
Editorial

Zheng Xu*

School of Computer and Information Engineering,
Institute for Artificial Intelligence,
Shanghai Polytechnic University,
Shanghai 201209, China
Email: xuzheng@sspu.edu.cn
*Corresponding author

Vijayan Sugumaran

Department of Decision and Information Sciences,
Oakland University,
201 Meadow Brook Rd. Rochester,
MI 48309-4401, USA
Email: sugumara@oakland.edu

Neil Yen

The University of Aizu,
Aizu-Wakamatsu, Fukushima Pref. 965-8580, Japan
Email: neilyyen@u-aizu.ac.jp

Biographical notes: Zheng Xu is currently the associate professor in Shanghai Polytechnic University, China. His current research interests include wireless communications, CPS, and smart cities with over 3600 citations. He has authored or co-authored more than 100 publications. He is also the associate editor of Springer *Electronic Commerce Research* journal and Springer *Discover Internet of Things* journal.

Vijayan Sugumaran is a Professor of Management Information Systems in the Department of Decision and Information Sciences at Oakland University in Rochester, Michigan. He received his PhD in Information Technology from George Mason University, located in Fairfax, VA, and his research interests are in the areas of service science, ontologies and Semantic Web, intelligent agent and multi-agent systems, component based software development, and knowledge-based systems.

Neil Yen received his doctorates in Human Sciences at Waseda University, Japan, and in Engineering at Tamkang University, Taiwan, in 2012. His doctorate in Waseda University was funded by the JSPS under RONPAKU program. He has served as Associate Professor at the University of Aizu, Fukushima, Japan, since April 2012.

This special issue related to the integration of sophisticated artificial intelligence technology to Smart Energy systems and grids, requires a multi-fold understanding of computational, economic and social issues.

Zhu used the Cloudsim open source cloud simulation platform for simulation. The results show that compared with the traditional genetic algorithm, the improved genetic algorithm can better adapt to the load balancing requirements in the cloud computing environment and improve the balance and efficiency of resource utilisation. Yang and You introduce group key-based authentication for securing services in an end-to-end manner. The proposed scheme administers security using batch keys to improve the sharing efficiency of different services. Ge et al. introduce a consistent pricing strategy and analyse the optimal decision and profit situation of manufacturers and retailers within the framework of this pricing strategy. It is found that the differentiated pricing strategy outperforms the unified pricing strategy in most cases for manufacturers and the entire supply chain. Tan et al. select the integrated energy system of an industrial park in Southwest China as the research object. Yao et al. consider the current and potential costs of customers, and forms a comprehensive customer energy value estimation system.

Zhen takes concrete cracks in road and bridge construction as the research object, and realises intelligent activities such as analysis, reasoning, judgement, conception and decision-making in the manufacturing process through intelligent manufacturing. Based on computational fluid dynamics, the aerodynamic performance and safety of a train running in a typical canyon terrain are simulated by numerical simulation proposed by Wang et al. Wu aims to carry out the interior environment design of green senior care buildings based on environmental energy efficiency. Yu aims to study the related systems of real-time renewable energy in the era of big data. An accurate accounting of carbon emissions must first be completed for this to work. An accurate accounting of carbon emissions are completed by Huang et al. Deng and Huang show that the predicted value of PCA algorithm fluctuates obviously, while the predicted value of MI-PCA algorithm tends to be stable after 100 iterations.

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