

## REPORT ON

### International Conference on Computational Advancement in Communication Circuits & Systems (ICCACCS-2014)

TEQIP Sponsored International Conference on Computational Advancement in Communication Circuits & Systems (ICCACCS-2014) organized by Narula Institute of Technology, Kolkata, India during 30th October to 1st November, 2014. ICCACCS-2014 aimed to bring together researchers, engineers and practitioners to present the latest achievements and innovations in the interdisciplinary areas of soft computing, Electronics and Communication Engineering, VLSI design. It created a platform to discuss the thought-provoking developments and challenges in the field of research leading to potential new future directions. We received paper from various disciplines, communication engineering, Control systems, Bio-medical signal processing, image processing, Computer Science and networking.

We are extremely privileged to have Springer as the publication partner and IEEE Kolkata section as the technical partner. We received 122 papers and after review and plagiarism check by Plagscan software a total of 58 papers have been accepted.

The conference spanned for three days with keynote sessions, paper presentations and cultural program. The inauguration session was graced by the chairman JIS group, Sardar Jodh Singhji, Prof Asit Guha, Director, JIS Group, Prof S.M.Chatterjee, Chairman BOG, Prof Ajoy Ray, Conference Chair and Director IEST, Prof Phalguni Gupta, Director NITTTR, Kolkata. Prof. Debatosh Gupta, Chairman IEEE Kolkata section.



Inaugural session: Sardar Jodh Singhji , Chairman JIS Group, Prof M.R.Kanjilal, Principal, Narula Institute of Technology, Prof Ajoy Ray, Conference Chair ICCACCS 2014, Director, IEST, Shibpur, Prof Dr. Christophe Fumeaux , School of Electrical and Electronic Engineering, The University of Adelaide, Australia



Prof D.Guha Chairman IEEE Kolkata Section, Prof M.R.Kanjilal, Principal, Narula Institute of Technology, Prof S.M.Chatterjee, Chairman, BOG, JIS Group

The keynote session on *Advanced Materials: Opportunities and Challenges for Tomorrow's Antennas* by Prof Dr. Christophe Fumeaux, School of Electrical and Electronic Engineering, The University of Adelaide, Australia gave an insight on reconfigurable antenna design and the multidisciplinary efforts to increase the performance of this class of conductive materials, and advancements in terms of intrinsic conductivity, mechanical properties which are applicable for future antenna applications.

We had a very good plenary speech on *Emerging Technologies on Broadband Optical Wireless Communications* by Dr. A. Alphones, School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore,

I Fang Chung, Associate Professor, Institute of Biomedical Informatics, National Yang-Ming University, Taiwan, R.O.C gave wonderful lecture on *Feature Selection Approaches for Biomedical Data*. He has sighted many biomedical examples and how Computational intelligence tools, such as fuzzy logic, neural networks, and evolutionary computing, can be used for modelling and analysis of data.

Prof Chia-Feng Juang of National Chung-Hsing University, Taiwan, R.O.C. gave a lecture on *Data-Driven Fuzzy Systems: Designs and Applications and on the fuzzy systems and ant colony optimisation*. His speech on the evolutionary learning schemes, especially focusing on the recent research works going and its application to human skin colour detection and robotics inspired many of us.

*It was a great privilege to listen to Dr. Sajjan Shiva Professor and Chairman, University of Memphis, Memphis, TN, USA. His speech on the A Holistic Game Theory Inspired Defence Architecture and the insight of Game theory and the various practical application and cyber security.*

Dr. M. H. Kori gave a lecture on Wireless Communications – 4G & Beyond and the latest updates on 4G - LTE advanced. Prof Debasis Saha gave a valuable speech on how to write a good Quality technical paper. Prof. Swapna Banerjee of IIT Kharagpur gave a lecture on Device & Circuits. Last but not the least Prof. Dr. Mrityunjay Chakraborty of IIT Kharagpur gave a lecture on signal processing.



*Plenary Session*

The technical paper sessions were classified into various tracks like RF, microwave and antenna, communication engineering, control system, computation and mathematics, image processing, signal processing, devices and circuit, computer and networks.

Technical Session





The technical paper sessions were chaired by eminent professors of various universities Prof Alphonies, Prof. Sukla Basu, Prof .C. Fumeaux, Prof Dr. A.k Aditya. Prof. P.K. Banerjee, Prof. S. R. Bhadra Choudhury, Prof. B. Bandyopadhyay. Prof. D. K. Bhattacharjee, Prof .I Fang Chung, Prof Chia-Feng Juang, Prof. A. K. Mallick, Prof. R. Nandi , Dr. M.H.Kori, Prof. Arun Mondal, Prof. Swapna Banerjee, Dr. Moumita Mukherjee, Prof. Santanu Sen, Prof. S. K. Sanyal, Prof. Sayan Mukherjee and Prof. D. N. Tibrewala.

In the RF and Microwave session papers on Rectangular Microstrip Patch Antenna, Dielectric Resonator antenna, Bandwidth enhancement techniques for UWB, Capacitive MEMS switch etc were presented. In Communication Engineering session papers on latest research areas like Spectrum Sensing in cognitive radio system, Random bit generator and on OFDM system were presented and placed for discussion..

The session on Computation and Mathematic covered papers on Similarity and Dissimilarity of DSA sequences, Homology Modelling method for Astacin family process and Proton Density variation in ionosphere before strong earthquake using GOES – 15 data. Computer and networks session covered research papers on the Secured group based Communication scheme, behaviour pattern of nodes, Non-cooperative node detection in mobile ad-hoc network and algorithm for Road network range queries. Papers on Comparison of brain motion learning and Controllability and observability testing for a standard prosthetic arm model were discussed in the Control system session. The session on Devices and Circuit covered papers on Frequency Response of Si/ SiGe Heterojunction Bipolar Transistor, Analysis of ambipolar intrinsic resistance of PIN diode and thermal modelling of III- V WBG based PIN switch. The technical paper session on Signal Processing had papers on Music effect on HRV impulse and subband coder and decoder of speech signal using log- normal probability distribution. The papers in the Image Processing session were on image noise removal using super threshold stochastic response for an image, Improvement of Reversible watermarking using convolution coding and filtering and segmentation approach for Iris recognition in less constrained environment.



Technical Paper Session

Valuable suggestions were given by the session chairs, without which the conference would not be a success.

With the technical paper presentation we organised a cultural program, gala dinner and a city tour for all the participants.





Cultural Program



Gala Dinner



City tour