



R & D Newsbulletin

Vol. 2, Iss.1

Annual Newsbulletin (June 2015-May 2016)















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ICETETS-2016 Feedback



Daniel Helman Founder / Executive Director Winkle Institute, USA

The First International Conference on Emerging Trends in Engineering, Technology & Science was productive and joyful for me. It was a decent introduction to the academic culture of South India, and I'd recommend the conference in future years for any academic from outside the region wishing to get a clearer picture of the progress and challenges that lie ahead for studies here in India. I was particularly taken with the quality of the research projects. I enjoyed learning the specifics of a few areasfly ash utilization especially- as my research is involved in sustainability.



Anooshmita Das PG Student/ECE National Institute of Technology Arunachal Pradesh

It was an absolute delight for me to participate in ICETETS 2016 for oral presentation during February, 24-26 at Kings College of Engineering, Punalkulam. I heartily congratulate and appreciate the hard-work and energy put behind to make the conference a successful event. And wish good-luck to the team for upcoming events.

Visitors Feedback





S. Augusti Lindiya .S Assistant Professor - III/SEEE SASTRA University Thanjavur

Research Lab at Kings College of Engineering has the facility of DT 9834 Data Acquisition Module and the controller developed for the converter in MATLAB/ Simulink® can be interfaced with the prototype model of the converter using DT9834 Data Acquisition Module. With this module the simulated results of the output voltages of Single Input Multiple Outputs and Multiple Inputs Multiple Outputs with various controllers are validated. DT 9834 is a high speed, high performance USB data acquisition module and compatible with LABVIEW® and MATLAB® software packages. I thank the Management & Principal for permitting me to utilize the facilities.

G. Abinaya, S. Sneha, R. Vinotha, V. Yogalakshmi

Final Year UG Students (2015-16) P.R Engineering College, Thanjavur

We are very happy to extend our warm thanks to R&D section of KCE. By doing our project in your esteemed lab we gained a lot of knowledge about the optical communication. We hope to apply the knowledge gained in the future.



International Conference

International Conference on Emerging Trends in Engineering, Technology and Science (ICETETS-2016), approved by IEEE, USA and technically sponsored by Computational Intelligence Society, Robotics & Automation Society of IEEE Madras Section, Cafet-Innova Technical Society, Hyderabad, Hannam University and Daejeon University, South Korea was organized during 24th–26th, February, 2016. A target of 400 papers was set. Enthusiastic response was received all around and 325 full manuscripts were uploaded on EasyChair conference management system. 116 academicians from renowned institutions scrutinized the technical papers and 173 papers were accepted for presentation. All the accepted papers were distributed for oral sessions in 17 tracks. The delegation consisted of nearly 200 personalities from amazingly varied backgrounds and from different walks of life including participants from countries like USA, Bangladesh.

Inauguration

The inaugural function of ICETETS-2016 was held on 24th February, 2016 at Chera Hall. **Dr S. Durairaj, Principal and Conference Chair,** welcomed the gathering and narrated the theme of the conference. **Shri T.R.B.Rajaa,** Ex-Chairman, Kings College of Engineering, presided over the function and honoured the Chief Guest **Dr. Kim Kyung-tae, Professor Emeritus, Hannam University, South Korea** and Guests of Honour **Dr.N.Kumarappan**, Vice Chairman/IEEE- Madras Section and **Shri.R.V.Balasubramaniam**, Vice President, Reliance Jio Infocomm Limited, Mumbai. **Dr. J. Arputha Vijaya Selvi, Technical Programme Chair,** gave an overview of ICETETS-2016.



Dr. S. Durairaj, Principal delivering welcome address



Dr. J. Arputha Vijaya Selvi Technical Programme Chair giving an overview of the conference

Hard copy of the Conference Proceedings was released by **Dr.Kim Kyung-tae**, Chief Guest and received by Shri **T.R.B Rajaa** and E-Copy of the Proceeding was released by **Dr.N.Kumarappan**, Vice Chairman/IEEE- Madras Section and was received by Shri. **T.R.S.Muthukumaar**, **Chief Executive Officer**, Kings College of Engineering.



Release of Hardcopy of the proceedings

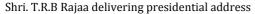


Release of the ecopy of the proceedings

Shri T.R.B.Rajaa, presided over the function and delivered the Presidential Address. He insisted the engineers to focus on innovations which would enhance the living standards of farmers and prosthesis for war veterans. He also reiterated that only engineers could bring newer technologies which would develop a sustainable eco system. **Prof. T. Mohan Bapu**,

Head/ Dept. of Information Technology introduced the Chief Guest **Dr. Kim Kyung-tae** who delivered the inaugural address. **Prof. Kim Kyung-tae**, enlightened the audience with his mind blowing talks on the Emerging trends in Communication Engineering.







Dr. Kim Kyung-tae, delivering Inaugural Address

Prof. R. Senguttuvan, Head/ Dept. of English, introduced the Guests of Honour. **Shri.R.V.Balasubramaniam**, felicitated & delivered special address. **Dr.N.Kumarappan**, offered felicitations and explained about the newer technologies for the next decade. **Prof. A. Albert Martin Ruban**, Head/Science & Humanities, concluded the inaugural function by proposing vote of thanks.



Shri.R.V.Balasubramaniam, Vice President, Reliance Jio Infocomm Limited, Mumbai, delivering special address



Dr.N.Kumarappan, Vice Chairman / IEEE- MAS, offering felicitations

Prof. K. Abhirami, Associate Professor/ Dept. of Computer Science & Engineering, welcomed the gathering & introduced the resource person. The Conference also featured an invited talk by **Dr.Kim Kyung-Tae** on the title, **"How do we perceive the 3D objects and how to implement"**. **Dr.N.Kumarappan** delivered invited talk on the title **"Smart grid - revolutionizing our Energy feature"**. **Prof. T. Gnanajeya**, Head/Dept. of Mathematics, proposed vote of thanks.



Dr.Kim Kyung-Tae delivering Invited Talk



Dr. N. Kumarappan delivering Invited Talk

On day 1, papers were presented in 7 tracks; Dr.A.Sivanantha Raja, A.C. College of Engineering & Technology, Karaikudi, chaired track 1, Prof.A.Tamil Selvan, KCE, chaired track 2, Dr.K.Lakshmi, Periyar Maniammai University, Thanjavur chaired track 3, Dr.K.R.Balasubramanian, National Institute of Technology, Tiruchirappalli, chaired track 4, Dr.D.Kumar, Periyar Maniammai University, Thanjavur, chaired track 5, Dr.V.R.Sarma Dhulipala, Anna University, BIT Campus, Tiruchirappalli, chaired track 6 and Dr.S.Nagarajan, Central University, Tiruvarur chaired track 7.







Delegates presenting their research work in the technical session

On the day 2, **Dr. R. Saravannan**, Head/Dept. of Civil Engineering, welcomed the gathering, **Prof.S.M. Uma**, Head/Dept. of Computer Science & Engineering, introduced the resource person to the gathering. **Dr. S. R. Pandian**, Indian Institute of Information Technology, Design and Manufacturing, Chennai, delivered invited talk on the title "**Building a Smart Mosquito Trap – Intelligent Mechatronics for Mosquito Control Research". Prof. T. Shanthi**, Head/Dept. of Electronics & Communication Engineering, proposed vote of thanks. On day 2, papers were presented in 4 tracks; Dr.S.Suganthi, Christ University, Benagaluru, chaired track 1, Dr.S.R.Pandian, IITD&M, Chennai, chaired track 2, Dr.J. Arputha Vijaya Selvi, KCE, chaired track 3 and Dr.R.Ganthimathi, National Institute of Technology, Tiruchirappalli, chaired track 4.

On day 3, papers were presented in 6 tracks; Dr.S.P.Kulandaivel Babu, Periyar Maniammai University, Thanjavur, chaired track 1, Dr.B.V.Manikandan, Mepco Schlenk Engineering College, Sivakasi, chaired track 2, Dr.S.Mary Saira Bhanu, National Institute of Technology, Tiruchirappalli, chaired track 3, Dr.P.K.Srividhya, Periyar Maniammai University, Thanjavur, chaired track 4, Dr.P.S.Kannan, Professor Emeritus, Thiagarajar College of Engineering, Madurai, chaired track 5 and Prof.M.Sivakumar, Thiagarajar College of Engineering, Madurai, chaired track 6.

Dr. T. Pushparaj, Head/ Dept. of Mechanical Engineering, welcomed the gathering. **Prof. K. Sathyalakshmi,** Assoc. Prof./ Dept. of Information Technology introduced the resource person. **Dr. S. Raghavan, Professor, NIT, Tiruchirappalli** delivered an invited talk on the title "**Miracles of Microwaves**". **Dr. V. Sureshkumar,** Head/ Dept. of Chemistry, proposed vote of thanks.



Dr. S. Raghavan, NIT, Tiruchirappalli delivering Invited Talk.



Dr. S. Sivakumar, Editorial Chair, welcomed the gathering.

In the valedictory function, **Dr. S. Sivakumar**, welcomed the gathering. **Prof. T. Vigneswari**, COE, introduced the Chief Guest. **Dr.D.Viswanathan**, **Ex Vice Chancellor**, **Anna University**, **Chennai**. In his valedictory address, Dr.D.Viswanathan, stressed the importance of transforming research ideas into patents/products and emphasized the need for project based learning in Universities & Colleges. He also stated that ICETETS-2016 is a huge platform for amalgamation of all engineering disciplines to generate and share new & innovative ideas. He briefed the role of computing systems in the thermal plants, oceanography and weather forecasting. He pointed out that the teaching fraternity should undergo training in recent trends which would help them to mould the student community to face the challenges in their career. His address to the academicians and researchers of the conference was a source of inspiration.



Dr. D. Viswanathan, Former Vice Chancellor, Anna University, Chennai delivering valedictory Address.



Dr. S. Raghavan, Professor, National Institute of Technology, Tiruchirappalli delivering special address.

In his special address, **Dr. S. Raghavan**, shared his experiences with the People's President, Dr. A.P.J. Abdul Kalam. **Dr. S. Durairaj**, Principal, presented the Conference Summary & Recommendations to the audience. **Dr.P.S.Kannan**, Professor Emeritus, TCE, Madurai, distributed the Conference Certificates to the delegates. **Dr. J. Arputha Vijaya Selvi**, Convener, proposed vote of thanks.



Dr. D. Viswanathan, distributing certificates to the participants



Dr. P.S.Kannan, distributing certificates to the participants



Participants of the ICETETS-2016 on 26th February, 2016



ICETETS-2016 team

Outcome of Memorandum of Understanding (MoU)

- Dr. Kim-Kyang Tae, Professor Emeritus, Hannam University, South Korea, delivered a guest lecture on "Aperiodic signal is also periodic signal" to undergraduate & post graduate students of ECE on 24th February, 2016.
- ECE undergraduate students carried out their final year academic projects in the area of Food Processing at Indian Institute of Crop Processing Technology, Thanjavur

	Name of the students	Title of the Project
Abhimathi.T	Anbarasi.P	Support Vector Machine based real time rice quality analysis
Dhivya.N	Jaya Jananee.A	system

Resource Sharing - Laser Communication Lab

S. No	Institution/ Dept.	Beneficiaries	Batch Size	Title	Guide
1	Ponnaiyah Ramajayam College of Engineering & Technology / ECE	R. Vinodha V. Yogalakshmi S. Sneha G. Abinaya	4	Experimental analysis of suitable modulation technique for wireless optical communication	Mr. T.Pasupathi, AP/ ECE
2	Ponnaiyah Ramajayam College of Engineering & Technology / ECE	S. Soundhariya M. Sowmya R.K. Kalaiarasi	3	Implementation of error correcting codes for free space optical communication	•
3	SEEE / SASTRA University Thanjavur	S.Augusti Lindya	1	Controllers for DC – DC converter	Mr.P.Narasimman, AP / EEE

Books Published

• Dr. A. Arockia Bazil Raj, Free Space Optical Communication System Design, Modeling, Characterization and Dealing with Turbulence, De Gruyter Oldenbourg, Germany, December 2015.

Grants sanctioned

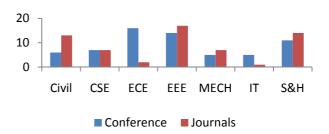
- Received a grant-in-aid of Rs. 7,500/- from IEEE Madras Section, Chennai towards organizing IEEE sponsored International Conference on Emerging Trends in Engineering, Technology and Science (ICETETS-2016).
- P. Mathavan and N. Senjeev, III EEE students under the guidance of Mr.E.Venugopal, AP/EEE received a grant-in-aid of Rs. 50,000/- from Indian Electrical and Electronics Manufacturers' Association (IEEMA), Bangalore towards the students project titled "Homemade Giromill Power Generation (HGPG)".

Proposals submitted

- Department of EEE, submitted a proposal to Ministry of New and Renewable Energy (MNRE) on "Generation & Utilization of electric power through the implementation of solar energy systems" for a grant-in-aid of Rs. 30,00,000/-.
- Department of Chemistry, submitted a proposal to Science & Engineering Research Board, New Delhi on "Water Based Fluorocarbon paints" for a grant-in-aid of Rs. 18,42,000/-.
- Department of Physics, submitted a proposal to CSIR, New Delhi on "Development of new cathode materials prepared by sol- gel method and studied by electrochemical process for sodium ion solid state battery applications" for a grant-in-aid of Rs. 17,63,000/-.

Publications

Department	Conference	Journals
Civil	06	13
CSE	07	07
ECE	16	02
EEE	14	17
MECH	05	07
IT	05	01
S&H	11	14



Faculty completed Ph.D.

Name / Dept	Outcome	
Dr.M. Malathy, Information Technology	2 Chapters in Books; 2 Papers in SCI journals.	

Faculty doing Ph.D.

Name / Dept	Area of Research
Mrs. D. Subasri, Civil Engg.,	Environmental Engineering
Mrs. J.Sharmila, Civil Engg.,	Environmental Engineering
Mrs.T.Vigneshwari, Computer Science & Engg.,	Grid Computing
Mrs.S.M.Uma, Computer Science & Engg.,	Data Mining
Mr.D.Sivakumar, Computer Science & Engg.,	Data Mining
Mr.J.Jegan, Computer Science and Engg.,	Wireless Networks
Mrs. K.Abhirami, Computer Science & Engg.,	Data Mining
Mrs.P.Nalayini, Computer Science & Engg.,	Wireless Networks
Mrs.T.Shanthi, Electronics & Communication Engg.,	Wireless Networks
Mr. A. Herald, Electronics & Communication Engg.,	Optical Communications
Mr. T. Pasupathi, Electronics & Communication Engineering	Free Space Optics
Mr.A.Tamilselvan, Electrical & Electronics Engineering	Electrical Machines
Mrs.N.Hemavathi, Electrical & Electronics Engineering	Wireless Sensor Networks
Mr.A.Albert Martin Ruban, Electrical & Electronics Engineering	Wireless Sensor Networks
Mr.P.Narasimman, Electrical & Electronics Engineering	Power Electronics
Mr. R. Sundaramoorthy, Electrical & Electronics Engineering	Power Converters
Mrs.K. Sathyalakshmi, Information Technology	Grid Computing
Mr.R. Murugesan, Information Technology	Data Mining
Mr.P.P.Shantharaman, Mechanical Engineering	Composite Material
Mr.M.Babu, Mechanical Engineering	Solar Energy Engineering
Mr. R.Sankar, Mechanical Engineering	Surface Coating
Mrs.G.Ramya Arokiamary, Mathematics	Stochastic Process
Mr.G. Shankara Kalidoss, Mathematics	Simultaneous Pells Equation
Mr. G. Jeyakrishnan, Mathematics	Number Theory
Mrs. S. Geetha, Mathematics	Fuzzy Graphs
Mrs. S. Revathy, Mathematics	Fuzzy Graphs
Mr. R. Suresh, Mathematics	Fuzzy Sets
Mrs.N.Latha, Mathematics	Mathematical Models in Genetics
Mr. K.Sudhakar, Training & Placement	Finance
Mr. B. Barankumar, Training & Placement	Marketing
Mr. B. Suresh Babu, Training & Placement	Marketing

Visiting Professor Activities - Dr. P.S.Kannan

- 1. Delivered a Guest Lecture on Electronic Circuits-I for II year ECE and Electronic Devices & Circuits for II year EEE on 29th July, 2015.
- 2. Delivered a Guest Lecture on Artificial Intelligence for IV year ECE students on 26th August, 2015.
- 3. Delivered a talk on Innovating Technology for utilizing solar energy to home without inverter in the workshop Microgrid connected solar power without inverter on 23rd September, 2015.
- 4. Reviewed the research progress of faculty members doing their Ph.D on 21st December, 2015.
- 5. Delivered a Guest Lecture on Circuit Theory for first year ECE & EEE students on 28th January, 2016.
- 6. Chaired a session in the International Conference on Emerging Trends in Engineering, Technology and Science on 26th February, 2016.
- 7. Reviewed the results of Anna University Examinations November/December 2015 on 31st March, 2016.

Awards & Championship

Dr.S.Durairaj, Principal, was awarded with Certificate of Appreciation in the presence of Honourable Union Ministers during the 45th National ISTE National Convention held at HVMPS College of Engineering & Technology, Maharashtra, during 09-11th January 2016.

Dr.S.Durairaj, Principal, presented a paper titled "Innovative Practices in Curriculum Delivery, Teaching & Learning Process" and received Best Paper Award during the 45th National ISTE National Convention held at HVMPS College of Engineering & Technology, Maharashtra, during 09-11th January 2016.

Mr. E. Venugopal, AP/EEE, received **Certificate of Appreciation** for organizing activities towards the advancement of IEEE and Engineering profession. Kings College of Engineering IEEE STB was awarded with Grade **"B"**.

P. Mathavan and N. Senjeev of III EEE secured third position in ELECRAMA-2016.



P. Mathavan and N. Senjeev of III EEE along with the fellow participants and officials of ELECRAMA-2016.

Programmes Organized

R&D section and IEEE student branch organized a guest lecture on **"Power Generation & Distribution"** on 24th July 2015. Er. S. Sambath, Assistant Executive Engineer, TANGEDCO, Mannargudi, was the resource person. In his lecture, he encouraged the students to do their projects in renewable energy system and smart grid, such as solar, wind and hybrid power generation.



From left: Mr. E. Venogpal, AP/EEE, Prof. T. Kannan, PO, Dr. S. Sivakumar, Head/EEE, Er.S.Sambath, AEEE/TANGEDCO, Dr. J. Arputha Vijaya Selvi, Dean(R&D), Prof. A. Tamilselvan, PO.



Mr.Shaik Mohd Raffi, Application Engineer, CoreEL Technologies, Bangalore, delivering lecture.

IEEE Student Branch organized a Workshop on "**System Application Products**" 08th August, 2015. Mr.R Sivasubramanian, Project Manager, Tech Mahindra, Chennai briefed overview, design flow of SAP with case studies.

R&D section and IEEE student branch organized a workshop on "Signal Processing Application using Xilinx System Generator" on 24th August 2015. Mr.Shaik Mohd Raffi, Application Engineer, CoreEL Technologies, Bangalore was the resource person. In his lecture, he explained about Design flow of both Xilinx and System generator using FPGA. Also he demonstrated the image processing applications along with case studies such as face and finger recognition.

IEEE student branch organized **Spell Bee Competition** on 05th September 2015, 119 students of various disciplines participated. The program was organized as an initiative to improve the vocabulary skills of our students. Dr. S. Sivakumar, Head/EEE, presided and appreciated the efforts made by the IEEE STB members. The winners of the competition K. Samuel – I Prize, M. Stephen Stanley – II Prize, R. Deepika – III Prize were awarded with prize and certificate of appreciation. Dr. J. Arputha Vijaya Selvi, Dean (R&D) presided and issued the prizes and certificates to the winners.

IEEE Student Branch celebrated **IEEE Day** on 06th October, 2015. Mr. E. Venugopal, IEEE Student Branch Counselor briefed about the importance of IEEE Membership and Benefits.



IEEE Student Branch of Kings College of Engineering on IEEE Day.



Prof.T.Kannan, PO, delivering awareness lecture.

IEEE Student Branch organized an "Awareness program on Basic Electricity for everyone and Electrical Safety" to the students of St. Mary's High School, Thirukanurpatti, on 04.03.2016. Around 230 students attended the program. **Prof. T. Kannan, Project Officer**, presided over the program and delivered the awareness speech on "Basic Electricity for everyone and Electrical safety". **Mr.E.Venugopal,** Asst. Prof, EEE, IEEE Student Branch Counselor gave a special address on Higher Studies to the students and proposed vote of thanks.

IEEE student branch and Instrument Society of India organized a one day hands on session on "Calibration of Electro-Technical Instruments" on 29th March, 2016. Mr. J. Prasad, Quality Manager, S-Calibration Laboratory, Coimbatore handled the sessions.



Mr. J. Prasad, Quality Manager, S-Calibration Laboratory, Coimbatore delivering lecture at the hands-on-session on calibration

IEEE MAS LINK Vol. 13 No.3 Apr 2016 Page 23





Hands-on Training on Calibration: The IEEE SB along with the dept. of EEE, R&D section organized a one-day "Hands-on Training on Calibration" on 29th Mar 2016. Around 50 students of EEE dept. attended this training program. Mr. E. Venugopal, AP-EEE and SB Counselor welcomed the gathering. The program was conducted by Mr.J. Prasad, Sakthi Powerr Solution, Coimbatore explained the need and methods of calibration. The students are actively participated in the training and learnt how to calibrate the meters.

Project Competition: The IEEE SB along with the dept. of EEE, R&D section organized a "Project Competition" on 2nd Apr 2016. 58 students (in 16 batches) of final year EEE participated in the competition. Dr. J. Arputha Vijaya Selvi, Dean R&D and Dr. S. Sivakumar HOD/EEE evaluated the projects. The project titled "Design of Robotic Vehicle for Under Water environment" demonstrated by R. Karthigapriya MIEEE, J. Reshma MIEEE and P. Visaali MIEEE and guided by Mr. E. Venugopal, AP/EEE & IEEE SB Counsellor, was selected as the best project.

The Hindu, dt. 14.03.2016 Page.2

Global meet

More than 180 delegates from India and abroad presented research articles at the IEEE sponsored international conference on "Emerging trends in engineering, technology and science (ICETETS-2016)," organised by Kings College of Engineering, Punalkulam. Kim Kyung-Tae, Professor Emeritus, Hannam University, South Korea, delivered the inaugural address. T.R.B. Rajaa, former chairman of the college. presided. R.V. Balasubramaniam, vicepresident, Reliance Jio Infocomm Limited, Mumbai. delivered a special address. An MoU was exchanged between Reliance Industries and Kings College of Engineering. Mr. Kim Kyung-Tae spoke on

"How do we perceive 3D objects," N. Kumarappan, Vice-Chairman, IEEE-Madras section, on "Smart grid," S.R. Pandian on Building a smart mosquito trap - intelligent mechatronics for mosquito control research" and S. Raghavan, Professor, National Institute of Technology, Tiruchi, on "Miracles of Microwaves." D. Viswanathan, former Vice-Chancellor, Anna University, Chennai, delivered the valedictory address. P.S. Kannan, Professor Emeritus, Thiagarajar College of Engineering, distributed the certificates in the presence of S. Durairaj, conference chair and Principal.

IEEE MAS LINK, Vol. 13, Iss. 1, March 2016, Page. 5



24 -26 Feb 2016: ICETETS-2016 - International Conference on "Emerging Trends in Engineering, Technology and Science" with inaugural talk by Dr.Kim Kyung-Tae, Professor Emeritus, Hannam University, South Korea.

Invited talks were given by Dr. Kim Kyung-Tae on "How do we perceive the 3D objects and how to implement", Dr. N. Kumarappan on "Smart grid – revolutionizing our energy future", Dr. S. R. Pandian, on "Building a Smart Mosquito Trap – Intelligent Mechatronics for Mosquito Control Research" and Dr. S. Raghavan, Professor, National Institute of Technology, Tiruchirappalli on "Miracles of Microwaves".

Paper Distribution - ICETETS-2016 - February, 24 - 26, 2016

