

# 2009 Chinese Control and Decision Conference

## GENERAL INFORMATION

Chinese Control and Decision Conference (CCDC) is an annual event. The purpose of the conference is to provide a forum for scientists, engineers and practitioners throughout the world to present their latest theoretical results and techniques in the field of systems, control and decision, automation, robotics, and emerging technologies. The first CCDC was held in 1989. The 2009 Chinese Control and Decision Conference (2009 CCDC) is the 21<sup>st</sup> of the series. It was successfully held in Guilin, China from 17<sup>th</sup> June to 19<sup>th</sup> June 2009. The conference venue was Guilin Guishan Hotel, located at the center of Guilin and at the east bank of Li River.

The conference was co-organized by Northeastern University, China, the Industrial Electronics (IE) Chapter of IEEE Singapore Section and Guilin University of Electronic Technology, China. The conference is technically co-sponsored by IEEE Control Systems Society(CSS); IEEE Industrial Electronics Society(IES); Automatic Control Society of Chinese Association of Aeronautics; Technical Committee on Control Theory of Chinese Association of Automation; Simulation Methods and Modeling Society of Chinese Association for System Simulations; Intelligent Control & Management Society, Chinese Association for Artificial Intelligence.



## TECHNICAL PROGRAM

2009 CCDC received overwhelming responses with a total of 2130 submissions from 33 countries/regions. After going through a rigorous review process, 1262 papers were accepted. Finally, 1233 papers were registered and presented in 99 oral sessions

and 9 poster sessions during the conference. 550 delegates from different countries/regions attended the conference.

In addition to the normal technical sessions, the technical program also included 4 keynote speeches and 11 semi-plenary talks covering the state-of-the-art in both theory and applications in Control, Decision, Automation, Robotics and Emerging Technologies. The four keynotes were

1. “Games, Decisions, Control and Communications: Common Threads and Coping with Non-Neutrality” by Prof. Tamer Basar, University of Illinois at Urbana-Champaign, USA.
2. “"Cloud Simulation Platform" -----A New Networked Modeling & Simulation Platform Based on the Concept of Cloud Computing” by Prof. Bohu Li, Beijing University of Aeronautics and Astronautics, China.
3. “Systems Biology: The interplay of Systems and Control Research and Biology?” by Prof. Richard H. Middleton, National University of Ireland Maynooth, Ireland.
4. “Randomly Switching Systems: Models, Analysis, and Applications” by Prof. Gang George Yin, Wayne State University, USA.

Semi-plenary talks were delivered by Prof. Guang-Ren Duan of Harbin Institute of Technology, China on “Parametric Control Systems Design with Application in Missile Attitude Control,” Prof. Geir E. Dullerud of University of Illinois at Urbana-Champaign, USA on “Multi-agent control with multi-resolution sensing over networks,” Prof. Minyue Fu of University of Newcastle, Australia on “Quantized Linear Quadratic Gaussian Control,” Prof. Furong Gao of The Hong Kong University of Science and Technology, Hong Kong, China on “Batch Process Control from Practice to 2D Model Predictive Control,” Prof. João P. Hespanha of University of California, Santa Barbara, USA on “Stochastic hybrid systems and their applications to networks and biology,” Prof. Wei Lin of Case Western Reserve University, USA on “Recent Developments in Nonsmooth Feedback Control of Nonlinear Systems,” Prof. Zongli Lin of University of Virginia, USA on “Low Gain and Low-and-High Gain Feedback: A Review and Some New Results,” Prof. Dragan Nesic of University of Melbourne, Australia on “A unified approach to analysis and design of networked and quantized control systems,” Prof. Lixin Tang of Northeastern University, China on “Hybrid meta-heuristics based research on the planning and scheduling in the process industry,” Prof. Paul M. J. Van den Hof of Delft University of Technology, The Netherlands on “Modelling and control of large-scale physical systems - challenges in reservoir engineering ,” and Prof. Hong Wang of University of Manchester, UK on “Recent Advances on Stochastic Distribution Control: Probability Density Function Control.”

All sessions, including plenary sessions, semi-plenary sessions, oral sessions and poster sessions, were well attended and produced active discussions. The conference banquet, which included entertainment, was held on the evening of 18<sup>th</sup> June 2009.

A CD-ROM, containing all the papers presented at the conference, was provided to each registered delegate. The official conference proceedings will be published by IEEE and included in the IEEE Xplore Database.



Prof. Tamer Basar delivering his plenary talk



Prof. Richard H. Middleton delivering his plenary talk



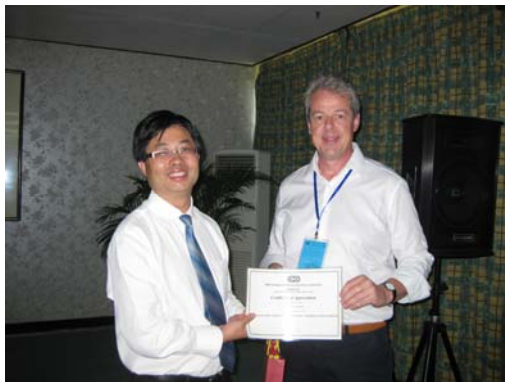
Prof. Gang George Yin delivering his plenary talk



Prof. Bohu Li delivering his plenary talk



During one plenary session





Semi-plenary talks with presentation of 'Certificate of Appreciation'



During Semi-plenary sessions



One of 99 oral technical sessions



One of nine poster sessions



Banquet of 2009 CCDC and performance

## **ZHANG SI-YING (CCDC) OUTSTANDING YOUTH AWARD**

The set up of Zhang Si-Ying (CCDC) Outstanding Youth Paper Award is to recognize Academician Zhang Si-Ying's highly-regarded perseverance, character and academic contribution and also to inspire, motivate and encourage young scholars in their research. For a paper to be eligible for the Award, the first author of the paper must not be older than 35 on the day of award presentation at conference for the year. The award is 3000 RMB with a certificate.

The Award Committee for 2009 CCDC is composed of 5 members: Professor Geir E. Dullerud, USA; Professor Minyue Fu, Australia; Professor Changyun Wen, Singapore; Professor Xin He Xu, China and Professor Guang-Hong Yang, China.

In 2009 CCDC, 67 papers were selected for the consideration of the "Zhang Si-Ying Outstanding Youth Paper Award" based on reviewers' comments and nominations as well as the evaluations of Technical Program Committee members. These papers were sent to famous experts including some members of the International Advisory Committee for further evaluation. Based on their evaluations and recommendation, the Technical Program Committee shortlisted the following 5 papers as the finalists for the Award:

1. Evolutionary Intelligence and Complexity Management in Social Economic Systems  
Wang, Jing; Zhu, Mei; Ren, Fujun/ Peking University
2. Fault Detection for NARMAX Stochastic Systems Using Entropy Optimization Principle  
Yin, Liping; Guo, Lei/ Southeast University
3. Multi-Robot Dispatching in a Geographically Constrained Environment  
Chen, Li-Che; Fu, Yu; Hsiang, Tien-Ruey/ National Taiwan University of Science and Technology
4. Indirect Iterative Learning Control: Application on Artificial Pancreatic Beta-Cell  
Wang, Youqing, Doyle, Frank J./ Univ. of California
5. Control of Observation Systems with Application to Radar  
O'Connor, Alan/ Harvard University

During the conference, all the Award Committee members attended the oral presentations of the 5 finalist papers. Each member independently assessed their originality, technical quality and written and oral presentations. On the basis of the assessments, the 2009 CCDC Zhang Si-Ying Outstanding Youth Paper Award was awarded to O'Connor, Alan from Harvard University.

Professor Zhang Si-Ying presented the award with a certificate to the winner and

'Certificate of Finalist' to all the finalists during the banquet.



Presentation of ZHANG SI-YING Outstanding Youth Award in banquet



Professor Zhang Si-Ying, 2009 CCDC Award Committee Members and Finalists of ZHANG SI-YING Outstanding Youth Award

## POST-CONFERENCE TOURS

On 20<sup>th</sup> June 2009, the conference organized a one-day post conference tour with 3 different routes for delegates to select: Li River, Crown Cave and City Tour. The routes cover the majority of Guilin's scenery which is famous all over the world for its green hills, clear waters, fantastic caves and spectacular rocks. In addition, delegates also enjoyed the evening show 'The Sight Impressions of Liu San Jie', a real scenery performance directed by the famous Chinese director Mr Zhang Yi Mou.





Post conference tour

## **2010 CHINESE CONTROL AND DECISION CONFERENCE**

The 2010 Chinese Control and Decision Conference (2010 CCDC), which is the 22<sup>nd</sup> of the series, will be held in Xuzhou, China on 26 – 28 May 2010. Keynote addresses on the state-of-the-art of the theories and applications in control and decision will be delivered by Professor David John Hill of Australian National University and Professor Frank Lewis of the University of Texas at Arlington. Semi-plenary talks will be delivered by Murat Arcaç of the University of California, Berkeley, Gary Gang Feng of City University of Hong Kong, Zhong-Ping Jiang of the Polytechnic Institute of New York University, Lorenzo Marconi of the University of Bologna and George J. Pappas of the University of Pennsylvania. The Organizing Committee will continue inviting prominent professors/academicians as keynote speakers and semi-plenary speakers of 2010 CCDC. The information for 2010 CCDC will consistently be updated in the conference website: <http://www.ccdc.neu.edu.cn>.

International Technical Program Chair  
International Technical Program Co-Chair

Changyun Wen  
Guang-Hong Yang