

---

## Editorial

---

### Ramani Kannan\*

Department of Electrical and Electronics Engineering,  
Universiti Teknologi PETRONAS,  
32610 Tronoh, Perak, Malaysia  
Email: kreee82@gmail.com  
Email: ramani.kannan@utp.edu.my  
\*Corresponding author

### P.D.D. Dominic

Department of Computer and Information Sciences,  
Universiti Teknologi PETRONAS,  
32610 Tronoh, Perak, Malaysia  
Email: pdddominic@yahoo.com  
Email: dhanapal\_d@utp.edu.my

### P. Parthiban

Department of Industrial Engineering,  
National Institute of Technology,  
Tiruchirappalli 620015, India  
Email: parthee\_p@yahoo.com  
Email: parthiban@nitt.edu

### T. Mala

Department of Information Science and Technology,  
College of Engineering, Guindy,  
Anna University,  
Chennai 600025, India  
Email: malanehru@annauniv.edu

**Biographical notes:** Ramani Kannan graduated from Bharathiar University, post graduated and PhD degree in Electrical Engineering from Anna University. Currently, he is a Senior Lecturer in Universiti Teknologi PETRONAS (UTP), Malaysia. He is a SMIEEE, ISTE, and MIAES. He obtained 'Carrier Award for Young Teacher' from AICTE, New Delhi, and 'Young Scientist and Highest Research Publication Award' in India. He is the Editor-in-Chief of the *Journal of Asian Scientific Research and Regional editor South-Asia* in *International Journal of Computer Aided Engineering and Technology*, Inderscience publisher (UK). His research interest includes power electronics, inverters, modelling of induction motors, renewable energy systems, and optimisation techniques.

P.D.D. Dominic received his BSc degree in Mathematics from the Madras University, India. He has completed his post-graduate degree in Management specialised in Information Systems. He received his PhD in Management from the Alagappa University, India. Currently, he is heading Information Systems Research Cluster at Universiti Teknologi PETRONAS. His research interests include information systems, decision support systems, supply chain management, BPR, e-business and knowledge management. He has published more than 100 publications in International journals and conferences.

P. Parthiban received his Bachelor of Engineering Madras University, Chennai. He has completed his postgraduate degree National Institute of Technology, Tiruchirappalli. He received his PhD in Supply Chain Management, JNT University, Hyderabad. Currently, he is an Assistant Professor, Department of Industrial Engineering, National Institute of Technology, Trichy. He has published more than 80 publications in international journals and conferences.

T. Mala received her Bachelor of Engineering Madras University, Chennai. She has completed her postgraduate degree, Anna University, Chennai. She received her PhD in Natural Language Processing & Graphics, Anna University, Chennai. Currently, She is working as an Associate Professor, Department of Information Science and Technology, College of Engineering, Guindy, Anna University, Chennai, India. She has published more than 90 publications in international journals and conferences.

---

It gives us great pleasure to welcome you to this special issue of the *International Journal of Information Technology and Management*. This issue is dedicated to the publication of selected papers researching on information technology and information systems applications in enterprise system.

The first paper is from the authors Mayqueen Attatsitsey and Noble Osei-Bonsu, there is consensus that IT has significant effects on the productivity of firms. This study focused on how modern information technology impacts on effectiveness and efficiency of HR practices. Human resource management practitioners generally use IT in the form of human resource information system (HRIS) for the purposes of decision making in the field of HR. The main objective of this study was to examine the impact of IT on HR practices in organisations in Ghana. One hundred organisations were purposively sampled for the study. Results revealed organisations awareness and use of the various HR-related software, and despite the fact that this software are costly, they, at the same time, generates terrific benefits.

The second paper is written by S. Remya and R. Sasikala, crowdsourcing is treated as an open contest for a crowd of people known as workers. All workers can contribute their suggestions and solutions to the platform. Hence, crowd sourcing can connect a large number of people and they can share their knowledge. This helps big analytics companies focus on the core aspect of infrastructure and security. It also makes sense of the data and not invests resources in organising data and this distributed environment can be solved intelligently. Here various crowd sourcing techniques in different aspects related to data pre-processing, performance approaches, security issues, and applications are analysed. This survey helps to analyse the various issues in crowd sourcing and proposed some solutions for improving the quality and security of workers in crowd sourcing based on the literature survey.

The third paper is written by R. Geetha Ramani et al. in recent days, analysis on magnetic resonance imaging (MRI) has extensively performed to understand the complex

information in the human brain. Mostly, the pathological regions in the brain are detected using various MRI techniques. Depending upon the MRI technique specific regions may be exhibited better than other regions. These images are computationally analysed to identify the abnormal regions. In this work, glioma images are involved to detect the tumour regions in the brain using image processing and data mining techniques. Broadly, the pixels are grouped into tumour and non-tumour pixels using unsupervised as well as supervised data mining methods. K-means clustering could detect the tumour pixels with the accuracy of 94.64% whereas random forest classifier with 99.5% could identify the pixel classes correctly.

The fourth paper is from the authors P. Kalaimani and K. Mohana Sundaram explained secure operation and reliable utilisation of transmission lines is a challenging issue in deregulated power system. The scheduled power transactions are difficult due to the overloading of transmission lines in restructured power system as the electricity market has become more competitive. Due to congestion of transmission lines, the transfer of real power and the power system voltage profile are greatly affected in the power system. The aim of this research work is to increase the real power and the reactive power flowing in the lines of multibus system using thyristor controlled series compensator (TCSC). The simulation studies indicate a significant improvement in the real and the reactive power flow with the introduction of TCSC. The advantages of the proposed system include the smooth variations of the real and the reactive powers.

The fifth paper from the authors Vijayan Ellappan and R. Rajkumar proposed the problem of classifying scenes from cricket video is addressed and a robust framework for this problem is proposed. It is proposed that the finite state machines (FSM) are suitable for detecting and classifying scenes and their usage is demonstrated for three types of events: wicket, six, four. This framework utilises the structural information of the scenes together with the low-level and mid-level features. Low-level features of the video including motion and audio energy and a mid-level feature, body, are used in this approach. The transitions of the FSM are determined by the features from each shot in the scene. The FSMs have been experimented on over 80 clips and convincing results have been achieved.

From paper six from the authors Xiaohui Tan and Ruiliang Guo, in cloth animation, the bending behaviour of cloth is important for cloth simulation effects. The presentation of cloth bending properties plays a key role in cloth animation research because cloth is characterised by strong resistance to stretch while weak resistance to bending. This paper proposed an improved approximate nonlinear bending model based on local geometric information. In the dynamic simulation, cloth was divided into several regions according to mean curvature of surface. The bending force was updated according to the changes of the mean curvature in each region. The calculation of bending force was simple and accurate with the proposed model. Experimental results show that wrinkles and folds generated in a natural way with the improved model and the efficiency of simulation is improved compared with the original algorithm.

In paper seven is from the authors Maryam Zaffar et al. educational data mining (EDM) evaluates and predicts student's performance that assists to discover important factors affecting student's academic performance and also guides educational managers to take decisions accordingly. The accuracy of classification algorithms on educational data can be increased by applying features selection algorithms. Feature selection algorithms help in selecting relevant and meaningful features for predicting the student's

performance with high accuracy. This paper presents a review of different EDM approaches for forecasting student's performance using different data mining techniques. In addition, this paper presents an evaluation of recent classification algorithms and feature selection algorithms used in EDM.

In paper eight is from the authors C.V. Aravind et al. information of the frequency variations is critical to restore the dynamics of power system network. In this paper, a modified load frequency control method in the deregulated power system to restore back the frequency is proposed and analyses. The distribution company participation matrix method is used to design the deregulated environment with number of generation company (GENCO) and distribution company (DISCO). The deviation of the output frequency in each area and tie line exchange are analysed. It is concluded that the modified load frequency control method improve the performance of the system on overshooting, undershooting and settling time. A 10% improvement on the settling time and about 20% improvement on undershooting is observed for the proposed controller.

In paper nine from the authors K. Deepika and J. Usha my person localisation and alerting network (myPLAN) is a framework for cautioning connections in deadlock situations. My plan is a mobile application (App) developed for Android-enabled smartphone. The application involves in linking the entity with the associations. My plan App opens by passing a unique code in the phone. An individual can inform the associated people about the whereabouts in case of trouble. The GPS API in the mobile phone locates the relevant assistance in the specified radius from the place where the individual positioned. The information is sent to the emergency carriers through SMS with the entity details along with the location co-ordinates.

The tenth paper from the authors Aliza Sarlan et al. informal learning for many people starts at home from the moment they were born until they die. The rapid development of emerging technologies for mobile devices has increase the possibility to exploit them for creation of Islamic context's apps necessary for children informal learning phase. As such, this project aims at developing a mobile application for Android that enables children and parents to learn Islamic Hadiths in an interactive and engaging manner called 'Hidup Cara Rasullullah'. User acceptance and usability testing results demonstrate an acceptable level of user acceptance and usability level.

The 11th paper from the authors D. Venkatesan and S. Sridhar, improvements to business-IT alignment (BITA) enable enterprises to achieve its goals efficiently. Adopting suitable enterprise architecture (EA) is one strategy to facilitates BITA in enterprises. EA depicts their IT models using popular software modelling approaches. Hence there is a direct relation between BITA, EA and software technology and aligning these improve enterprise capability to achieve its goals. This work compares the EA alignment capabilities of these technologies using Zachman framework (ZF) by filling grid cell with their models.

Paper 12th from the authors M. Suganthy and S. Manjula, the proposed method consists of two phases. In the first phase, PCA features are extracted and then classified using k nearest neighbour (KNN) classifier. The second phase includes Gaussian Kernal PCA (GKPCA) feature extraction with support vector machine (SVM) classifiers. Iris image is used for analysis of proposed methods. Detection of the iris region aims to achieve a more robust and accurate localisation of patterns even in non-ideal conditions. Also matching using different types of SVMs is done. The experiment result achieves a recognition accuracy of 96.42% and linear SVM outperforms the other methods.