

The 29th Chinese Control and Decision Conference

GENERAL INFORMATION

The 29th Chinese Control and Decision Conference (2017 CCDC) was successfully held in Chongqing, China during May 28-30. 2017 CCDC was co-organized by Northeastern University, China, IEEE Industrial Electronics (IE) Chapter, Singapore and Technical Committee on Control and Decision of Cyber Physical Systems (TCCD-CPS), Chinese Association of Automation, China. The local organizer was Chongqing University, China. The conference was technically co-sponsored by IEEE Control Systems Society (CSS), Chinese Association for Artificial Intelligence (CAAI), Technical Committee on Control Theory of Chinese Association of Automation and State Key Laboratory of Synthetical Automation for Process Industries of Northeastern University.

TECHNICAL PROGRAM

The 2017 CCDC received 1914 full paper submissions from authors of 20 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, 1453 papers were included in the technical program for presentation in 152 oral sessions and 9 interactive sessions in the conference. 1239 delegates attended the conference.

In addition to the normal technical sessions, the technical program also included 4 keynote addresses and 8 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. “*Convex Optimization*” by Stephen P. Boyd, Stanford University, USA;
2. “*Traffic Flow Control: Closing the Loop*” by Petros Ioannou, University of Southern California, USA;
3. “*When It Is Unnecessary to Be Optimal and Enough to Be Greedy*” by Edwin K. P. Chong, Colorado State University, USA;
4. “*Control Problems in Quantum Sensing*” by Jiancheng Fang, Beihang University, China.

Distinguished lectures were delivered by Tielong Shen of Sophia University on “*Challenges and Solutions in Automotive Powertrain Control Applications*”, Z.Y. Dong of The University of New South Wales on “*Data Based Methods for Energy Systems*”, Zhiyong Chen of University of Newcastle on “*Advanced Nonlinear Output Regulation Techniques-Theory and Experimental Validation*”, Zhi-Hong Guan of Huazhong University of Science & Technology on “*Hybrid Control of Complex Intelligent Networks*”, Karl H. Johansson of KTH Royal Institute of Technology on “*Collaborative Road Freight Transport*”, Min Huang of Northeastern University on “*Decision Problems and Methodologies in the Forth Party Logistics*”, Hong Qiao of University of Chinese

Academy of Sciences on “*Brain-inspired Intelligent Robotics: Integration of Vision, Motion and Planning*”, Haibo He of University of Rhode Island on “*Goal-representation Adaptive Dynamic Programming for Decision and Control*”.

All sessions, including keynote address sessions, distinguished lectures sessions, oral sessions and interactive sessions, were well attended and produced active discussions. The presentation ceremony of the "Zhang Si-Ying Outstanding Youth Paper Award" was held in the morning of May 29, 2017.

A CD-ROM, containing all the papers presented at the conference, was provided to each registered delegate. The papers written in English of official conference proceedings will be 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 Zhang Si-Ying (CCDC) Outstanding Youth Paper Award winner may receive an award of 10000 CNY together with a certificate, each of the remaining finalists receives an award of 3000 CNY and the Certificate of Finalist.

The Award Committee for the 2017 CCDC was composed of five members: Professor Zhong-Ping Jiang of USA, Professor Karl H. Johansson of Sweden, Professor Changyun Wen of Singapore, Professor Xinhe Xu of China and Professor Guang-Hong Yang of China.

For the 2017 CCDC, 127 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. “*Disciplined Multi-Convex Programming*” by Xinyue Shen and Yuantao Gu of Tsinghua University, Steven Diamond and Stephen Boyd of Stanford University, Madeleine Udell of Cornell Univ;
2. “*Parameterized Frequency-dependent Balanced Truncation for Model Order Reduction of Linear Systems*” by Xin Du and Peter Benner of Max Planck Institute for Dynamics of Complex Technical Systems and Shanghai University;
3. “*Optimal DoS Attack Strategy against Remote State Estimation Over Lossy Networks*” by Menglin Li and Jiahu Qin of University of Science and

Technology of China, Ling Shi of Hong Kong University of Science and Technology, Xinghuo Yu of RMIT University and Huijun Gao of Harbin Institute of Technology;

4. “*A New Distributed Method for Clock Synchronization in Sensor Networks*” by Yong Qiao and Wenlun Yang of Zhejiang University, Minyue Fu of Zhejiang University and University of Newcastle;
5. “*Cooperative Output Regulation for a Class of Nonlinear Heterogeneous Multi-Agent Systems*” by He Cai and Guoqiang Hu of Nanyang Technological 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, Paper 1 and paper 4 listed above won the 2017 CCDC Zhang Si-Ying Outstanding Youth Paper Award. Professor Fuli Wang of Northeastern University and Professor Yongduan Song of Chongqing University presented the awards with certificates to all the finalists and the winners in the presentation ceremony.

The 30th CHINESE CONTROL AND DECISION CONFERENCE

The 30th Chinese Control and Decision Conference (2018 CCDC) will be held in Shenyang, China during June 9–11, 2018. Keynote addresses on the state-of-the-art of the theories and applications in control and decision will be delivered by Francesco Bullo of University of California, Santa Barbara, USA, Anders Lindquist of Royal Institute of Technology, Sweden and Nanning Zheng of Xi'an Jiaotong University, China. The Organizing Committee will invite additional prominent professors/academicians as speakers of keynotes and distinguished lectures for the 2018 CCDC. Information for the 2018 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: ccdc17_ Opening Ceremony

Caption: Professor Fuli Wang giving an opening speech



Figure 2: ccdc17_ Opening Ceremony

Caption: Professor Changyun Wen introducing the technical program of 2017 CCDC during the opening ceremony

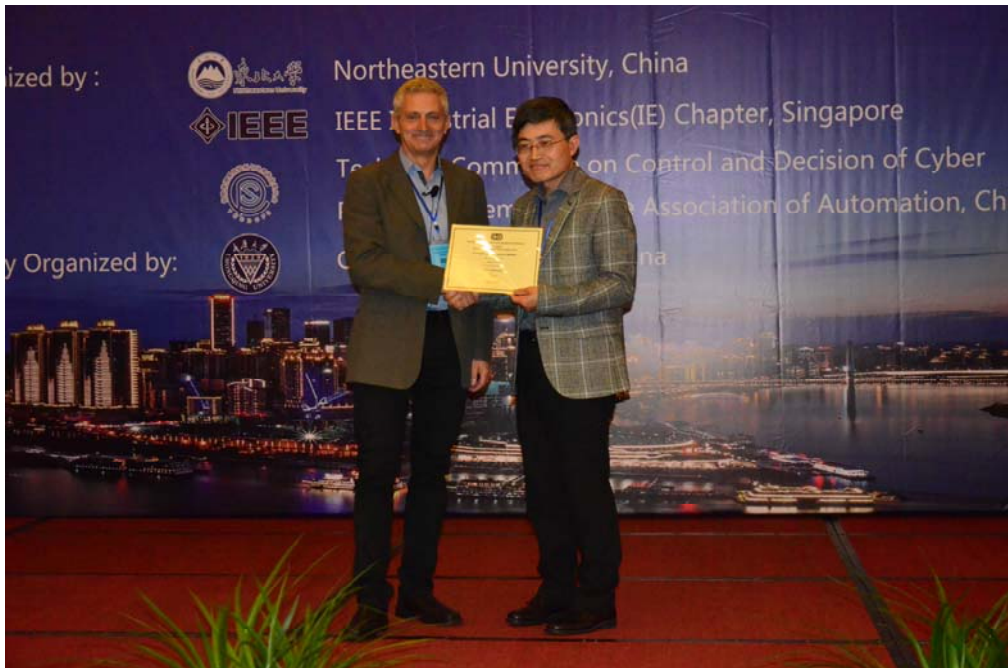


Figure 3: ccdc17_Keynote Address Session _Prof Stephen P. Boyd
Caption: The TPC Chair Professor Zhong-Ping Jiang presenting a certificate of appreciation to Professor Stephen P. Boyd after Prof. Boyd delivering his keynote address



Figure 4: ccdc17_Keynote Address Session _Prof Petros Ioannou
Caption: Professor Petros Ioannou delivering his keynote address



Figure 5: ccdc17_Keynote Address Session _Prof Edwin K. P. Chong
Caption: The TPC Chair Professor Changyun Wen presenting a certificate of appreciation to Professor Edwin K. P. Chong after Prof. Chong delivering his keynote address



Figure 6: ccdc17_Keynote Address Session _Prof Jiancheng Fang
Caption: The General Chair Professor Guang-Hong Yang presenting a certificate of appreciation to Professor Jiancheng Fang after Professor Jiancheng Fang delivering his keynote address



Figure 7: ccdc17_coffee break

Caption: The General Chair Professor Guang-Hong Yang and the TPC Chair Professor Changyun Wen



Figures 8: ccdc17_Award

Caption: 2017 CCDC Award Committee members, winners and finalists in the presentation ceremony of the "Zhang Si-Ying Outstanding Youth Paper Award"



Figures 9: ccdc17_ representatives

Caption: 2017 CCDC organizing committee members and conference secretaries with speakers of keynotes and distinguished lectures



Figures 10: ccdc17_ registration

Caption: 2017 CCDC delegates