

2012 Chinese Control and Decision Conference

GENERAL INFORMATION

The 2012 Chinese Control and Decision Conference (2012 CCDC) was successfully held May 23-25, 2012 in Taiyuan, China. It was the 24th of the conference series. The 2012 CCDC was co-organized by Northeastern University, China, the Industrial Electronics (IE) Chapter of the IEEE Singapore Section and the IEEE Harbin Section Control Systems Society Chapter. The local organizers were Taiyuan University of Technology, China and Taiyuan University of Science and Technology, China. The conference was technically co-sponsored by the IEEE Control Systems Society (CSS), the Automatic Control Society of Chinese Association of Aeronautics, the Technical Committee on Control Theory of Chinese Association of Automation, the Simulation Methods and Modeling Society of Chinese Association for System Simulations, the Intelligent Control and Management Society, and the Chinese Association for Artificial Intelligence.

TECHNICAL PROGRAM

The 2012 CCDC received 1300 full paper submissions from authors of 28 countries and regions. After going through a rigorous review process, during which all the members in the Technical Program Committee worked professionally, timely, responsibly and diligently, 840 papers were included in the technical program for presentation in 84 oral sessions and seven interactive sessions in the conference. Attending the conference were 560 delegates.

In addition to the normal technical sessions, the technical program also included five keynote speeches and 10 distinguished lectures covering the state-of-the-art in both theory and applications in control, decision, automation, robotics and emerging technologies. The five keynotes were as follows:

1. “Event-driven Control and Optimization: Where Less Is Often More...” by Christos G. Cassandras, Boston University, USA.
2. “On the Limits of Feedback in Dealing with Uncertainties” by Lei Guo, Chinese Academy of Sciences (CAS), China.
3. “Robustness in Nature: Challenges and Opportunities for the Systems Biology Community” by Francis J. Doyle III, University of California, Santa Barbara, USA.
4. “High-Gain Observers in Nonlinear Feedback Control: Progress and Challenges” by Hassan K. Khalil, Michigan State University, USA.
5. “Challenges in System Identification” by Paul M.J. Van den Hof, Delft University of Technology, Holland.

Distinguished lectures were delivered by Jian Chen of Tsinghua University, China on “Evaluating the Potential Effects from Probabilistic Selling of Seasonal Items,” Tongwen Chen of the University of Alberta, Canada on “Towards an Advanced Technology for Industrial Alarm Monitoring,” Gary Feng of City University of Hong Kong, China on “Intelligent Control: A T-S Fuzzy Model Based Approach,” Haijun Huang of Beihang University, China on “Optimal Adoption of Advanced Traveler Information Systems: an Optimal Control Theory Approach,” Farshad Khorrani of Polytechnic Institute of NYU, USA on “Autonomous Unmanned Vehicle Technologies,” Campi Marco of the University of Brescia, Italy on “Risk-Return Trade-Off in Decision-Making Processes,” Dragan Nesic of the University of Melbourne, Australia on “Analysis and Design of Extremum Seeking Controllers,” Lucy Pao of the University of Colorado at Boulder, USA on “Control of Wind Turbines: Accomplishments and Challenges,” Huanshui Zhang of Shandong University, China on “Challenge/Complexity of Optimal Control for Systems with Input-delay and Its Approaches,” Jun Zhao of Northeastern University, China on “Dissipativity of Switched Systems Using Multiple Storage Functions.”

All sessions, including keynotes sessions, distinguished lectures sessions, oral sessions and poster sessions, were well attended, received positive feedback and produced active discussions. The conference banquet, which included entertainment, was held in the evening of May 24, 2012.

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

ZHANG SI-YING (CCDC) OUTSTANDING YOUTH AWARD

The Zhang Si-Ying (CCDC) Outstanding Youth Paper Award serves to recognize Academician Zhang Si-Ying’s highly-regarded perseverance, character and academic contribution. It also serves to inspire, motivate and encourage students and 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 the conference. The award is 3000 RMB with a certificate.

The Award Committee for the 2012 CCDC was composed of five members: Christos G. Cassandras of USA, Zhong-Ping Jiang of USA, Changyun Wen of Singapore, Xin He Xu of China and Guang-Hong Yang of China.

For the 2012 CCDC, 183 papers were submitted with request for consideration of the award. Based on reviewers’ comments, nominations, and the evaluations of the Technical Program Committee members, 28 papers were selected for further consideration. These papers were sent to international experts, which included some members of the International Advisory Committee, in the relevant areas for further evaluation. Based on their evaluations and recommendation, the Technical Program

Committee shortlisted the following five papers as the finalists for the Award:

1. “Distributed Consensus of Multi-Agent Systems with General Linear Node Dynamics through Intermittent Communications” by Guanghui Wen and Zhisheng Duan of Peking Univ. and Guanrong Chen of City University of Hong Kong;
2. “Representation of Supervisory Controls using State Tree Structures, Binary Decision Diagrams, Automata, and Supervisor Reduction” by Wujie Chao, Yongmei Gan, and Zhaoan Wang of Xi'an Jiaotong University and W. M. Wonham of the University of Toronto;
3. “Controller Synthesis for Positive Systems Under l_1 -induced Performance” by Xiaoming Chen, James Lam, and Ping Li of The University of Hong Kong and Zhan Shu of the University of Southampton;
4. “Predictive Control of Convex Polyhedron LPV Systems with Markov Jumping Parameters” by Yanyan Yin and Fei Liu of Jiangnan University and Peng Shi of the University of Glamorgan;
5. “Complex Laplacian and Pattern Formation in Multi-agent Systems” by Lili Wang, Zhimin Han, Zhiyun Lin, and Gangfeng Yan of Zhejiang University.

During the conference, all the Award Committee members attended the oral presentations of the five finalist papers. Each member independently assessed their originality, technical quality and written and oral presentations. On the basis of these assessments, the 2012 CCDC Zhang Si-Ying Outstanding Youth Paper Award was awarded to Xiaoming Chen from The University of Hong Kong and Lili Wang from Zhejiang University.

The 25th CHINESE CONTROL AND DECISION CONFERENCE

The **25th** Chinese Control and Decision Conference (2013 CCDC), which is the 25th in the series, will be held in Guiyang, China on 25 – 27 May 2013. Keynote addresses on the state-of-the-art of the theories and applications in control and decision will be delivered by John Baillieul of Boston University, USA, Han-Fu Chen of Chinese Academy of Sciences (CAS), China, Okyay Kaynak of Bogazici University, Turkey and Yutaka Yamamoto of Kyoto University, Japan. Distinguished lectures will be delivered by Jie Chen of City University of Hong Kong, China & University of California, USA, Guoxiang Gu of Louisiana State University, USA, Jagannathan Sarangapani of Missouri University of Science and Technology, USA, Jun Wang of The Chinese University of Hong Kong, China, Xiaohua Xia of the University of Pretoria, South Africa and Ji-Feng Zhang, Chinese Academy of Sciences (CAS), China. Information for the 2013 CCDC will consistently be updated on the conference website: <http://www.ccdc.neu.edu.cn>.

Chairs of the 2012 CCDC Technical Program Committee

Changyun Wen
Zhong-Ping Jiang