

The 26th Chinese Control and Decision Conference

GENERAL INFORMATION

The 26th Chinese Control and Decision Conference (2014 CCDC) was successfully held in Changsha, China during May 31-June 2. 2014 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 organizers were Hunan University of Technology, China and Central South University, China. The conference was technically co-sponsored by IEEE Control Systems Society (CSS); Systems Engineering Society of China (SESC), Chinese Association for Artificial Intelligence (CAAI); and Technical Committee on Control Theory of Chinese Association of Automation.

TECHNICAL PROGRAM

The 2014 CCDC received 1497 full paper submissions from authors from 22 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, 1016 papers were included in the technical program for presentation in 98 oral sessions and 9 interactive sessions in the conference. 752 delegates attended the conference.

In addition to the normal technical sessions, the technical program also included 4 keynote addresses and 6 distinguished lectures covering the state-of-the-art in both theory and applications in control, decision, automation, robotics and emerging technologies. The 4 keynotes were as follows:

1. *“Precision Mapping and Vehicle State Estimation for Autonomous Highway Vehicles”* by Jay A. Farrell, University of California, Riverside, USA.
2. *“Convex Optimization: Theory and Algorithms”* by Dimitri Bertsekas, Massachusetts Institute of Technology, USA.
3. *“On Networked Evolutionary Games”* by Daizhan Cheng, Chinese Academy of Sciences, China (CAS).
4. *“Challenges in Bioinformatics”* by Yanda Li, Tsinghua University, China.

Distinguished lectures were delivered by Jing Sun of University of Michigan, USA on *“Electrified and Connected Vehicles: A New Era for Controls”*, Jie Chen of Beijing Institute of Technology, China on *“An overview of high-order multi-agent coordination*

and Flocking control of multiple non-holonomic robots with connectivity maintenance”, Qing-Chang Zhong of The University of Sheffield, UK on “*Autonomous Distributed Control of Next-Generation Smart Grids*”, Magnus Egerstedt of Georgia Institute of Technology, USA on “*From Global Properties to Local Rules for Multi-Agent Systems*”, Seddik M. Djouadi of University of Tennessee, USA on “*Optimal Model Reduction for Fluid Flows with Application to Nonlinear Convection*”, Dewen Hu of National University of Defense Technology, China on “*Advances in Brain-computer Interface for Control*”.

All sessions, including keynote address sessions, distinguished lectures sessions, oral sessions and interactive sessions, were well attended and produced active discussions. The conference banquet, which included entertainment, was held in the evening of June 1, 2014.

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 2014 CCDC was composed of five members: Zhong-Ping Jiang of USA, Magnus Egerstedt of USA, Changyun Wen of Singapore, Xin He Xu of China and Guang-Hong Yang of China.

For the 2014 CCDC, 88 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. “*Dynamic boundary stabilization of Euler-Bernoulli beam through a Kelvin-Voigt damped wave equation*” by Lu Lu and Jun-Min Wang of Beijing Institute of Tech.;

2. *“Fault subspace selection and analysis of relative changes based reconstruction modeling for multi-fault diagnosis”* by Chunhui Zhao of Zhejiang Univ.;
3. *“Mean-field backward stochastic differential equations with uniformly continuous generators”* by Guo Hancheng and Ren Xiuyun of Shandong Univ.;
4. *“Output swarm stability for high-order linear swarm systems”* by Jianxiang Xi of High-Tech Institute of Xi’an;
5. *“Transmission Data Compression of Remote Networked Control Systems via Model Reduction Method”* by Libin Bai of Univ. of North Carolina at Charlotte.

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 2014 CCDC Zhang Si-Ying Outstanding Youth Paper Award was awarded to Lu Lu from Beijing Institute of Tech..

The International Advisory Committee Chair of 2014 CCDC, Si-Ying Zhang presented Certificate of Finalist to all the finalists and also presented the award with a certificate to the winner during the banquet.

The 27th CHINESE CONTROL AND DECISION CONFERENCE

The 27th Chinese Control and Decision Conference (2015 CCDC) will be held will be held in Qingdao, China during 23 May to 25 May 2015. Keynote addresses on the state-of-the-art of the theories and applications in control and decision will be delivered by K. J. Ray Liu of University of Maryland, USA, Maria Elena Valcher of Universita' di Padova, Italy. The Organizing Committee will invite prominent professors/academicians as distinguished lectures for the 2015 CCDC. Information for the 2015 CCDC will consistently be updated on the conference website: <http://www.ccdc.neu.edu.cn>.

International Technical Program Chairs

Changyun Wen,
Zhong-Ping Jiang

LIST OF FIGURES



Figure 1: ccdc14_OpeningCeremony
Caption: Opening ceremony of 2014 CCDC



Figure 2: ccdc14_Keynote Address Session_Prof Jay A. Farrell
Caption: Prof Jay A. Farrell delivering his keynote address

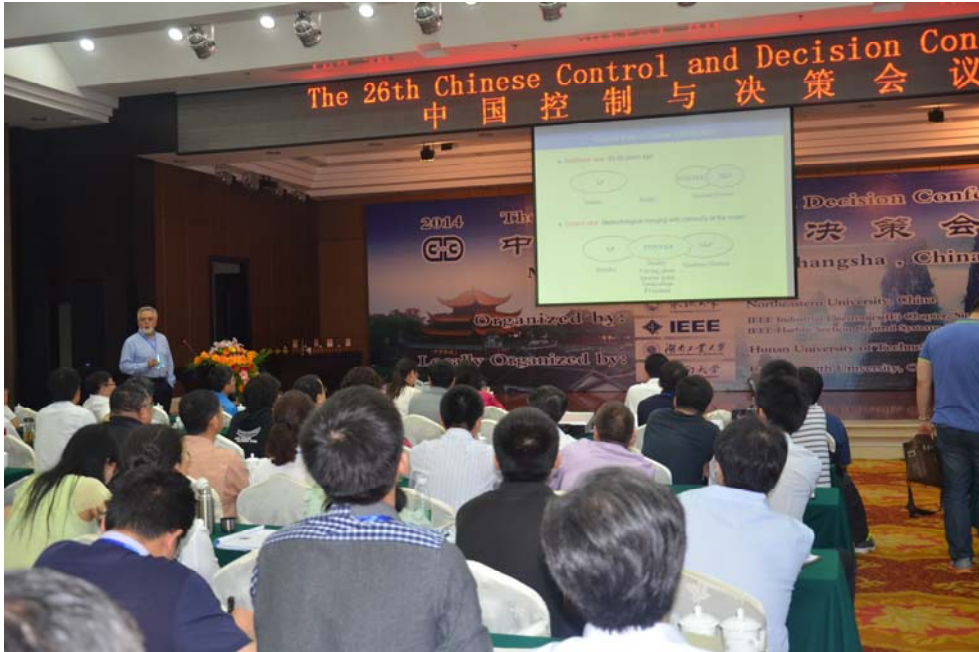


Figure 3: ccdc14_ Keynote Address Session _Prof Dimitri Bertsekas
Caption: Prof Dimitri Bertsekas delivering his keynote address



Figure 4: ccdc14_ Keynote Address Session _Prof Daizhan Cheng
Caption: Prof Daizhan Cheng delivering his keynote address



Figure 5: ccdc14_ Keynote Address Session _Prof Yanda Li
Caption: Prof Yanda Li delivering his keynote address



Figures 6: ccdc14_Award
Caption: 2014 CCDC Award Committee Members and Finalists of ZHANG SI-YING Outstanding Youth Award