

Advances in Control and Automation

— Dedicated to Professor Jie Huang's 70th Birthday

It is our great honor to present this special issue of the Journal of Systems Science & Complexity in celebration of Professor Jie Huang's 70th birthday. As a distinguished scholar, mentor, and leader in the field of control theory and engineering, Professor Huang has made profound contributions to both academia and industry, inspiring generations of researchers worldwide. This special issue consisting of 21 high-quality research papers, contributed by his colleagues, collaborators, and former students, reflects the breadth and depth of his intellectual influence across multiple domains, including control systems, multi-agent systems, optimization, game theory, and intelligent learning.

Professor Jie Huang earned his Ph.D. in Automatic Control from The Johns Hopkins University in 1990, followed by several years in the U.S. industrial sector, where he honed his expertise in control science and engineering. Since joining The Chinese University of Hong Kong (CUHK) in 1995, he has served as a pillar of the Department of Mechanical and Automation Engineering, holding key leadership roles, including Department Chair and Director of the Applied Control and Computation Laboratory. His academic excellence extends beyond Hong Kong, with affiliations as a Distinguished Visiting Professor at numerous prestigious institutions in mainland China, such as the University of Science and Technology of China, Harbin Institute of Technology, and Huazhong University of Science and Technology, among others. He is currently serving as the Associate Dean (Research) for the CUHK Faculty of Engineering.

His research spans a remarkable spectrum — control theory and applications, robotics and automation, systems biology, and aerospace guidance and control — earning him widespread recognition. As an IEEE Fellow (2004), IFAC Fellow (2009), and inaugural Fellow of the Chinese Association of Automation (2011), Professor Huang has been at the forefront of advancing control science. His accolades include the National Natural Science Award (Second Class, 2010), the Croucher Senior Research Fellowship Award (2006), and multiple best paper prizes at top international conferences.

Beyond his technical prowess, Professor Huang has shaped the academic community through editorial leadership in over 10 leading control journals, service as a Distinguished Lecturer for the IEEE Control Systems Society, and roles as General Chair or Program Chair for many major control conferences. His mentorship has cultivated a global network of scholars, many of whom are now leaders in their own right.

This special issue stands as a testament to Professor Huang's enduring impact. His ability to blend theoretical rigor with practical relevance has set a benchmark for the field. We extend our deepest gratitude to all contributors and reviewers for their dedication to this project. Above

all, we thank Professor Huang for his mentorship, collaboration, and unwavering commitment to advancing systems science and engineering.

May this special issue inspire future breakthroughs and serve as a fitting tribute to a luminary on his 70th birthday.

Guest Editors:

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