
Guest Editorial

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Biographical notes: Jennifer S. Raj received the PhD from Anna University and Masters Degree in communication System from SRM University, India. Currently she is working in the Department of ECE, Karunya University, Coimbatore, India. She is a life member of ISTE, India. She has been serving as Organising Chair and Program Chair of several International conferences, and in the Program Committees of several International conferences. She is book reviewer for Tata McGraw Hill publication and publishes more than 50 research articles in the journals and IEEE conferences. Her interests are in wireless healthcare informatics and body area sensor networks.

Joy Iong-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 IOT (Internet of Thing) techniques and he owned some patents authorised by the Taiwan Intellectual Property Office (TIPO).

Wireless connected sensors, actuators and other hardware have already changed global development work, and signs point to bigger changes to come. IoT promises to make the lives more convenient by turning each physical object in the surrounding environment into a smart object. Sensors, beacons, wearable, and devices are driving business transformation across enterprises. The IoT development environment encompasses multitudes of devices, hardware-software interfaces, and communication protocols possibly causing contention.

Inventive systems along with the innovative concept of IoT and many other technologies will help to solve problems and find solutions utilising random trial and error methods and reflects high performance in IoT and make decision making more reliable, spontaneous and creative. The main focus of this special issue is to meet the future requirements of IoT inventive systems and address the various scope and challenges, and the papers contributed high quality theoretical and practical works.

In the paper ‘Mixed integer programming for vehicle routing problem with time windows’, A novel mathematical model of MIP is formulated and implemented using IBM CPLEX to optimise both transportation cost and number of vehicle used simultaneously. The paper ‘Efficient multimedia content storage and allocation in multidimensional cloud computing resources’ provides an improved storage and scheduling of multimedia contents in cloud storage (ISS-MCCS) to handle server clusters and unevenness and improved task scheduling and finally to optimise memory.

‘Context aware reliable sensor selection in IoT’ paper design a method which senses reliable data from a sensor environment that satisfies user contexts, by different functionalities like user addition, location sensing, context specification, user context counting and selection of current best results. In the paper ‘Lagrangian relaxation for distribution networks with cross-docking centre’ a mixed-integer programming model is formulated for cross-docking allocation and commodities distribution, to solve logistics network problem and provides optimal solution in a reasonable time.

The paper ‘Factors influencing regression testing on cloud and on-premises: an analysis’ depicts testing applications in cloud environment improves the performance of various parameters of testing process and inference paves way to carry out further research to formulate effective strategies to test applications in cloud. In the paper ‘A hybrid test prioritisation technique for combinatorial testing’, combinatorial testing technique can effectively test complex IoT systems with reduced effort as it generates fewer test cases with adequate coverage. It basically tests the interactions that exist between values of different parameters and practically faults up to six-way interactions have been found successfully.

The paper ‘Intelligent systems for redundancy removal with proficient run-length coding and statistical analysis using regression’, develops a multiple regression analysis with PSNR as dependent variable where video size and execution time are taken as independent variable. In the paper ‘An intelligent inventive system for personalised webpage recommendation based on ontology semantics’ a dynamic ontology alignment technique for recommending relevant web pages is proposed. Personalisation is achieved by prioritisation of web pages by Content Based Analysis of the user’s web usage data.

The paper ‘Survey on techniques of fault detection-rookies vantage point’, display hypotheses depicting the likelihood of irregular testing to recognise connection blames and contrast the outcomes with combinatorial testing.

In this paper ‘Effect of magnetising core on impedance and induced EMF of two coils wound on single iron core’, variation of induced EMF in the secondary coil placed on the same core at different magnetic fields are presented and concluded that the permeability of iron core is not constant and it does not have a constant values of impedance parameters.

The guest editors would like to express their deep gratitude to all the authors who have submitted their valuable contributions, and to the numerous and highly qualified anonymous reviewers. We think that the selected contributions, which represent the current state-of-the-art in the field, will be of great interest to the inventive systems and

IoT. In addition, we would like to thank the publication staff members for their continuous support and dedication. We particularly appreciate the relentless support and encouragement granted to us by Professor Edmund M-K. Lai, the Editor-in-Chief of *International Journal of Intelligent Systems Technologies and Applications*.