
Preface

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Biographical notes: Fuqian Shi is currently an Associate Professor at College of Information and Engineering, Wenzhou Medical University, China. He was invited as a Visiting Associate Professor in the Department of Industrial Engineering and Management Systems, University of Central Florida, USA from 2012 to 2014. His research interests include biomedical engineering, fuzzy inference system, and artificial neuro networks. Shi has served on over 20 international conference committee memberships and serves as an Associate Editor of the *International Journal of Ambient Computing and Intelligence* and *International Journal of Rough Sets and Data Analysis*. He has published over 80 journal papers and conference proceedings.

Nilanjan Dey was currently an Assistant Professor in Department of Information Technology, Techno India College of Technology, India. His research topic is signal processing, machine learning and information security. He is an Associate Editor of *IEEE ACCESS* and is currently the Editor in-Chief of the *International Journal of Ambient Computing and Intelligence*, *International Journal of Rough Sets and Data Analysis*, *International Journal*

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Pamela McCauley is an ergonomics and biomechanics expert, an internationally acclaimed keynote speaker, a Professor and Director of the Ergonomics Laboratory in the Department of Industrial Engineering and Management Systems at the University of Central Florida where she leads the Human Factors and Ergonomics in Disaster Management Research Team. She previously held the position of Martin Luther King, Jr. Visiting Associate Professor of Aeronautics and Astronautics at the Massachusetts Institute of Technology. She is the author of over 80 technical papers, book chapters, conference proceedings.

Valentina E. Balas is currently a Full Professor in the Department of Automatics and Applied Software at the Faculty of Engineering, University 'Aurel Vlaicu' Arad (Romania). She holds a PhD in Applied Electronics and Telecommunications from Polytechnic University of Timisoara. She is author of more than 180 research papers in refereed journals and international conferences. She is the Editor-in Chief to *International Journal of Advanced Intelligence Paradigms* (IJAIP) and to *International Journal of Computational Systems Engineering* (IJSysE), editorial board member of several national and international journals. He is the Vice-President (Awards) of IFSA International Fuzzy Systems Association Council.

Intelligent industry integrates all kinds of terminals with environmental perception, ubiquitous technology-based computing mode, and mobile communication, etc. which is merged into each link of industrial production, greatly improves manufacturing efficiency, improves product quality, reduces product cost and resource consumption, and promotes traditional industry to a new stage of intelligence.

The realisation of intelligent industry is based on the penetration and application of internet of things technology, and combines with the future advanced manufacturing technology to form a new intelligent manufacturing system. The foundation of industrialisation is automation, and the field of automation has developed for nearly a hundred years. The theory and practice have been perfected. Especially with the development of modern large-scale industrial production automation and the increasingly complex operation of process control requirements, and combination of computer technology, system control technology, network communication technology and multimedia technology.

Following the development of IT and artificial intelligent, the main problem to be solved is the problem of information-island; it is necessary to solve the problem in a wider range. It is to connect things with people's information. Intelligent analysis and optimisation technology is a means to solve this problem after obtaining information according to historical experience and theoretical model; quickly makes the most decision through AI technologies. Data analysis and optimisation technology have strong demand in the industrialisation and information integration of the both integrations.

This special issue focuses on the topic of 'Intelligent technologies in modern industries: challenges facing globalisation and informatisation'. All papers were reviewed by at least 4–5 reviews, and recommended in 2017 by the 2nd International Conference on Information Technology and Intelligent Transportation Systems (ITITS 2017).