Special Session on
Advanced Signal Processing and System Integration on Automation Technology

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Hsiung-Cheng Lin received his B.S. degree in engineering from National Taiwan Normal University, Taiwan, in 1986. He received his M.S. and Ph.D. degrees from Swinburne University of Technology, Australia, in 1995 and 2002, respectively. He received many research rewards from university, government departement and international committee. He is currently a full professor in the Department of Electronic Engineering at National Chin-Yi University of Technology. He has been serving as a guest editor for many international journals such as Sensors, Algorithms, Journal of Robotics, Sensors&Materials and Applied Sciences, etc. His special fields of interest include signal processing, power electronics, neural network, and network supervisory system.

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Ling-Ling LI received her B.S. degree in Industrial Process Measurement and Control Instrument from Tianjin University, China, in 1989, M.S. degree in Control Theory and Control Engineering from Hebei University of Technology in 2001 and Ph.D. degree in Electric Machines and Electric Apparatus from Hebei University of Technology in 2004. Since 2006, she is a professor with the School of Electrical Engineering, Hebei University of Technology, Tianjin, China. She was a director with Reliability Engineering branch of China Mechanical Engineering Society between 2015-2018. Her research interests include reliability of electrical apparatus, power system and new energy.

Scope of the session

Traditional signal processing techniques or facilites used in industry are not entirely suitable for industrial automation process due to a lack of effective integration. With increasing applications using information communication technologies, the modern automation methods must be capable of handing a high flexibility production and achieving efficient data management. Therefore, the advancement of automation in industry is to suit the variety of desired functionalities for all technical production processes.

However, automation system relies on signal processing and integration that emerge a multidisciplinary frontier of engineering. Due to its high potential to contribute to breakthroughs in many areas of technology, advances in signal processing and system integration on automation technology are capturing the interest of many researchers from different fields. Topics of discussion include, but are not limited to, the exploration of new directions of robotics-based science and application technology that enable technological breakthroughs in high impact areas.

Prospective authors are invited to submit original and unpublished work on the following research topics related to this Special Session:

- Product quality inspection
- Automation signal measurement and processing

- Image signal sensing technology
- Image measurement technology
- Intelligent robotic control
- Automation system integration
- Remote robot monitoring and Control
- Deep learning in robot path planning and control
- Autonomous robots coordination
- Autonomous robots navigation
- Environment recognition for multi-robot navigation and path planning