

The 35th Chinese Control Conference (CCC2016)

The 35th Chinese Control Conference (CCC2016) was held on July 27–29, 2016 at the Chengdu International Conference Center, Chengdu, Sichuan Province, China. Chengdu is one of the most attractive cities and a major metropolis in China. The city, with its rich historical heritage and natural pride, is renowned for its cuisine, tourism, culture, and the giant panda. Chengdu is the first Asian city to win a UNESCO City of Gastronomy accolade, one of only six in the world. Over 2300 people attended the conference, including more than 2000 registrants, 50 faculty and staff volunteers, and over 200 student volunteers from Southwest Jiaotong University.

CCC2016 was sponsored by the Technical Committee on Control Theory (TCCT) of the Chinese Association of Automation and Systems Engineering Society of China, and locally organized by Southwest Jiaotong University. The conference was also cosponsored by several organizations, both domestic and abroad, including the Academy of Mathematics and Systems Science of Chinese Academy of Sciences (CAS), China Society for Industrial and Applied Mathematics, University of Electronic Science and Technology of China, Sichuan University, Sichuan Society of Automation and Instrument, Asian Control Association (ACA), IEEE Control Systems Society (CSS), Institute of Control, Robotics and Systems (ICROS) Korea, and the Society of Instrument and Control Engineers (SICE), Japan.

Many distinguished guests from these sponsoring and cosponsoring organizations attended the conference, including Prof. Han-Fu Chen, Academy of Mathematics and Systems Science of CAS; Prof. Lei Guo and Prof. Kemin Zhou, general chairs of CCC2016; Prof. Ji-Feng Zhang, chair of TCCT; Prof. Janan Zaytoon, president of IFAC; Prof. Keum-

Shik Hong, vice-president of ACA; Prof. Yoshito Ohta, vice-president of SICE; Prof. Dongil Cho, president-elect of ICROS; and more than 100 consultants and committee members of the TCCT.

TECHNICAL PROGRAM

This year, 2901 papers were submitted to CCC2016 with authors from 29 countries and regions including Australia, Canada, China, Comoros, Ecuador, Finland, France, Germany, Hong Kong, India, Italy, Japan, Kazakhstan, Korea, Mexico, Norway, Pakistan, Poland, Romania, Russia, Serbia and Montenegro, Singapore, South Africa, Sweden, Taiwan, the United Arab Emirates, Ukraine, the United Kingdom, the United

States, and the former Yugoslavia. After a rigorous peer review process organized by the conference program committee, 1944 papers were accepted and included in the conference proceedings. The proceedings will be included in the IEEE conference publication program with the IEEE catalog number CFP1640A.

Seven distinguished scientists delivered plenary lectures:

- » “Universal Laws and Architectures for Bio, Med, Neuro, and Tech Nets,” by John Doyle, California Institute of Technology, United States
- » “Automation of High-Speed Railway Traction Power Supply Systems” by Qingquan Qian, National



Program Committee Chair Jie Chen presides over the opening ceremony of the conference.



Fei Xu, president of Southwest Jiaotong University, at the opening ceremony.



General Chair Kemin Zhou addresses audience during the opening ceremony.



Daizhan Cheng, winner of the third Chen Han-Fu Award, gives his acceptance speech at the opening ceremony.



The registration desk.



Janan Zaytoon delivers his plenary talk, "Practical and Dependable Control Synthesis for Programmable Logic Controllers."



Hong Chen presents her plenary talk, "Triple-Step Nonlinear Control Design: Methodology and Automotive Applications."

Rail Electrification and Automation Engineering Technology Research Center, China

- » "Networked Cyberphysical Systems" by John S. Baras, University of Maryland, United States
- » "Practical and Dependable Control Synthesis for Programmable Logic Controllers" by Janan Zaytoon, University of Reims Champagne-Ardenne, France
- » "Triple-Step Nonlinear Control Design: Methodology and Auto-

motive Applications" by Hong Chen, Jilin University, China

- » "Convex Relaxation Techniques for Control and System Identification" by Bo Wahlberg, KTH Royal Institute of Technology, Sweden
- » "Pinning Control and Controllability of Complex Networks" by Guanrong Chen, City University of Hong Kong, China.

These plenary sessions were respectively chaired by Kemin Zhou, Weirong Chen, Han-Fu Chen, Ji-Feng Zhang, Jie

Chen, Yanlong Zhao, and Qianchuan Zhao.

In addition to these plenary talks, there were 149 oral sessions, including 70 invited oral sessions, arranged in 25 parallel tracks, so that a total of 915 papers were presented in oral sessions. There were also six poster sessions. The conference languages are Chinese and English. Papers in English sessions were presented in English, and papers in other sessions could be presented in either English or Chinese.

AWARDS

To recognize and honor scholars who have made outstanding contributions to the field of systems and control science, to inspire and stimulate innovative and original research, and to advance systems and control science in China, the TCCT established the Chen Han-Fu Award in early 2014. At the opening ceremony of CCC 2016, Prof. Lei Guo, chair of the Evaluation Committee of the Chen Han-Fu Award, announced the winner of the third Chen Han-Fu Award, Prof. Daizhan Cheng, for significant contributions to systems and control science. Prof. Jie Huang, another member of the Evaluation Committee, made a brief introduction of Prof. Cheng's work, and then Prof. Cheng gave an acceptance speech in which he expressed his appreciation to the Evaluation Committee.

Several awards were presented at the closing ceremonies. The winning paper for the 22nd Guan Zhao-Zhi Award was "Time-Inconsistent Mean-Field Stochastic Linear-Quadratic Optimal Control," by Yuan-Hua Ni. The papers that received honorable mention for the 22nd Guan Zhao-Zhi Award were "A Regenerative Braking Control Strategy for Electric Vehicle with Four In-Wheel Motors," by Wei Xu, Haiyan Zhao, Bingtao Ren and Hong Chen, and "Robust Internal Models for Nonlinear Output Regulation with Uncertain Exosystems," by Dabo Xu. Two papers received the 10th Poster Paper Award: "Data-Driven Fault Detection for Networked Control System Based on Implicit Model Approach," by Zhaoxu Chen and Huajing Fang, and "The Sustainable



John S. Baras gives his plenary talk, "Networked Cyberphysical Systems."



Yingmin Jia (middle), vice-chair of the Evaluation Committee for the Poster Award, presents the award.



Lei Guo, chair of the Evaluation Committee of the Chen Han-Fu Award, announced the winner of the third Chen Han-Fu Award.



Qingquan Qian presents his plenary talk, "Automation of High-Speed Railway Traction Power Supply Systems."



Bo Wahlberg delivers his plenary talk, "Convex Relaxation Techniques for Control and System Identification."

Tracking Strategy of Moving Target by UAV in An Uncertain Environment," by Changchun Zhao, Ming Zhu, Haoquan Liang, and Zhe Wu. The winner of the IEEE CSS Beijing Chapter Young Author Prize was Pengpeng Zhang from Northeastern University, for "Input-to-State Stabilization of Nonlinear Discrete-Time Systems with Event-Triggered Control" coauthored by Tengfei Liu and Zhong-Ping Jiang.

PANEL DISCUSSIONS

Jie Huang from the Chinese University of Hong Kong and Jie Chen from the Beijing Institute of Technology organized two plenary panel discussions at the conference. The session "Forum of Young Outstanding Scholars" included Jian Chen from Zhejiang

University, China, Jiming Chen from Zhejiang University, China, Youfeng Su from Fuzhou University, China, and Jian Sun from the Beijing Institute of Technology, China, as panelists. The panel discussed the practical problems with UAVs and future developments and prospects in this area. The panel discussions were enthusiastically greeted by the audience who

appeared to appreciate the face-to-face discussion format.

PRECONFERENCE WORKSHOPS

Four preconference workshops, organized by Shaoyuan Li, Shanghai Jiao Tong University, China, and Weirong Chen, Southwest Jiaotong University, China, were held at the Chengdu International Conference Center. The workshop "Nonlinear Systems and Control" consisted of three speakers: Quanmin Zhu from University of the West of England, Bristol, United Kingdom, Tengfei Liu from Northeastern University, China, and Zhong-Ping Jiang from New York University, United States. The workshop "Power System Analysis and Control" had two speakers, Yuanzhang Sun from Wuhan University,



Lei Guo (right), chair of the Evaluation Committee for the Guan Zhao-Zhi Award, presents the Guan Zhao-Zhi Award.



Guanrong Chen gives his plenary talk, "Pinning Control and Controllability of Complex Networks."



Jie Chen (right), IEEE CSS Chapter Activities chair, presents the IEEE CSS Beijing Chapter Young Author Prize.



John Doyle delivers his plenary talk, "Universal Laws and Architectures for Bio, Med, Neuro, and Tech Nets."

China, and Xiaoru Wang from Southwest Jiaotong University, China. The workshop "Model-Based Automotive Powertrain Systems: Control Design and Implementation" had two speakers, Guoming Zhu from Michigan State University, United States, and Xiang Chen from the University of Windsor, Canada. The workshop "Cooperative Control of Multi-Agent Networks" had four speakers, Wei Ren from the University of California, Riverside, United States, Ming Cao from the University of Groningen, The Netherlands, Wenwu Yu from South-

est University, China, and Zhongkui Li from Peking University, China.

CONCLUDING REMARKS AND INVITATION TO CCC2017

Many members of the conference committees, authors, and individuals contributed to the success of the conference in numerous ways. The program committee of over 400 members undertook the task of reviewing papers, compiling the final program, and editing the book of abstracts and the proceedings. Ten program regional chairs were responsible for promoting the conference within their respective regions and for organizing invited sessions. These chairs were Tongwen Chen, University of Alberta, Canada; Xiaoming Hu, KTH, Sweden; James Lam, the University of Hong Kong; Guoping Liu, the University of South Wales, United Kingdom; Wei Ren, the University of California, Riverside, United States; Tielong Shen, Sophia University, Japan; Xiaohua Xia, the University of Pretoria, South Africa; Lihua Xie, Nanyang Technological University, Singapore; Xiaolan Xie, ENSM.SE, France; and Weixin Zheng, the University of Western Sydney, Australia.

The organizing committee successfully completed the daunting task of

local arrangements. There were over 50 faculty and staff volunteers and over 200 student volunteers in blue shirts serving throughout the conference. Their smiles and considerate service provided a pleasant experience for the conference attendees and helped the conference run smoothly.

At the closing ceremony of CCC2016, Program Committee Chair Jie Chen gave a detailed summary of the conference and expressed the most sincere thanks to the units and individuals who contributed to its success. Tao Liu, the Program Committee chair of CCC2017, then reported on the progress of the preparation work and extended a warm invitation to colleagues to participate in the upcoming conference (July 26–28, 2017) in Dalian, which is a trading and financial center in northeastern China. More information on CCC2017 is available from the conference website: <http://ccc2017.dlut.edu.cn/EH-1.html>. We look forward to seeing you in Dalian next July!

Yanlong Zhao

*General Secretary,
TCCT and CCC2016*

Ying Qu

*Secretary, TCCT and
CCC2016 Secretariat*