Editorial

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Biographical notes: V. Suma has obtained her BE in Information Science and Technology, MS in Software Systems and her PhD in Computer Science and Engineering. She has a vast experience of more than 17 years of teaching. She has published more than 183 international publications which include her research articles published in world class international journals such as *ACM*, *ASQ*, *Crosstalk*, *IET Software*, international journals from Inderscience publishers, from journals released in MIT, Darmout, USA, etc. Her research results are published in NASA, UNI trier, Microsoft, CERN, IEEE, ACM portals, Springer, and so on.

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 internet of thing (IOT) techniques and he owned some patents authorised by the Taiwan Intellectual Property Office (TIPO).

Khaled A. Kamel is currently a Professor at Texas Southern university, College of Science and Technology, Department of Computer Science, Houston, TX. He has published many research articles in refereed journals and IEEE conferences. He has more than 30 years of teaching and research experience. He has been the General Chair, Session Chair, TPC Chair and Panellist in several conferences and acted as a reviewer and guest editor in referred journals. He coauthored two leading text books in the areas of PLC industrial process control and automation, both published by McGraw-Hill. His research interest includes networks, PLC process control and automation, and communication systems.

The biomedicine in industry and society relates to the understanding and analysis of human healthcare and it comprises the biotechnologies. This provides an efficient relationship between human health developments to biomedicine technologies. Nowadays many techniques are involved in human health care development such as disease diagnosis, disease prediction, and secure transmission, continuous monitoring of the patient and report health issues to the doctor. Biomedical society and the biomedical industry combine to concentrate on the development of human healthcare and introduced the various techniques to resolve the issue that occurs in the medical field. This special issue concentrates on the recent developments in biomedicine fields and that relates to industry and society. This special issue selects the eight quality papers based on the theme of biomedicine in industry and society.

The first paper entitled 'Investigation of problems faced during capturing of gait signals' purpose of this paper is to describe some of the problems that make it difficult to apply gait as a biometric identification and use recent literature to show suggestions being made to solve some of these technical issues. The second paper entitled 'Improving the classifier accuracy with an integrated approach using medical data – a study' and the authors have used different classification techniques for the study purpose and this article attempts to analyse the accuracy of classifiers with respect to that of medical data. In this article, the authors have done a study on integrated approaches that help in classifying the instances of a bio-medical data. The third paper entitled 'Wavelet packet transform-based medical image multiple watermarking with independent component analysis extraction' introduces this article to maintain the security issues in the medical images and introduced the watermarking technique based on the wavelet packet transform approach. This research article measures the parameters like PSNR, similarity measure, and normalised correlation is assessed to confirm the robustness of the scheme and performance of the proposed approach.

The next paper entitled 'Novel feature extraction of EEG signal for accurate event detection' presents a new feature vector generation using the fusion of energy feature vectors of different types and proposed new feature outperform with improved accuracy for emotion detection, seizures detection and sleep state detection. The fifth paper entitled 'An amalgamated prediction model for breast cancer detection using fuzzy features' introduced the hybrid algorithm implements a fuzzy K-means algorithm with support vector machine (SVM) coupled with an EKF for data filtering and the proposed approach achieves accuracy, precision, recall and F-score value of the algorithm. The sixth paper entitled 'Optimised feature selection and entropy-based graph classification of gene expression data' gives a technique for the GE data classification utilising entropy-based graph classifier and its experimental outcome generates the effect of contrasted

classification with the existing method. Another paper 'EEG signal analysis and classification on P300 speller-based BCI performance in ALS patients' analyse the electroencephalography signal based on brain-computer interface by using P300 speller for amyotrophic lateral sclerosis (ALS) patients and perform classification on extracted features to obtain high accuracy proposed model. And the last paper entitled 'Novel multiphase contouring and force calculation algorithm for ROI detection and calculation of energy value in multiple scale and orientation for early detection of stages of breast cancer' introduced the new MCFC algorithm for the detection of malignant tumours and reduce the computation time in image processing techniques.