute of Technology for Women, 10th June 2015.
 2. "Science Academies' Lecture Workshop on Advances in Wireless Communications and Networking", organized by Department of Electronics and Communication, Amal Jyothi College of Engineering, Kanjirappally, from 23 - 24 July 2015. Staff Attended: Ms. Yamuna K. Moorthy
 3. "Faculty Development Program on Optical Engineering" under FDP scheme of TEQIP-II, organized by Government Engineering College, Barton Hill, Trivandrum, from 18- 20 March, 2015. Staff Attended: Ms. Sreedevi P.
 4. "Two day Workshop on IC Design Flow using Mentor Graphics Tools and Vivado Design Flow Using Zed Board", held at Sree Buddha College of Engineering, Pattore, from 25- 26 June, 2015. Staff Attended: Ms. Ann Mariam John
 5. "Faculty Development Programme on Recent Advances in Nano science and Nanotechnology", held at Amal Jyothi College of Engineering and Technology, Kanjirappally, from April 20 - May 1, 2015. Staff Attended: Ms. Ann Mary Alex
- ## 3. Seminar/Conferences organized by the department

1. "One Week National Workshop on Modelling and Simulation of Communication Systems (MSCS)", organized by Department of Electronics & Communication Engineering, MBCET, from 8 - 12 June, 2015.

Coordinators : Ms. Swapna P.S., Ms. Luxy Mathews, Mr. Niyas K. Haneefa

Staff Attended : Ms. Luxy Mathews, Ms. Ancy S. Anselam, Ms. Swapna P. S.,

Mr. Niyas K. Haneefa, Ms. Ann Mary Alex, Ms.

Yamuna K. Moorthy, Ms. Remya Annie Eapen, Ms. Roshny G. Kumar, Ms. Lani Rachel Mathews, Ms. Lakshmy S., Ms. Anu Anna John, Ms. Teena Rajan, Ms. P. P. Hema, Ms. Riya John, Mr. Arun P. S.

2. "Ansys and Orcad Software Training" for the Technical Staff of the Department of Electronics and Communication, during 18 and 19 June, 2015.

Technical Staff Attended: Mr. Rajendran H., Mr. Anil Kumar, Mr. Ajith Kumar S. M., Ms. Saarika U., Mr. Shrin C. S., Ms. Manju Suresh.



4. Achievements of students

1. Co-Curricular Activities

- The project titled "UPASANA, A Diagnostic Tool Kit for ASHA workers" by Joji John Varghese (S6EC₁), Vivek Suresh Kumar (S8EC) and Arun Krishna (CS) won the third prize for Tech Top 2015, held at Mar Baselios College of Engineering and Technology. Joji John Varghese of S7 EC2 visited Singapore Science Centre, as part of Yuva Mastermind Competition 2015 conducted by Mancestara and sponsored by IBS.



- The project also received the first prize in the Marian Award for Technology Excellence (MATE) 2015, held at Marian Engineering College, August 17, 2015.
- Mr. Abhiram A(S7 EC2), Mr. Sreeharsh R(S5 EC2) and Mr. Madhav M Nair(S7 EC2), have been selected to be among the 10 Student Ambassadors for International

Center for Free and Open Source Software(ICFOSS), Technopark, Trivandrum.

2. Extra Curricular Activities

- Mr. Deepak John Reji of S7 EC1 and Mr. Sajith R of S5 EC1 were selected as the Arts Secretary and General Secretary of the College Senate respectively.
- Ms Mariya Roniya, Ms Athira Krishnan R, Ms Swati Chandran and Ms Aishwarya Krishnan of S7 EC1 won the 2nd prize for Group Dance in the Kerala University Youth Festival, 2015.
- Ms Mariya Roniya, Ms Athira Krishnan R and Ms Aishwarya Krishnan of S7 EC1 won the 1st prize for Thiruvathira in the Kerala University Youth Festival, 2015.
- Ms Reshma S S and Ms Mariya Roniya of S7 EC1 won the 3rd prize for Kathakali in the Kerala University Youth Festival, 2015.
- Ms Athira Krishnan R of S7 EC1 won the 2nd prize for Bharathanatyam and 3rd prize for Kuchipudi in the All Kerala BSNL Cultural Meet, 2015.

EC Association

- Organized a talk on "How to introduce originality into project" by Mr. Vijaykumar M., CEO, Wobyfy Infotech Ltd, Trivandrum for the final year students on 10th July, 2015.

Social Service

- The social service wing of Electronics and Communication Department has been christened "Spandanam".
- The staff of EC department visited the inmates of Unity House, Chittazha on May 30, 2015.



IEEE

- IEEE Travancore Hub Meet - CONVENTUS 2015 was organised by IEEE MBCET Student Branch on 25 and 26 July 2015.



- The event was inaugurated by Mr. Harish C. S., Deputy Director, Human Spaceflight Program, ISRO. Dr. T. M. George, Principal of MBCET presided over the function. Mr. Koruthu P. Varghese, Head of Clinical Department, SCTIMST and Chair, IEEE EMBS Society was the Chief Guest of event. Mr. Jithin Krishnan, Treasurer IEEE Kerala Section also attended the event.
- About 300 Students from 15 different colleges in Trivandrum, Kollam and Pathanamthitta participated in this event.
- Five workshops were organised, during CONVENTUS 2015 - Arduino, Raspberry pi, Robotics, Photoshop and MATLAB.
- The sessions were handled by experts from industry and institutions. MATLAB sessions were handled by the faculty of ECE Department of MBCET.
- All the workshops received overwhelming and enthusiastic participation from all the students.
- A talk about Rocket Science was delivered by Mr. Anoop Raj, Engineer SD, CASG, ISRO.
- CONVENTUS bridged geographical boundaries and provided additional opportunities for IEEE members, volunteers and staff to communicate with each other.
- Alka Ajith of S7 IT, Chair, IEEE MBCET attended the IEEE Region 10 WIE-YP-Students Congress from 9 to 12 July held at Colombo, Sri Lanka.

5. Ongoing Projects

1. Project entitled "Visual Interface System for the Disabled (VISD)" for Centre for Disability Studies

(CDS). Students involved: Mr. Vineeth G.K., Ms. Geethu S., Mr. Zabin P. and Ms. Nagma Rani of S7 EC1. Staff involved: Ms. Remya Annie Eapen.

2. Project entitled "Wireless System for Water Level Monitoring in Overhead Tank" for Hindustan Lifecare Limited (HLL). Students involved: Mr. Joji John Varughese of S7 EC2, Mr. Abhinand S. and Mr. Navseen S. of S5 EC1. Staff involved: Ms. Teena Rajan and Ms. Lani Rachel Mathew

6. Faculty Inclusion

Ms. Anu R. G., M.Tech. in Microwave and TV Engineering, College of Engineering, Trivandrum, University of Kerala. Mr. Shiras S. N., M.Tech. in Telecommunication Engineering, Mar Baselios College of Engineering and Technology, University of Kerala. Mr. Jubin James Theenattil, M.Tech. in Advanced Communication and Information Systems, Rajiv Gandhi Institute of Technology, M. G. University. Ms. Anu Susan Philip, M.Tech. in VLSI and Embedded Systems, Mangalam College of Engineering, M. G. University.

DEPARTMENT OF INFORMATION TECHNOLOGY

Seminar/Talk Organised by Faculty Members

- Mr. Vishnukumar S. has delivered a talk on "Basics of Computers & Operating Systems" on 23 March 2015, as part of a Five Day Workshop on IT Oriented Personality Development, organized by Centre for Vedanta Studies and Department of Sanskrit, University of Kerala in association with the Computer Society of India, Trivandrum Chapter.
- Mr. Vishnukumar S. organised a Two day Workshop on "Python Programming" on 24 and 25 July 2015 at MBCET in association with the Computer Society of India, Trivandrum Chapter.

Two Day Workshop on Python Programming

The Department of Information Technology and Computer Science & Engineering jointly organized a Two Day Workshop on Python Programming in association with the Computer Society of India, Trivandrum Chapter on 24 and 25 July, 2015 at Mar Baselios College of Engineering and Technology, Thiruvananthapuram. The workshop was inaugurated by Mr. K. Mohammed Y.

Safarulla IAS, Director, Kerala State IT Mission. Mr. Vishnukumar S., Secretary, CSI Trivandrum Chapter welcomed the gathering and Mr. Sreekanth P. Krishnan, Chairman, CSI Trivandrum Chapter gave the presidential address. Mr. K. Mohammed Y. Safarulla IAS, Director, Kerala State IT Mission gave the inaugural address and a Special Address was given by Prof. Viswanatha Rao, Vice Principal, Mar Baselios College of Engineering and Technology. Dr. Vikraman Nair, Head, Department of Computer Science and Engineering, Mar Baselios College of Engineering and Technology proposed the vote of thanks.

The resource persons of the workshop were Dr. Umesh P., Lecturer, Department of Computational Biology and Bioinformatics, University of Kerala, Mr. Rejith Rehim, OWASP Kerala Chapter Leader and Speaker at Coffee@DBG and Mr. Sreenath Sasikumar, Information Security Consultant and Python developer.

The seminar was attended by 34 Faculty Members from various Engineering Colleges in Kerala



Seminars/Conferences Attended by Faculty Members

- Ms. Asha S., Ms. Devi Priya V. S., Ms. Divya R. S., Ms. Poorna B. R., Ms. Ashwini B. and Mr. Shon J. Das attended Two Week ISTE STTP on "Introduction to Design of Algorithms" conducted by IIT Kharagpur from 25 to 30 May, 2015 under Blended MOOCs (Massive Open Online Courses) model.
- Ms. Jisha John attended a Workshop on "Introduction to Sustainable Engineering" from 18-20 June, 2015 at the College of Engineering, Trivandrum.
- Ms. Asha S., Ms. Devi Priya V. S., Mr. Vishnukumar S. and Ms. Ashwini B. attended a Two day Workshop on Python Programming from 24 & 25 July 2015 organized by the Computer Society of India, Trivandrum Chapter at MBCET.

Photography Club (FRAMES)

Mr. Sandeep S. R. (Staff Coordinator) coordinated the following events:

- "Kerala University Youth Festival-2015" held at Kollam was exclusively covered by FRAMES from 16-20 March 2015.
- 29 and 30 May, 2015 marked a new episode in the event line of FRAMES when a video shoot was done for the College, which highlighted the infrastructure and facilities of the College.
- For the first time, EXODOS the passing out ceremony of final year students was exclusively covered by FRAMES.
- FRAMES has now an official email address to which MBCET family members can send mails requesting the service of FRAMES - frames@mbcet.ac.in
- New office bearers of FRAMES took charge on 10 July 2015 marking the beginning of a new academic year.
- FRAMES organized a photo walk for the members of Frames at Vellayani Lakeside headed by the staff coordinator on 17 July 2015.

Student Achievements

- Ms. Juhya Joseph secured Second Rank (CGPA - 8.52) in B.Tech. (Information Technology), 2015 from University of Kerala.



- Alka Ajit of S7 IT have been selected as "IEEE Computer Society Merwin Ambussadar 2015" and also won a scholarship of US\$1,200.
- Alka Ajit of S7 IT has been selected as one of the 250 student delegates of Asia Pacific Region for IEEE Region 10 Student/Young Professional/WIE Congress' July 2015, held at Sri Lanka.
- Sairaj M. Pillai of S7 IT won First prize in Orchestra and Gamamela in Kerala University Youth Festival, March 2015.
- Sruthi Krishnakumar of S7 IT won First prize

in Stringed Instruments Western, Orchestra and Gamamela in Kerala University Youth Festival, March 2015.

- Syam Venugopal of S7 IT won Third prize in Kathakali in Kerala University Youth Festival, March 2015.

DEPARTMENT OF MECHANICAL ENGINEERING

STTP on RECENT ADVANCES IN MECHANICS

The Department of Mechanical Engineering, Mar Baselios College of Engineering and Technology conducted a Short Term Training Program on RECENT ADVANCES in MECHANICS sponsored by ISTE [Kerala Section] from 8 to 12 June 2015. The program was inaugurated by Dr. B. Anil, former chairman, ISTE [Kerala Section]. The focused areas were Non Linear Vibrations, Perturbation Techniques, Mechanics of Biological Composites, Design of Composite Structures, Analysis of Complex Mechanical Systems. Sessions were handled by resource persons namely, Dr. Anup S. (IIST), Mr. Bibin Balram (Amrita School of Engineering), Dr. Ramesh Kumar (Rtd. ISRO), Mr. Ajith K. Mani (Research Scholar, NIT-C).



STTP on Fundamentals of Hydraulic Machines and Heat Engines Lab

The Department of Mechanical Engineering, Mar Baselios college of Engineering and Technology along with ISTE chapter organized a Short Term Training Programme on Fundamentals of Hydraulic Machines and

Heat Engines Lab from 2 to 6 June 2015.

The programme was inaugurated by Dr. T. M. George, Principal MBCET. The course provided exposure to various Flow Measuring Devices, Hydraulic Machines, Internal Combustion Engines and Basics of Microsoft Word & Excel for Technical Staff from various AICTE approved Engineering Colleges. The course was handled by Retd. Professors of College of Engineering, Trivandrum and Faculty Members of the Mechanical Engineering Department.



Department Magazine

The first edition of Mechanical Engineering Students Association News Letter was formally released on 8 June 2015.

CONFLUENCE – Continuance of togetherness

Reunion of Mechanical Alumni's named "Confluence" was conducted last year on 6th September 2014. This year the reunion is planned on 22 October, 2015.

RESEARCH PAPER/PUBLICATIONS

Ms. Nidhi M. B. presented technical papers on "An Empathy based Framework for ISR" and "The Role of Entrepreneurship on Engineering Education", at IEDC (Indian Engineering Dean's Council) Global Summit 2015 which was held in Chennai for the first time in India. It had representations from 18 countries by leading Industrialists, Academicians, Change Agents and Visionary Administrators. The main aim of the summit was to encourage Engineering Education Research across the globe.

V. Vinod, Bipin Balaran, M. D. Narayanan, Mihir Sen, "Effect of Oscillator and Initial Condition Differences in the Dynamics of a Ring of Dissipative Coupled Van Der Pol Oscillator", Springer Link, Journal of Mechanical Science and Technology, May 2015, Volume 29, Issue 5, pp 1931-1939

Rahul R. and Kitey R., "Viscoelastic Behavior of Resin/Hardener Ratio Based Epoxy Variants", 18th National Seminar on Aerospace Structures, VNIT, Nagpur.

Rahul R. and Kitey R., "Fracture Behavior of Resin/Hardener Ratio Based Epoxy Variants", Sixth International Conference on Theoretical, Applied, Computational and Experimental Mechanics, IIT Kharagpur.

Participation in Conferences/ Symposia/ Workshops/ Seminars

Ms. Nidhi M. B. attended one day Workshop on 'Global Outlook for Engineering Curriculum Development' at the College of Engineering Trivandrum on 6 July, 2015 organized by KTU. She attended a 3 day workshop on "Introduction to Sustainable Engineering" during 18-20 of June 2015, at CET organised by KTU and attended one day workshop on Skill development by Mr. Murthy, Bosch.

Mr. Roshan George Koshy, Ms. Ruby Maria Syriac attended a 5 day STTP on "Finite Element Analysis using ANSYS" at RIT, Kottayam during June 22-26, 2015.

Staff Achievements

Dr. K. J. Sreekanth joined Kuwait University as a Post-Doctoral Fellow. He is working on the idea "Modelling Urban Sustainability- Energy, Daylight and Walkability", which is a joint program with MIT for building a new neighbourhood with energy efficient technologies.

Mr. Arvind P. has registered for Part Time doctoral programme on the area "IC Engines and Tribology"

New Faculty members

The following teachers joined the Department: Mr. Rahul R., M.Tech. - Aerospace Engineering, Indian Institute of Technology (IIT) - Kharagpur and Mr. Premchand V. P. has joined the College back after study leave.

Student Achievements

Mr. Vivek S. A. of M4 M.Tech. (Machine Design) has bagged a patent on his invention "RGM-Reciprocating Gear Mechanism, under the guidance of Ms. Ruby Maria

Syriac. Patent Details: Patent No. 531/CHE/2015A. Description: Reciprocating Gear Mechanism is capable of converting reciprocating to rotary motion and vice-versa. This is an advanced form of rack and pinion mechanism. A peculiar type of gear is used for conversion and this will give more efficiency than the existing slider crank mechanism. This can be applied as an alternative for Withworth Quick Return Mechanism.

A talk was given by Mr. Gopikrishnan on CoEDAS "Career-oriented Education in Design and Simulation". It is a self-learning software suite that could be used by students acquaint themselves with industrial applications of Mechanical Engineering Principles that they learn in the classrooms.

DEPARTMENT OF SCIENCE & HUMANITIES

Faculty Inclusion

Distinguished resource person in Linear Algebra Prof. Joseph Cherian, (Former Head, Department of Mathematics, College of Engineering Trivandrum) has joined the Department. He is an authority in Wavelet Theory, Fourier Analysis and other Applied Mathematical areas also. He won the second prize in ISTE- Srinivasa Ramanujan Mathematical Competitions for Engineering College Teachers, 2013.

The following members joined the Faculty of Mathematics recently;

Ms. Treasa Antony, M.Sc. and Ms. Jina Joseph, M. Sc, B. Ed,

The following members joined the faculty of English recently;

Ms. Remya Lekshmi, MA. (English Language & Literature) and Ms. Armu Maria Ashok, MA. (English Language & Literature).

Inauguration of Labs

Well setup Physics Lab and Chemistry Lab were inaugurated in the Department which are intended to train the first Semester students of the College as per the APJ Abdul Kalam Technological University scheme and syllabus.

The newly constructed Physics & Chemistry labs were blessed on 18 August by Asst. Bursar, Rev. Fr. Joshua

Kochuvilayil.

The following members joined the Department for assisting in Physics & Chemistry labs;

Ms. Lucky Vishnu, M.Sc Chemistry (Lab Tutor), Mr. Joshy R., B.Sc Chemistry and Mr. Praveen R., B.Sc Physics.

Invited Talks

Prof. Joseph Cherian was a resource person for the Faculty Development Programs in the following areas recently:

1. On "Linear Fractional Transformation & Singular Value Decomposition" for the workshop on Multivariable control and Estimation organized by Department of Electrical Engineering, CET
2. On "Numerical Method's for PDE" in the STTP on Computational Fluid Mechanics organized by the Department of Mechanical Engineering, CET.
3. On "Mathematical Preliminaries for Fractional Calculus" in the workshop on Fractional Calculus organized by Department of Electronics & Communication Engineering.
4. On "Linear Algebra and some applications" in the STTP on Power Electronics and Applications conducted by EE department, Govt. College Idudki.

He has also given a bridge course for the third semester B. Tech students at Mohandas College of Engineering & Technology, Anad in June, 2015.

Research Papers

Ms. Archana P. Das has published a paper entitled as "Evaluation of In Silico and In Vitro Pharmacological Activities of 1,3,8-trihydroxyanthraquinone" in the International Journal of Research and Reviews in Pharmacy and Applied Sciences, Vol.5, Issue.1 Pg:1173-1188.

Ms. Armu Maria Ashok has published

- (i) a paper titled as "Effectiveness of Role Play in Enhancing Communication Skills of English Language Learners" in Language in India (Journal), volume 15:4, April 2015.
- (ii) a paper titled as "The Role of English Language Teacher in Role Plays" in The English Classroom

(print journal) Regional Institute of English, South India, June 2015.

Paper Presentations & Event Participations:

Ms. Annu Maria Ashok presented a paper on "Role of Soft Skills in English Language Teaching" in the National Seminar on "English Language and Literature: Changing Trends" on March 2015, organized by Department of English, St. Jerome's College, Nagercoil.

She participated in the following programmes:

- UGC sponsored national seminar on "Visual Culture" conducted by Sree Sankaracharya University Regional Centre, Trivandrum on 18, 19, 20 March 2015.
- Workshop on Teacher Development in ESL of an experimental course titled Job skills with English for Communication on April 2015, conducted by School of Distance Education, Kerala University.
- BEC training conducted by Cambridge University on 20 & 21 July 2015 in Trivandrum.
- Coordinators' Workshop on "Technical Communication" conducted by IIT Bombay at Mumbai during August 24-28, 2015.

ISTE

The ISTE Chapter of MBCET held the Annual General Body Meeting on 20 February 2015 in the Senatus Hall. The meeting was attended by a number of ISTE student members, as well as Faculty Members which included Ms. Nidhi M. B., NC Member ISTE and Chairman, ISTE MBCET, Student Advisor, Ms. Elizabeth B. Varghese and Faculty Chapter Secretary, Ms. Asha S.

The new office bearers were elected and office bearers of previous year were given certificates for their credential leadership to the ISTE MBCET Chapter. The Certificates were given by Ms. Jayasree M. J., HOD, ECE Department of MBCET, and ex-officio ISTE MBCET Chapter.

The new office bearers for 2015-2016 are as follows:

Chairman : Ananthu (S4 ME I), Vice Chairman : Anneeta Anu J. (S4 CE I), General Secretary : Amaroesh (S4 EE), Treasurer : John W. (S4 EC II), Alan Charles (S4 CE I), Publicity Heads : Blesson T. Kurien (S4 ME I), Anneeta Anne Charles (S4 CE I), Design Head : Kiran Mathew (S4 CS II), Design Committee Member: Samuel (S4 CS II), Technical Heads: Joanne Jacob (S4 CS II), Rejath (S4 EC II)



Department Representatives: Steha Kurien (S4 CS II), Amritha Vijayan (S4 EC I), Anna S. (S4 EE), Asha K. Thomas (S4 CE I), Abraham S (S4 ME II), Anoop S (S4 ME I)

ISTE MBCET student CHAPTER and MESA.

ISTE MBCET Students Chapter along with MESA organized a session on Industry Academia Gaps on 16/03/2015 in James Watt Hall. Mr. Asok Kumar, General Manager, Guif Asia was the resource person. He enlightened the students on latest technology and motivated them on what industry expects from Engineering graduates. There were 104 student participants. The session was coordinated by MaNidhi MB (AHO& APME) and supported by Asst. professors Mr. Deepak B, Mr. Ravesh, Mr. Roshan and Mr. Sreejith NK of ME department. The meeting was presided by Mr. Pradeep M., HoDME and Mrs. Jayasree Asok Kumar.

ISTE MBCET chapter (Faculty)

Celebrated environment day on 5 June 2015. Rev. Fr. Wilson Thattarathundil congratulated ISTE initiative and underpinned the need to preserve trees and nature.

ISTE student chapter took initiative under the leadership of student chapter chairman, Anandu, S5 ME, on 5 June 2015 to plant sapling as part of environment day



observation. Under the leadership of Anitha, S5 CE, ISTE student chapter office bearer and representative of PG students, Sooraj, S3, M.Tech. Machine Design, ISTE initiated planting sapling.

G K Quiz

A GK quiz was organized as Event #2, hosted by the ISTE core committee for S4 batch. There were 16 participants comprising a total of 8 teams, with representations from Civil, Mechanical and Electrical departments. The event was co-ordinated by Amarosh, ISTE student chapter Gen. Secretary, S5 EEE.

Cast iron Recycling Unit.

A cast iron recycling cum production unit has been established at the Mechanical Engineering Workshop, MBCET on 21 August 2015 by the Department of Mechanical Engineering with the aim to recycle the scrap cast iron generated inside the campus. It can stand as a production unit by producing the castings required for the Mechanical Department and can also support student projects with the additional cast iron scrap purchased from outside.

Training & Placement Unit

Campus placement drives conducted in August and September 2015: Infosys – 82, UST Global – 10, IBS Software Services – 10, QBust – 17, MU Sigma – 7 & Ernestnet – 3. Total of 129 offers till October 1, 2015

An invited talk by Dr. S. Karthikeyan, IAS, Thiruvananthapuram District RDO was held on 6 August, 2015 and by Ms. T. V. Anupama, IAS, Commissioner of Food Safety, was held on 1 October, 2015.



Project Exhibition on Sustainable Engineering

An exhibition on Sustainable Engineering to highlight the reusability of materials was held on 19 June 2015 at the College. It gave an opportunity for the students to apply Technology to address social issues and to showcase their creativity and to inculcate in them a culture of “a

cradle to cradle approach” rather than “a cradle to grave approach”.



SPORTS & GAMES

All India Inter Collegiate Basketball Held at SSN College Chennai

In the League matches we defeated Rajalekshmi Engg College (40-08), St. Joseph College, Chennai (55-38) and lost to Hindustan University by one point (53-52). In the quarter finals we defeated JPR institute of technology (62-57). In the semi finals we defeated Jain University (39-27). Finals again with Hindustan University, we won the match by 4 points (55-51). Arjun G. K. of Mar Baselios selected as the best player of the Tournament.



43rd UC Basketball Tournament Held at Aluva

In the semi-finals we defeated SB College by 16 points. In the finals we defeated Mar Ivanios College by 16 points (72-56).

Abhijith Vijayan of Mar Baselios selected as the best player of the Tournament.

College Games 2015 Basketball (Men)

Mar Baselios Engg. College Team became the winners of College Games 2015 Basketball Men Tournament defeating SB College, Changanacherry by 22 points. This is the second consecutive time, MBCET bags the College Games Trophy.

Kerala University Shuttle Badminton (Women)

Second runner-up in the Kerala University Shuttle Badminton Women Tournament.

College Senate

Office bearers: E.A.M. Subsil (S7 ME) – Chairman, Athul Chacko Philip (S7 CS) – Vice Chair Person, Sajith

(S5 EC) – General Secretary, Deepak John Reji (S7 EC1) – Arts Secretary, Vishwanath (S7 ME1) – Sports Secretary, Anil Mary George (S7 IT) – Joint Secretary, Ananda Bhadrin (S7 CE) – Media Secretary, Anna S. (S5 EEE) – Social Secretary, Jayadev (S5 CS) – Treasurer.

Staff Advisors: Mr. Rajesh T. N. (Asst. Prof. ME) and Ms. Devi Priya (Asst. Prof. IT)

Important Activities :

Aug. 15 – Independence Day Celebrations

Aug. 21 – Oram Celebration

Sept. 4 – Teachers Day Celebration

N S S Activities

The activities of the NSS unit of the College included the following:

- NSS volunteers helped the police in the smooth conduct of the Attakal Pongala.
- A street play was conducted in MBCET to spread the awareness and need for organ donation.
- Tree walk was conducted by volunteers to identify the trees and plants in the MBT campus.
- Cloths were distributed in General hospital Trivandrum and an orphanage in Attingal.
- Food was distributed at Mar Gregorios Stnehabeda and Mahilamandiram Poojappura.
- One day orientation camp was conducted for NSS volunteers in MBT. Independence Day and NSS day were celebrated.



Spirituality and Value Education

The Jesus Youth conducts its activities regularly. Besides, in order to invoke the blessings of the Lord upon the campus community the "Blessing" of the College was held on 26 June 2015.

Staff Club

The new staff club for the academic year 2014-15 was elected on August 5th 2014. Members are Mr. Vinod V, President (ME), Ms. Soumya A. V., Secretary (EEE) and Ms. Dhanya Ramachandran, Treasurer (Science & Humanities).

Executive Members: Ms. Tessa Marlow & Mr. Sabarinath (CSE/IT/ITMS), Mr. Anil Kumar & Mr. Sreejith N. K. (ME), Ms. Adhira & Mr. Rajendran (EC), Ms. Chandini Basu & Mr. Edwin Roy (CE), Ms. Surasmi N. L. & Mr. S. Rajeevmon (EEE), Mr. Praveen - Office/Library, Ms. Aleyamma - Last grade, Ms. Lekshmi J. S. - Basic Science.

The Staff Club organized the Christmas day celebrations on 19th December 2014 at which His Beatitude Moran Mor Baselios Cardinal Cleemis Catholicos, Major Archbishop of Trivandrum gave the Christmas Message. The staff members along with family attended the same. Christmas dinner was arranged by the Management. Cultural activities of the children of Staff Club members have been arranged.

The Annual Sports meet for the year 2015 was conducted during the months of March and April. Cricket, Football, Curroms Board, Shuttle Badminton and Athletics were the events for competition.

A one-day Staff Tour was arranged by the Staff Club to Vagamon Hill Station in May. 35 Members of the Staff participated.



Onam celebrations 2015 was organised by the College Staff Club on 21-08-2015. The function was inaugurated by Fr. Wilson Thattarathundil, Bursar by lighting the lamp followed by a traditional Onasadhya. A wonderful athapakalm was prepared by the staff members lead by Dr. Chandrika and Mr. Anesh. The cultural activities started with the message of Fr. Joshua, Asst. Bursar followed by Ona pattukal, a lucky dip and prize distribution of the staff annual sports meet 2015. Various games like musical chair, Tug of War, etc. were organized and prizes were distributed to the winners.



*Duc In Altum.....
To the Heights of Excellence*



Decipherers of Techno-dreams Since 2002



The founder conceived it. We build it. Posterity sustains it.

Managing Editor : Rev. Fr. Wilson Thattaiyandil, Bursar

Editor-in-Chief : Dr. T. M. George, Principal

Editor : Dr. George Zachariah

Board of Editors : Mr. Job Varghese (Dept. of Phy. Eds.), Mr. V. K. Kuriankone (Swan), Mr. Arun S. Mathew (Dept. of BEE),
Ms. Rajalekshmi I. S. (Dept. of Science & Humanities), Mr. Roshan George Koshy (Dept. of ME), Ms. Roshni G. Kumar (Dept. of GCE),
Ms. Ann George (Dept. of CE), Ms. Merin Kuriankone (Dept. of CG) & Ms. Daya R. S. (Dept. of IT).

Tel : 0471-2545865 / 2545868 / 2545872 **Fax :** 0471-2545869 **Email :** mboat@mboat.org **Website :** www.mboat.ac.in

[For Private Circulation only] Designing & Printing : St. Joseph's Press, Tvm-14