
Editorial

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Biographical notes: Santanu Kumar Behera received his BSc (Engg.) from UCE Burla, Sambalpur University in the year 1990, ME and PhD (Engg.) from Jadavpur University in the year 2001 and 2008, respectively. He is currently working as an Associate Professor in the Department of Electronics and Communication Engineering, National Institute of Technology Rourkela, India. His current research interests include Planar Antennas; Dielectric Resonator Antenna and Metamaterials. He is a Life Member of IETE (India), Computer Society of India, Society of EMC Engineers (India), ISTE (India) and Member of IEEE. He is a reviewer for ICTACT Journal of Communication Technology, India and IETE Journal of Research India.

Dr. Umesh Chandra Pati obtained B.E. degree in Electrical Engineering from National Institute of Technology (NIT), Rourkela, India. He received M.Tech. and Ph.D. degrees in Electrical Engineering with specialisation in Instrumentation and Image Processing respectively from Indian Institute of Technology, Kharagpur, India. Presently, he is serving as Associate Professor in Electronics and Communication Engineering Department, NIT, Rourkela, India. His current areas of interest are Image Processing, Signal Processing, Computer Vision and Instrumentation. He has authored/edited two books and published more than 40 papers in international as well as national journals and conference proceedings. He is a member of IEEE.

Samit Ari graduated in Electronics and Tele-communication Engineering from University of Kalyani, India in 2001. He received the M. Tech degree from University of Calcutta, India in 2003 and PhD degree in 2009 from Indian Institute of Technology, Kharagpur, India. Since July 2009, he is serving as a faculty member at Dept. of Electronics & Communication Engineering, National Institute of Technology, Rourkela. His research interest is in the broad area of signal processing, image processing, modelling, neural networks, pattern recognition, RFID detection etc. Dr. Ari has over 15 publications in journals and conference proceedings. He has served/is serving various administrative responsibilities.

We are very glad to release *special issue on Electronic Systems-2011* in the *International Journal of Signal and Imaging Systems Engineering (IJSISE)* in three parts. The first issue will be published in Vol. 5, Number. 4 and subsequently the second and third will follow as Vol. 6 Number. 1, 2013 and Vol. 6 Number. 4 respectively. These three issues will cover the areas of Signal Processing, Communication, Computational Intelligence, Integrated Circuits and Systems and Instrumentation.

Today, most electronic devices use semiconductor components to perform electron control. The study of semiconductor devices and related technology is considered a branch of solid state physics, whereas the design and construction of electronic circuits to solve practical problems come under electronics engineering. Most electronic appliances, such as radio receivers, Television, Mobile handset etc., are constructed from combinations of a few types of basic circuits.

Presently, electronics engineers have the ability to design circuits using pre-manufactured building blocks such as power supplies, semiconductors and integrated circuits. Electronic design automation software programs include schematic capture programs and printed circuit board design programs. Popular names in the EDA software world are NI Multisim, Cadence (ORCAD), Eagle PCB and Schematic, Mentor (PADS PCB and LOGIC Schematic), Altium (Protel), Agilent (ADS) and many others.

Electronics also deals with electrical circuits that involve active electrical components such as vacuum tubes, transistors, diodes and integrated circuits and associated passive interconnection technologies. The nonlinear behaviour of active components and their ability to control electron flow makes amplification of weak signals possible and is usually applied to information and signal processing. Similarly, the ability of electronic devices to act as switches makes digital information processing possible. It also deals

with RF and Microwaves, Antenna and Wave propagation etc for wireless applications.

Many people have worked hard to bring out this Special issue of the International Conference on Electronic Systems-2011 held at NIT Rourkela, India during January 7–9, 2011. At first, we would like to thank all the authors for contributing papers to this issue. Our special thanks to

Dimitrios A Karras for his kind permission to publish the special issue in IJSISE journal. We would like to express our sincere gratitude to the reviewers who had carried out the most difficult work by carefully evaluating the submitted papers. Last but not the least thanks are due to Liz Harris and her team members of IJSISE for their support for bringing out this issue.