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## Editorial

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**Biographical notes:** Mahesh Chandra is presently working as an Associate Professor in the Department of Electronics & Communication Engineering at Birla Institute of Technology Mesra, Ranchi, India. He has published more than 115 research papers in the area of speech, signal and image processing at national/international levels. He has guided seven PhD students, 20 MTech students and 50 BE projects. He has delivered a number of keynotes and chaired many sessions at international levels. Presently, he is PI from BIT Mesra Ranchi in DEITY consortium project on “Speech based Access of Agricultural Commodity prices and weather information in 12 Indian Languages, Dialects”.

Asutosh Kar is working as an Assistant Professor in the Department of Electrical and Electronics Engineering at BITS Pilani (Hyderabad Campus). He has published more than 40 research papers in the areas of digital signal processing, advanced signal processing, filter theory and image processing at international levels. He has organised special sessions in various reputed international conferences worldwide. He has received honour on behalf of President of India four times from All India Radio for high-quality technical presentations. He is a member of many international technical societies and the author of the various international book and book chapters.

Sambit Bakshi is presently with the Department of Computer Science & Engineering of National Institute of Technology Rourkela, India. He has pursued his Doctoral and Masters from the same institute.

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We are happy to present the special issue on ‘Adaptive and Creative System Design’. Adaptive systems are the need for any development to have a sustainable future of the product. Researchers and scientists from different parts of the globe are hence engaged in research in this domain. Adaptive systems find their application in various research areas in present time including signal, image, video processing, communication and computing. They can be employed for system identification, low complexity dynamic designs, channel equalisation and modelling etc. We could only accommodate few quality articles in the scope of the special issue from the pool of articles submitted. We thank all

authors and reviewers who have supported us to come up with this special issue.

The topics covered in the issue spans from fault diagnosis in mobile network to embedded vision system design. Sahoo and Khilar present a flexible Distributed Self Diagnosis Protocol (DSDP) considering the time-varying topology of MANETs aiming to diagnose both hard and soft faulty mobile hosts. Two types of soft fault (permanent and intermittent) are considered. Using OMNet++ simulator, the validity of the proposed DSDP is supported with the accuracy and false alarm rates obtained through simulation environment having up to 30% faulty nodes. Selvakumar

et al. propose to implement robust face detection and identification system on a programmable resource constrained digital video processor. The proposed approach is shown to work in unconstrained scenarios whereas unconstrained face recognition is a bottleneck of present available systems.

Topics like designing quadrature mirror filter bank and regression neural network based greyscale image watermarking have also been covered in this issue. Kumar et al. present a closed form method for designing two-

channel linear phase quadrature mirror filter (QMF) bank which is improved by exploiting different window functions for designing the prototype filter for QMF bank. Mehta et al. present a regression neural network based greyscale image watermarking which is shown to yield high PSNR value indicating the imperceptibility and high bit correct ratio and normalised correlation value proving robustness of the proposed scheme.

We hope the readers will find the reported cutting edge researches very interesting.