

The 30th Chinese Control Conference

Plenary Panel Session 1 on

Control Research: The Present and The Future

Chair: Professor Lihua Xie, Nanyang Technological University, Singapore

Panelists: Professor Jie Chen, City University of Hong Kong, China
Professor Zhihua Qu, University of Central Florida, USA
Professor Jing Sun, University of Michigan, USA
Professor Yuan Wang, Florida Atlantic University, USA

CCC'11 proudly presents the plenary panel session on Control Research: The Present and The Future. We are honored to be able to invite four prominent professors in the field of control to be the panelists. The objective of the plenary panel session is to provide an opportunity for researchers, especially young researchers, to interact with world renowned experts in control and seek their views on current and possible future developments of the fields as well as how to develop a research career and how to publish high quality papers, etc. During the session, panel members will share their vast experiences and visions with audience through effective face-to-face dialogues.

This panel consists of four world-class researchers and educators. They include:



Professor Jie Chen was born in Yichun, Jiangxi Province, The People's Republic of China in 1963. He received the B.S. degree in aerospace engineering from Northwestern Polytechnic University, Xi'an, China in 1982, the M.S.E. degree in electrical engineering, the M.A. degree in mathematics, and the Ph.D. degree in electrical engineering, all from The University of Michigan, Ann Arbor, Michigan, in 1985, 1987, and 1990, respectively.

Professor Chen teaches in the field of systems and control, and signal processing. From 1990 to 1993, he was with School of Aerospace Engineering and School of Electrical and Computer Engineering at Georgia Institute of Technology, Atlanta, Georgia. He joined University of California, Riverside, California in 1994, where he has been a Professor of Electrical Engineering since 1999 and served as the Professor and Chair of Electrical Engineering from 2001 to 2006. While on leave from University of California, he was appointed a Chair

Professor of Electronic Engineering, City University of Hong Kong since 2010. He has also held a number of guest positions and visiting appointments with institutions in Australia, China, and Japan. His main research interests are in the areas of linear multivariable systems theory, system identification, robust control, optimization, and networked control. He is the author of two books, respectively, (with G. Gu) *Control-Oriented System Identification: An H-infinity Approach* (Wiley-Interscience, 2000), and (with K. Gu and V.L. Kharitonov) *Stability of Time-Delay Systems* (Birkhauser, 2003).

An elected Fellow of IEEE, Fellow of AAAS, and a Yangtze Scholar/Chair Professor of China, Professor Chen was a recipient of 1996 US National Science Foundation CAREER Award, 2004

SICE International Award, and 2006 Natural Science Foundation of China Outstanding Overseas Young Scholar Award. He served on numerous editorial boards in various capacities, including Associate Editor and Guest Editor for the IEEE Transactions on Automatic Control, Guest Editor for IEEE Control Systems Magazine, Associate Editor for Automatica and Journal of Control Theory and Applications, and the founding Editor-in-Chief for Journal of Control Science and Engineering.



Professor Zhihua Qu received his Ph.D. degree in Electrical Engineering at the Georgia Institute of Technology in June 1990. Since then, he has been with the University of Central Florida and is currently the SAIC Endowed Professor at UCF and a Professor of Electrical Engineering. Dr. Qu's areas of expertise are nonlinear systems and control, autonomous vehicles, and energy systems. His recent research activities in controls have been cooperative control of heterogeneous dynamical systems as well as control of nonholonomic systems. Applications to autonomous vehicles include real-time path planning, cooperative and reactive control. In energy systems, his ongoing research covers such subjects as dynamic stability of distributed power systems, anti-islanding control and protection, distributed generation and load sharing control, distributed VAR compensation, and distributed optimization.

Dr. Qu is the author of three books: *Robust Tracking Control of Robot Manipulators* by IEEE Press (1996), *Robust Control of Nonlinear Uncertain Systems* by John Wiley & Sons (1998), and *Cooperative Control of Dynamical Systems with Applications to Autonomous Vehicles* by Springer Verlag (2009). His research has been supported by governmental agencies (NSF, Army, AFOSR, ONR, NASA, Oak Ridge, DoE) and industry (Lockheed, L-3, SAIC).

Dr. Qu is a Fellow of IEEE and currently serves on Board of Governors of IEEE Control Systems Society and as Associate Editor for Automatica, IEEE Transactions on Automatic Control, and International Journal of Robotics and Automation. From 1999 to 2004, he was the Director/Chair of the EE department at UCF. Since September 2010, he has been serving as the interim chair of ECE.



Professor Jing Sun received her Ph. D. degree from University of Southern California in 1989, and her B. S. and M. S. degrees from University of Science and Technology of China in 1982 and 1984 respectively, all in Electrical Engineering

From 1989 to 1993, she was on the faculty of the Electrical and Computer Engineering Department, Wayne State University. She joined Ford Research Laboratory in 1993 where she worked, first as a technical specialist then a project leader, in the Powertrain Control Systems Department on engine emission control and fuel economy optimization projects. After spending almost 10 years in industry, she came back to academia and joined the Naval Architecture and Marine Engineering Department and Electrical Engineering and Computer Science Department at the University of Michigan in September 2003, where she is a full professor. Her research interests include control theory and optimization, as well as their applications to marine and automotive propulsion systems. She holds 34 US patents, has co-authored a textbook, *Robust Adaptive Control* (Prentice

Hall, 1996), and published over 120 journal and conference papers. She is an IEEE fellow and one of the recipients of the 2003 IEEE Control System Technology Award.



Professor Yuan Wang received her Ph.D. degree in Mathematics from Rutgers University in 1990. Since then she has been with the Department of Mathematics at Florida Atlantic University, where she is currently a Professor. She was a visiting scholar at the Institute of Mathematics and Its Application in 1993; at Université Claude Bernard Lyon I, France, in 1994; at the Australian National University in 1996, and at the Academy of Mathematical Sciences, Chinese Academy of Sciences, for several months annually from 2000 to 2005. She was a recipient of a Young Investigator award from the U.S. National Science Foundation, and a Young Investigator award from the Chinese NSF.

Dr. Wang's research interests lie in several areas of control theory, including realization theory, stability analysis and stabilization of nonlinear systems. She has served as associate editor for the IEEE Conference Editorial Board, for Systems & Control Letters, and for the Journal of Control and Applications. She is also a moderator for the optimization and control branch of the mathematics archive <http://www.arxiv.org/archive/math>.