
Editorial

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Biographical notes: Arasu Pasumpon Pandian has received his PhD in the Faculty of Information and Communication Engineering under Anna University, Chennai, TN, India in 2013. He received his graduation and post-graduation degree in Computer Science and Engineering from PSG College of Technology, Coimbatore, TN, India in 1993 and 2006, respectively. He is currently working as a Professor in the Computer Science and Engineering Department of KGiSL Institute of Engineering and Technology, Coimbatore, TN, India. He has 23 years of experience in teaching, research and IT industry. He has published more than ten research articles in International Journals. His research interest includes, image processing and coding, image fusion, soft computing and swarm intelligence.

Farhad Memarzadeh is the Director, Division of Technical Resources (DTR) at the National Institutes of Health (NIH). He has been the Principal Investigator on many groundbreaking research and chaired several American National Standards committee. He is a Lecturer at the Harvard School of Public Health. He authored four books and over 70 scientific papers. He has been a keynote/guest speaker at over 60 scientific conferences. Some of his awards include the following; eight NIH Director's and five Merit Awards, three NSPE-Top Ten Engineer of the year award, six literary awards for outstanding scientific publications, two Public Health Service Engineer of the Year award, 2015 nominee for Samuel J. Heyman Service to America Medals, 2010 Howard Fawcett Award, and several commendations from the US Senate.

Intelligent computation systems is derived from the information systems and it optimise the superficial solutions by using artificial intelligence, machine learning, decision making, soft computing, neural networks, genetic algorithms, fuzzy intelligence and natural language processing. The new era of intelligent computation systems promote the sustainable computation in all research fields. This special issues aims to provide the perfect platforms for innovative ideas and perception of analysis and theoretical implements in the recent advances in intelligent computation system.

This special issue selected the high quality papers based on the peer review process and the first paper entitled ‘Automated transformation of NL to OCL constraints via SBVR’ presents an automatically generate object constraint language (OCL) constraints for model processing tasks in UML models via SBVR. Second paper titled ‘Study of skin flow motion pattern using photoplethysmogram’ showed that PPG signal can be used as a non-invasive tool for studying the vasomotion impairment in the diabetic patient during resting condition.

Third paper entitled ‘Incorporating security in opportunistic routing and traffic management in opportunistic sensor network’ and it includes three different algorithms such as three algorithms such as range-based clustering (RBC) for clustering the sensor nodes, minimum waiting time routing algorithm (MWR) for routing the data packets and light weight key generation mechanism (LWKG) for secure communication. Fourth paper proposed the HMAC-SHA1 algorithm for detecting malicious agent and rule based logic (RBL) is designed to identify malicious host and this work entitled as ‘Improving reliability in MAS by rule-based logic and cryptographic techniques’. Fifth paper ‘THD minimisation using genetic algorithm on the nine-level multilevel inverters’ formulating an appropriate switching strategy to maintain optimality in power quality.

In ‘Simulink implementation of RLS algorithm for resilient artefacts removal in ECG signal’ determined the mean square error for different algorithms like LMS, NLMS and RLS. Seventh paper titled ‘Semantic linkage of source content dynamically with virtual documents using wikipedia in Hadoop’ describes a semantic weblog which has the feature of locating the exact source content from the reference URLs. Eighth paper, ‘A novel system for early detection of breast cancer using area and entropy features of malignant tumour’ used the computer aided detection and classification system for the detection of breast cancer at an early stage by predicting the area and texture of malignant tumours. Next paper ‘Threshold algorithm for the cell formation problem’ presents to maximise the grouping efficacy as it is one of the best performance measures for the cell formation problem.

Tenth paper ‘Support vector machine-based proactive fault-tolerant scheduling for grid computing environment’ proposed the combination of support vector machine (SVM) with the quantum-behaved particle swarm optimisation using Gaussian distributed local attractor point (GAQPSO) for the accuracy of prediction in SVM classifier. Cloud computing is an emerging technology that provides variety of applications to the end user in secured way. Next paper ‘Automatic classification for preventing duplication of online multimedia data in secure cloud infrastructure’ avoid the security issues in multimedia content. And the final paper ‘Breast cancer diagnosis using a Minkowski distance method based on mutual information and genetic algorithm’ presents a mutual information genetic algorithm (MIGA) for diagnosing breast cancer and reveals an enhancement in performance compared with the methods of previous works.