

2010 Chinese Control and Decision Conference

GENERAL INFORMATION

The 2010 Chinese Control and Decision Conference (2010 CCDC) was successfully held in Xuzhou, China in May 26-28, 2010 and it was the 22nd of the conference series. 2010 CCDC was co-organized by Northeastern University, China, the Industrial Electronics (IE) Chapter of the IEEE Singapore Section and China University of Mining 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 2010 CCDC received 1510 full paper submissions from 23 countries/regions. After going through a rigorous review process, 902 papers were included in the technical program for presentation in 90 oral sessions and 9 interactive sessions in the conference. 550 delegates attended the conference.

In addition to the normal technical sessions, the technical program also included 4 keynote speeches and 8 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. “Research on Navigation Control and Cooperation of Mobile Robots” by Zixing Cai, Central South University, China.
2. “Dynamic Learning and Pattern-Based Control” by David John Hill, Australian National University, Australia
3. “Reinforcement Learning and Cooperative Decision-Making for Control of Dynamical Systems” by Frank Lewis, The University of Texas at Arlington, USA.
4. “Control Science - a Science Advancing with Needs” by Lin Huang, Peking University, China.

Semi-plenary talks were delivered by Sam Shuzhi Ge of National University of Singapore, Singapore on “Adaptive neural control and output constraint control”, Weihua Gui of Central South University, China on “Optimal control for large scale electrolytic zinc process”, Zhong-Ping Jiang of Polytechnic Institute of New York University, USA on “A tool for the analysis and synthesis of interconnected systems”, Lorenzo Marconi of University of Bologna, Italy on “Modeling and control of a

VTOL UAV interacting with the environment: from flying vehicles to flying robots”, George J. Pappas of University of Pennsylvania, USA on “Mutli-agent systems: challenges and opportunities”, Yong-Duan Song of Beijing Jiaotong University, China on “Latest Developments in modeling and control of high speed trains”, Xinghuo Yu of RMIT University, Australia on “Smart grids from a complex network viewpoint”, Huaguang Zhang of Northeastern University, China on “Analyses and synthesis of fuzzy hyperbolic model”.

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 27, 2010.

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 researches. 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 2010 CCDC was composed of five members: Zhong-Ping Jiang of USA, Lorenzo Marconi of Italy, Changyun Wen of Singapore, Xin He Xu of China and Guang-Hong Yang of China.

For the 2010 CCDC, 67 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 recommendations, the Technical Program Committee shortlisted the following five papers as the finalists for the Award:

1. “*Extending LaSalle’s invariance principle to impulsive switched systems with an application to hybrid epidemic dynamics*” by Jun Liu, Xinzhi Liu, and Wei-Chau Xie of University of Waterloo;
2. “*An estimation of distribution algorithm for resource-constrained project scheduling problem*” by Chen Fang, Ling Wang and Ye Xu of Tsinghua University;
3. “*The maximum principle for partially observed optimal control of fully*

- coupled forward-backward stochastic systems with state constraints*” by Jingtao Shi of Shandong University;
4. “*Self-tuning measurement fusion wiener filter for autoregressive signals*” by Yuan Gao and Zili Deng of Heilongjiang University;
 5. “*Synchronization control of discontinuous neural networks via approximation*” by Xiaoyang Liu and Jinde Cao of Southeast 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 these assessments, the 2010 CCDC Zhang Si-Ying Outstanding Youth Paper Award was awarded to Jun Liu from University of Waterloo and Jingtao Shi from Shandong University.

The General Co-Chair of 2010 CCDC, Jianchang Liu, presented Certificate of Finalist to all the finalists and the General Chair of 2010 CCDC, Fuli Wang, presented the Award with Certificate to the two winners during the banquet.

2011 CHINESE CONTROL AND DECISION CONFERENCE

The 2011 Chinese Control and Decision Conference (2011 CCDC), which is the 23rd of the series, will be held in Mianyang, China on 23 – 25 May 2011. Keynote addresses on the state-of-the-art of the theories and applications in control and decision will be delivered by A. Stephen Morse of Yale University, Ian R. Petersen of University of NSW at the Australian Defence Force Academy and Cheng Wu of Tsinghua University. Semi-plenary talks will be delivered by Naira Hovakimyan of University of Illinois at Urbana-Champaign, Ali Jadbabaie of University of Pennsylvania and Andrea Serrani of The Ohio State University. The Organizing Committee will continue inviting prominent professors/academicians as semi-plenary speakers for the 2011 CCDC. Information for the 2011 CCDC will consistently be updated on the conference website: <http://www.ccdc.neu.edu.cn>.

International Technical Program Chairs

Changyun Wen
Guang-Hong Yang



Opening ceremony of 2010 CCDC



Zixing Cai delivering his plenary talk



David Hill delivering his plenary talk



Caption: Frank Lewis delivering his plenary talk



Lin Huang delivering his plenary talk



During one plenary session



2010 CCDC Award Committee Members and Finalists of ZHANG SI-YING
Outstanding Youth Award



Banquet of 2010 CCDC