
Editorial

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Biographical notes: G. Ranganathan is a Professor/ECE at Gnanamani College of Technology, Coimbatore, India. He has done his PhD in the Faculty of Information and Communication Engineering from Anna University, Chennai in 2013. His research thesis was in the area of bio medical signal processing. He has a total of 29+ years of experience both in industry, teaching and research. He has guided several project works for many UG and PG students in the areas of biomedical signal processing. He has published more than 35 research papers in international and national journals and conferences. He has also co-authored many books in electrical and electronics subjects. He has served as referee for many reputed international journals published by Elsevier, Springer, Taylor and Francis, etc. He has membership in various professional bodies like ISTE, IAENG, etc., and has actively involved himself in organising various international and national level conferences, symposiums, seminars, etc.

Joy long-Zong Chen is currently a Full Professor of Department of Electrical Engineering Dayeh University at Changhua Taiwan. Prior to joining the Dayeh University, he worked at the Control Data Company (Taiwan) as a Technical Manager since September 1985 to September 1996. His research interests include wireless communications, spread spectrum technical, OFDM systems, and wireless sensor networks. He has published a large number of SCI Journal

papers in the issues addressed physical layer for wireless communication systems. Moreover, he also majors in developing some applications of the internet of thing (IoT) techniques and he owned some patents authorised by the Taiwan Intellectual Property Office (TIPO).

Subarna Shakya is currently a Professor of Computer Engineering at the Department of Electronics and Computer Engineering, Pulchowk Campus, Institute of Engineering, Pulchowk, Tribhuvan University, Coordinator (IOE), LEADER Project (Links in Europe and Asia for Engineering, Education, Enterprise and Research Exchanges), ERASMUS MUNDUS. She received MSc and PhD degrees in Computer Engineering from the Lviv Polytechnic National University, Ukraine, 1996 and 2000 respectively. He has served as visiting professor at Brown University, Rhode Island, USA. His research area includes e-government system, computer systems and simulation, distributed and cloud computing, software engineering and information system, computer architecture, information security for e-government, multimedia system.

1 Introduction

In the recent scenario of information communication technologies (ICT), development of sustainable computing is most important task in various applications such as agriculture, healthcare, smart homes and smart cities. The convergence of sustainable computing and wireless network helps to meet the criteria for the overall performance achievement in Information and communication technology applications. By adopting the sustainable computing in wireless network, it reduces many issues like energy consumption, network lifetime and resource management. This special issue aims to collect the recent trends in wireless networks includes ad hoc networks, sensor networks, internet of things, heterogeneous network, LTE networks and 5G communication systems. It aims to achieve the higher growth by using the sustainable computing approaches includes fuzzy control, neural networks, decision support systems and optimisation algorithms.

The first paper entitled 'Improving the dissemination of messages in MANETs through an optimal carrier' introduced the new method for selecting an intermediate node as an optimal carrier to disseminate messages from the source to the destination. The second paper entitled 'Robust intrusion detection system based on fuzzy C means clustering scheme implemented in IoT-based wireless sensor networks' proposed a fuzzy-based clustering algorithm to effectively detect an intrusion and make the information secure and improved the efficiency of the algorithm by minimising the number of false detections of intrusions. The third paper entitled 'Design and investigations of novel compact RSS antenna for ultra-wide band applications' designed a new antenna UWB with simple structure and compact size and it analysed the various parameters such as return loss, VSWR, gain, directivity, impedance, group delay and radiation pattern. Next paper entitled 'An improved vertical handoff decision based on the modular neural network with fuzzy logic for wireless heterogeneous network' introduced the new technique MNN-FL-based VHDA and it produces the effective results in terms of handoff dropping rate and throughput. And the fifth paper entitled 'A novel adaptive fuzzy-based sliding mode control for channel state estimation in cognitive radio for reduction of interference' finds the channel state information through sliding model control-based intelligent adaptive fuzzy algorithm and outputs established in terms

of bit error rate and mean squared error. Another paper entitled 'Non-orthogonal filter bank multi carrier systems with higher overlap factor filters for 5G communications and beyond' it states that the process of FBMC-based 5G communication system with prototype filters of higher order spreading factors and it provides the lesser adjacent channel power ratio (ACPR) compared to the other existing approaches. The last paper entitled 'Filter-based optimal transmission path scheduling in MIMO LTE and LTE-A networks' proposed the new filter scheme for contemporary models in order to minimise the bit error rate and other quality metrics.