

“ELECTRONICS MAKERS - 2017”

JULY 1-2, 2017

NETAJI SUBHAS INSTITUTE OF TECHNOLOGY, NEW DELHI




IEEE CAS Circuits and
Systems Society
Bangalore Chapter


JOINTLY ORGANIZED BY IEEE INDIA COUNCIL, CENTRE FOR EMBEDDED PRODUCT DESIGN CENTRE FOR ELECTRONICS DESIGN & TECHNOLOGY, NSIT
IN ASSOCIATION WITH IEEE CAS, BANGALORE CHAPTER

ADVANCE TECHNICAL PROGRAM

Day-1

| | Track 1 DIY in India | Track 2 Hands-on Workshop |
|---------------|---|---|
| 9.00 – 9.30 | Registration | Registration |
| 9.30 – 10.00 | Inauguration | |
| 10.00-11.00 | Keynote Bridging Academic R&D with Product Innovation - a few case studies and a way forward... <i>Prof. Ram Gopal Rao, Director, IIT Delhi and</i> <i>Prof. Prabhat Ranjan, TIFAC-CORE, Department of Science and Technology</i> | |
| 11.00-11.30 | Tea Break | |
| 11.30 – 12.30 | Panel Discussion #1: “Do It Yourself” to “Make in India”: A Leap of Faith Moderator: <i>C.P.Ravikumar (Texas Instruments, India)</i> Panelists: <i>Prof. Dhananjay Gadre, NSIT and Sanjay Dixit, TI, New Delhi</i> | Hands-on Workshop Microcontroller Learning Platform on a Shoestring Budget using MSP430 LunchBox Each participant gets an MSP430 Lunchbox Kit. |
| 12.30 – 1.00 | Invited talk TBA | |
| 1.00 – 2.00 | Lunch and time for selected demos | |
| 2.00 – 3.00 | Panel Discussion #2: Project based Engineering Education for “Make in India” Moderator: TBA Panelists: <i>A. Paventhan, ERNET, Bangalore and others</i> | Workshop continues  |
| 3.00 – 4.00 | Summer and Winter Workshops for Promoting ESDM Culture <i>Prof. Dhanjay Gadre, NSIT</i> | |
| 4.00 – 5.00 | Tea and time for networking | |

Day-2

| | Track 1 Project Presentations | Track 2 Workshop | Track 3 Workshop | |
|---------------|--|--|---|---|
| 09.00 – 9.30 | Registration | Registration | Registration | |
| 09.30 – 10.00 | Inauguration | | | |
| 10.00-11.00 | <p style="text-align: center;">Project Presentations</p> <p>EHEIGHT Vijay Singh and Bhoomika Sharma (Eheight)</p> <p>Design of an Automatic Solar Tracking System For Position Control Of SPV Panel Ishtyaq Choudhary (SOET B.G.S.B University) and Prof.Farhad Ilahi Bakhsh</p> <p>Nuclear Industry Pipes Maintenance Robot Tejas Gujrati (Hindustan University , Chennai)</p> <p>Automated Embedded Software DevOps with BootBox Ayan Pahwa and Vijay Kumar Rai (Mentor Embedded Software Division)</p> | <p style="text-align: center;">Project Presentations</p> <p>Arduino Mega and IOT based Intelligent Energy Meter (IEM) to Increase Efficiency and Accuracy in Current Billing Methodology Dilip Chaubisa and Osmi Jaiswal (L.D College of Engineering)</p> <p>Speed Control of DC Motor using Arduino and Measuring that Speed using Contactless Arduino based Tachometer Kajal Sharma (SOET B.G.S.B University) and Prof.Yasir Arafa</p> <p>Application of Li-Fi Technology in the Audio Transmission Abhishek Akash Diggewadi and Akshay Diggewadi (Shah & Anchor Kutchhi Engineering College, Mumbai)</p> | <p style="text-align: center;">Hands-on Workshop Beaglebone and Linux - Open-Source Hardware and Software for DIY</p> <p>Each participant gets a Beaglebone Cape.</p>  | <p style="text-align: center;">Workshop on VXWORKS Conducted by CG CoreEI, New Delhi</p> |
| 11.00 – 11.30 | Tea Break | | | |
| 11.30 – 1.00 | <p style="text-align: center;">Project Presentations</p> <p>Remote Discovery using MEMS, GPS and GSM Diwakar.V (R.M.K. Engineering College)</p> <p>Antenna Positioner Solution for Academic and Research Institutes Shiv Prasad Tripathy (Candlestick Consulting LLP)</p> <p>Automatic laundry System for Hostels Paramvir Singh (Chitkara University)</p> <p>Smart Energy Meter Amit Kumar (Chitkara University)</p> | <p style="text-align: center;">Project Presentations</p> <p>Solar Power based Intelligent Charging System using MPPT Algorithm Deepak Singh (NSIT, Delhi)</p> <p>Duplex Brain Signal Channel Abhirupa Saha</p> <p>\$1 ECG EKG and EMG DIY Project Deepak Khatri (NSIT, Delhi)</p> <p>Evolution of Wearable Technology Towards Women Safety J.Cyril Antony (Manakula Vinayagar Institute of Technology, Puducherry) and Ast.Prof. G.Sharmila</p> | Workshop continues | Workshop continues |
| 01.00 – 2.00 | Lunch | | | |
| 02.00 – 4.00 | Project Demos | ... continues | ... continues | |
| 04.00 – 5.00 | Valedictory Certificates and Prize distribution | | | |

Registration

Please **FILL OUT THE REGISTRATION FORM** to enroll.

The fee structure is mentioned in the above form. Please calculate the fee applicable to you and prepare a cheque or DD made out to "**Centre for Embedded Product Design, NSIT**" and send it to "**Dr. Tarun Rawat**, Electronics and Communication Engineering Division, Netaji Subhas Institute of Technology, Sector-3, Dwarka. New Delhi 110078". Your participation will be confirmed and further instructions will be sent through e-mail.

Hostel accommodation is available @ Rs 200/- per day. Please include this as part of registration fee and send a mail to **Prof. Tarun Rawat** (tarundsp@gmail.com) intimating the time of your arrival and departure. Contact person for hostel is +919911686234. Hostel accommodation includes bedding. Meals are not included. However, meals can be purchased in the hostel or in the canteen. The conference will provide a working lunch and coffee/tea as part of registration fee.

Keynote address

Bridging Academic R&D with Product Innovation - a few case studies and a way forward...

***Prof. Ram Gopal Rao**, Director, IIT Delhi*

India's contribution to the world's R&D and Intellectual Property is steadily increasing. In certain specialized areas such as Nanotechnology, India is among the top 3 countries in the world in terms of research publications and patent filings. Despite the low percentage of GDP spending for R&D in India, Indian researchers have excelled in research output, when measured in terms of the number of research publications. Though these are excellent achievements, the situation is entirely different when one looks at the innovation or the product development potential in the country. For example, India ranks very poorly on the Global Innovation Index (GII), and the research undertaken by institutions, whether public or private, has hardly resulted in any major technological breakthrough of significant commercial value.

Given this scenario, in order to make the Indian research competitive and sustainable in terms of innovation and product development, a multitude of initiatives have recently been contemplated and launched by the Govt. of India at the national level. In this talk, we will discuss the changing scenario for product innovation in Indian academic institutions, and also see how one can accelerate the culture of product innovation in Indian academic institutions.



Dr. V. Ramgopal Rao is currently the Director, IIT Delhi. Before joining IIT Delhi, Dr. Rao was a P. K. Kelkar Chair Professor in the Department of Electrical Engineering and the Chief Investigator for the Centre of Excellence in Nanoelectronics project at IIT Bombay. Dr. Rao has over 400 publications in the area of Electron Devices & Nanoelectronics in refereed international journals and conference proceedings and is an inventor on 35 patents (including 13 issued US patents) and patent applications, with many of his patents licensed to industries for commercialization. He is a co-founder of two startup companies at IIT Bombay which are developing products in the area of Security and agricultural sectors.

Prof. Rao's work is recognized with many awards and honors in the country and abroad. He is a recipient of the Shanti Swarup Bhatnagar Prize in Engineering Sciences in 2005 and the Infosys Prize in 2013. Dr. Rao also received the Swarnajayanti Fellowship award from the Department of Science & Technology, IBM Faculty award, Best Research award from the Intel Asia Academic Forum, Techno-Mentor award from the Indian Semiconductor Association, DAE-SRC Outstanding Research Investigator award, NASI-Reliance Platinum Jubilee award, J.C.Bose National Fellowship, Prof. C.N.R.Rao National Nanoscience award, VASVIK award, and the Excellence in Research Award from IIT Bombay. Prof. Rao was an Editor for the IEEE Transactions on Electron Devices during 2003-2012 for the CMOS Devices and Technology area and currently serves on the Editorial boards of various other international journals. Dr. Rao is a Fellow of IEEE, the Indian National Academy of Engineering, the Indian Academy of Sciences, the National Academy of Sciences, and the Indian National Science Academy. For more information about Prof. Rao's current research interests and a list of publications visit: <http://www.ee.iitb.ac.in/~rrao/>