
Editorial

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Biographical notes: Peiyi Zhu received his MSc and PhD both in the School of Internet of Things Engineering from the Jiangnan University, Wuxi, China. Now he is an Associate Professor from the School of Electrical and Automatic Engineering, Changshu Institute of Technology. He is a 'six big talent peak' of Jiangsu Province candidate and a Jiangsu Province University 'Blue Project' excellent young backbone teacher. From 2011 to 2012, he was a joint training of graduate student between the University of Western Australia and Jiangnan University. From 2016 to 2017, he was a Visiting Research Fellow at the University of Western Australia. His research interests are related to intelligent information processing, intelligent control and computational intelligence.

Dimitri Lefebvre graduated from the Ecole Centrale of Lille in France in 1992. He received his PhD in Automatic Control and Computer Science from the University of Sciences and Technologies, Lille in 1994, and HAB from the University of Franche Comté, Belfort, France in 2000. Since 2001, he has been a Professor from the Institute of Technology and Faculty of Sciences, University Le Havre, France. He is with the Research Group on Electrical Engineering and Automatic Control (GREAH) and from 2007 to 2012 he was the Head of the group. His current research interests include control and diagnosis issues for continuous, discrete and hybrid systems and their applications to electrical engineering.

Ahmed Chemori received his MSc and PhD both in Automatic Control, from the Polytechnic Institute of Grenoble, France, in 2001 and 2005 respectively. During 2004/2005, he was a Research and Teaching Assistant from the Laboratoire de Signaux et Systèmes (LSS – Centrale Supélec) and University Paris 11. Then he joined Gipsa-Lab (former LAG) as a CNRS postdoctoral researcher. He is currently a senior research scientist in automatic control and robotics for the French National Center for Scientific Research (CNRS), at the Montpellier Laboratory of Computer Science, Robotics and Microelectronics (LIRMM). His research interests include nonlinear (adaptive and predictive) control and its real-time applications in different fields of robotics (under-actuated robotics, parallel robotics, underwater robotics, humanoid robotics and wearable robotics).

Jawhar Ghommam is an Associate Professor of Control Engineering from the Sultan Qaboos University in Oman. He obtained his DEA (MSc) degree from the University of Montpellier at the Laboratoire d'Informatique, Robotique et Micro-électronique (LIRMM, France) in 2004, and PhD in Control Engineering jointly from the National Engineering School of Sfax and the University of Orleans in 2008. From 2008 to 2017, he was with the National Institute of Applied Sciences and Technology, where he held a Tenured Associate Professor from the Department of Physics and Instrumentation. His research interests include nonlinear control of under-actuated mechanical systems, adaptive control, guidance and control of autonomous vehicles, and cooperative motion of non-holonomic vehicles.

With the rapid development of Chinese manufacturing industry, some industrial-oriented applications such as intelligent analysis technology, big-data, robotics, machine-learning, cloud-computing, the internet of things (IoT) and cyber-physical system (CPS) have been widely used to realise innovation-driven development, as well as to enhance the comprehensive international competitiveness. Faced with this global technological and industrial revolution, many industries have undergone great changes with more complex production equipment and industrial processes. Over the past decades, numerous efforts have been made to push forwards the research of control theory, even though there are certain potential problems to be further investigated to make modern systems with mechanical, hydraulic and piezoelectric actuators, power transmission and other electromechanical devices work properly. Hence, some researches on advanced methodologies and techniques related to data-driven modelling and intelligent computation are essential, which demands an international forum for professionals, academics, and researchers over the world to share latest developments from interdisciplinary theoretical studies, computational algorithm developments and applications.

After a thorough reviewing process, in the special issue of the *International Journal of Modelling, Identification and Control*, we are delighted to accept 15 research articles for this special issue from 43 submitted articles. These articles cover various aspects of modelling, control methodologies and applications, with specific application to electromechanical systems for aerial vehicles, spacecraft, robotics and wind turbines, etc. They mainly address challenging issues in modelling, parameter estimation, calibration and control designs of the realistic engineering plants, by further investigating both well-known and recently emerging techniques, e.g., Kalman filter, system identification, dynamic programming, neural network, disturbance observer, fault-tolerance analysis and so on.

The guest editors would like to thank all the authors for submitting their manuscripts to this special issue. We would also like to acknowledge the reviewers for their contributions in reviewing the articles and providing constructive comments that helped the authors to improve. Finally, the guest editors would like to thank Professor Quan Min Zhu (the Editor-in-Chief of *IJMIC*) for his consistent support, which makes the publication of this special issue possible in such a short period.