The 32nd Chinese Control Conference

Pre-conference Workshop 1

Speaker: Liu Guoping, Harbin Institute of Technology

Title: Control and Robustness for Quantum Linear System

Biography

Liu Guoping received the BEng and MEng degrees from Central South University of Technology (now Central South University, China) in 1982 and 1985, respectively, and the PhD degree from UMIST (now University of Manchester, UK) in 1992. He is a professor of control engineering in the University of Glamorgan in the UK. He has held a Changjiang Scholar visiting professorship at Harbin Institute of Technology in China.

Prof Liu's research interests include networked control systems, multi-objective optimal control, nonlinear identification and control, and industrial advanced control applications. He is an author of 7 books, 2 edited books, over 100 journal papers and numerous conference papers.

Prof. Liu is a Fellow of IEEE and a Fellow of IET. He has served as an Editor-in-Chief of the International Journal of Automation and Computing, and as an Associate Editor of the IEEE Transactions on Neural Networks and Learning Systems.

Abstract:

With the development of network technology and control technology, the research of networked control systems has been paid much attention. Particularly, the Internet of Things becomes hotter and hotter in recent years. In fact, the Internet of Things is a technological revolution that represents the future of computing, communication and control, and its development depends on dynamic technical innovation in a number of important fields, from wireless sensors to nano-technology. Actually, networked control systems play a key role in the Internet of Things. In networked control systems, there are many challenging issues on networked control systems: how to compensate for communication delays, overcome data dropouts, improve the security of real-time data transmission, and design a controller in a less conservative way. To address the above issues, this talk will introduce various design methods and implementation techniques of networked control systems based on a networked predictive control scheme.