

2011 Chinese Control and Decision Conference

GENERAL INFORMATION

The 2011 Chinese Control and Decision Conference (2011 CCDC) was successfully held in Mianyang, China during May 23-25, 2011 and it was the 23rd of the conference series. 2011 CCDC was co-organized by Northeastern University, China, the Industrial Electronics (IE) Chapter of the IEEE Singapore Section and IEEE Harbin Section Control Systems Society Chapter. The local organizer was Southwest University of Science and Technology, China. The conference was technically co-sponsored by IEEE Control Systems Society (CSS); 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 and Management Society, Chinese Association for Artificial Intelligence.

TECHNICAL PROGRAM

The 2011 CCDC received 1355 full paper submissions from authors from 28 countries and regions. After going through a rigorous reviewing process during which all the members in the Technical Program Committee worked professionally, timely, responsibly and diligently, 852 papers were included in the technical program for presentation in 84 oral sessions and 7 interactive sessions in the conference. 450 delegates attended the conference.

In addition to the normal technical sessions, the technical program also included five 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 as follows:

1. "DETERMINISTIC GOSSIPING" by A. Stephen Morse, Yale University, USA.
2. "The PageRank Computation, Randomized Algorithms and Consensus of Multi-Agent Systems" by Roberto Tempo, IEIIT-CNR, Italy.
3. "Quantum Linear Systems Theory" by Ian R. Petersen, University of NSW at the Australian Defense Force Academy, Australian.
4. "Fusion of Decision and Control: Scientific Research and Experiments in Intelligent Drive" by Deyi Li, Beijing University of Posts and Telecommunications, China.
5. "The Status and Prospect of Information Technology in Chinese Industrialization" by Cheng Wu, Tsinghua University, China.

Semi-plenary talks were delivered by Ali Jadbabaie of University of Pennsylvania,

USA on “Consensus, social learning and distributed estimation in complex networks”, Li Qiu of The Hong Kong University of Science and Technology on “Quantify the Unstable”, Naira Hovakimyan of University of Illinois at Urbana-Champaign, USA on “The Theory of Fast and Robust Adaptation”, Yiguang Hong of Institute of Systems Science, Chinese Academy of Sciences on “Set coordination of multi-agent systems”, Andrea Serrani of The Ohio State University, USA on “Suppression of Resonance Tones in Shallow Cavities: A Case Study in Aerodynamic Flow Control”, Ben M. Chen of National University of Singapore, Singapore on “Modeling and forecasting of stock markets under a system adaptation framework”, Dingwei Wang of Northeastern University, China on “Mechanism Design of Reserve Auction for Centralized Procurements of Large Enterprise Groups”, Huaguang Zhang of Northeastern University, China on “Analyses and synthesis of fuzzy hyperbolic model”, Long Wang of Peking University, China on “Multi-robot Cooperation”, S. Joe Qin of University of Southern California, USA on Assessing and Improving Model based Control Performance from Closed Loop Data, Donghua Zhou of Tsinghua University, China on Recent Progress on “Fault Diagnosis, Fault Prediction and Reliability Prediction”, Haibin Yu of Institute of Automation, Chinese Academy of Sciences on “Capacity Analysis and Transmission Scheduling for Industrial Wireless Sensor Networks”.

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 in the evening of May 24, 2011.

A CD-ROM, containing all the papers presented at the conference, was provided to each registered delegate. The official conference proceedings has been published by 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 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 2011 CCDC was composed of five members: Zhong-Ping Jiang of USA, Yiguang Hong of China, Changyun Wen of Singapore, Xin He Xu of China and Guang-Hong Yang of China.

For the 2011 CCDC, 220 papers were selected for consideration for the “Zhang Si-Ying Outstanding Youth Paper Award” based on reviewers’ comments, nominations, and the evaluations of the 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 five papers as the finalists for the Award:

1. “*Convergence Accelerated By the Improvements of Stepsize and Gradient in SPSA*” by Zhang Huajun, Zhao Jin and Geng Tao of Huazhong Univ. of Scie. & Tech.;
2. “*A Novel Control Scheme for Teleoperation with Guaranteed Performance under Time-Varying Delays*” by Bo Zhang, Alexandre Kruszewski and Jean-Pierre Richard of Univ. Lille Nord de France;
3. “*Fault-tolerant Tracking Control of FW-Steering Autonomous Vehicles*” by Henan Chen, Yongduan Song and Danyong Li of Beijing Jiaotong Univ.;
4. “*Active Vibration Control for Harmonic Disturbances with Time-Varying Frequencies through LPV Gain Scheduling*” by Xinyu Shu, Pablo Ballesteros and Christian Bohn of Clausthal Univ. of Tech.;
5. “*A Guaranteed Cost Congestion Control Strategy for a Network of Multi-Agent Systems Subject to Differentiated Services Traffic*” by Ruiru Chen and K. Khorasani of Concordia Univ.

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 these assessments, the 2011 CCDC Zhang Si-Ying Outstanding Youth Paper Award was awarded to Henan Chen from Beijing Jiaotong University and Ruiru Chen from Concordia Univ.

The International Advisory Committee Chair of 2011 CCDC, Si-Ying Zhang presented Certificate of Finalist to all the finalists and also presented the award with a certificate to the two winners during the banquet.

The 24th CHINESE CONTROL AND DECISION CONFERENCE

The **24th** Chinese Control and Decision Conference (2012 CCDC), which is the 24th of the series, will be held in Taiyuan, China on 23 – 25 May 2012. Keynote addresses on the state-of-the-art of the theories and applications in control and decision will be delivered by Christos G. Cassandras of Boston University, Lei Guo of Chinese Academy of Sciences (CAS), Francis J. Doyle III of University of California, Santa Barbara and H. Khalil of Michigan State University. The Organizing Committee will invite prominent professors/academicians as semi-plenary speakers for the 2012 CCDC. Information for the 2012 CCDC will consistently be updated on the conference website: <http://www.ccdc.neu.edu.cn>.

International Technical Program Chairs

Changyun Wen
Guang-Hong Yang

LIST OF FIGURES



Figure 1: ccdc11_OpeningCeremony

Caption: Opening ceremony of 2011 CCDC



Figure 2: ccdc11_PlenarySession_Prof Morse

Caption: A. Stephen Morse delivering his plenary talk

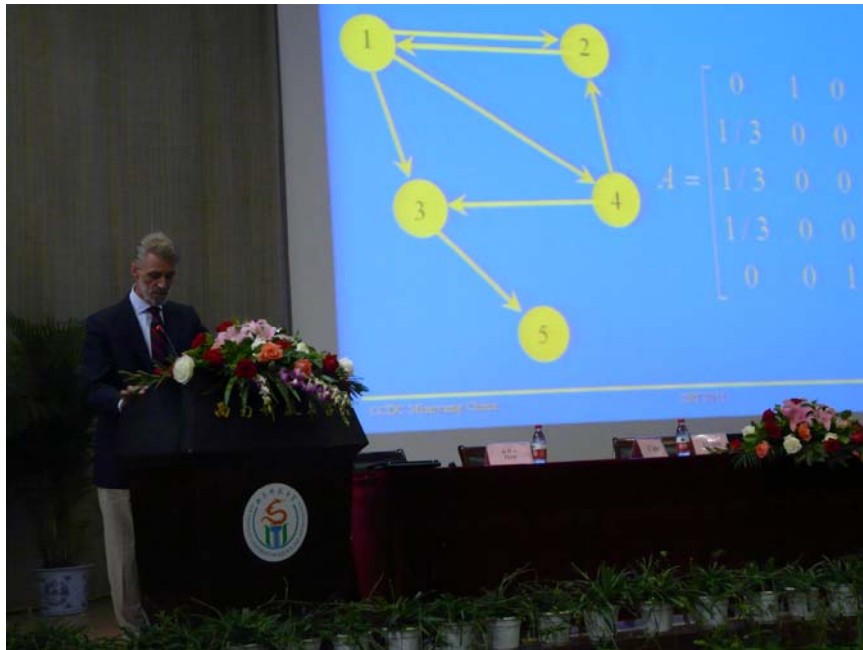


Figure 3: ccdc11_PlenarySession_Prof Tempo
Caption: Roberto Tempo delivering his plenary talk



Figure 4: ccdc11_PlenarySession_Prof Petersen
Caption: Ian R. Petersen delivering his plenary talk



Figure 5: ccdc11_PlenarySession_Prof Cheng WU
Caption: Wu Cheng delivering his plenary talk



Figures 6: ccdc11_Award
Caption: 2011 CCDC Award Committee Members and Finalists of ZHANG SI-YING Outstanding Youth Award



Figures 7: ccdc11_Banquet

Caption: Banquet of 2011 CCDC