The 38th Chinese Control Conference (CCC2019)

The 38th Chinese Control Conference (CCC2019) was held on July 27–30, 2019, at the Guangzhou Baiyun International Convention Center, China. Guangzhou is known as a famous historical and cultural city, international metropolis, important transportation center, and China's southern gateway to the world. For thousands of years, long-standing Lingnan culture and modern civilization have blended here. More than 2400 attendees, including more than 2100 registrants, 100 faculty and staff volunteers, and more than 200 student volunteers from the Guangdong University of Technology, China, attended the conference.

CCC2019 was sponsored by the Technical Committee on Control Theory (TCCT) of the Chinese Association of Automation and Chinese Association of Automation and Systems Engineering Society of China and locally organized by the Guangdong University of Technology. The conference was also cosponsored by several domestic and international organizations: the Academy of Mathematics and Systems Science of the Chinese Academy of Sciences (CAS); China Society for Industrial and Applied Mathematics; South China University of Technology; Automation Society of Guangdong Province; Asian Control Association; IEEE Control Systems Society (CSS); Institute of Control, Robotics, and Systems, Korea; and Society of Instrument and Control Engineers, Japan. Many distinguished guests from these sponsoring and cosponsoring organizations along with more than 100 consultants and members of the TCCT attended the conference.

The registration desk.

The Canton Tower is a famous Chinese landmark located in Guangzhou, the host city of the 38th Chinese Control Conference.

Minyue Fu, Program Committee chair, presides over the opening ceremony.

Xin Chen, president of the Guangdong University of Technology, addresses the opening ceremony.

Yiguang Hong, general vice-chair, speaks during the opening ceremony.

The 38th Chinese Control Conference plenary speakers. (a) Robert Bitmead delivers his plenary talk "Conundrums in Everyday Stochastic Control: The Excitation Price of Performance." (b) Weihua Gui presents his plenary talk "High-Performance Detection Technology and Application." (c) Le Yi Wang gives his plenary talk "Integration of Control, Communications, and Computing in Networked Systems." (d) Frank Allgöwer provides his plenary talk "From Stabilizing to Economic Model Predictive Control: A Paradigm Shift Toward Increased Control Performance." (e) Xiaohong Guan delivers his plenary talk "Cyberphysical Systems in the Intelligence Age." (f) Tielong Shen presents his plenary talk "Automotive Powertrain Control: Online Learning and Optimization." (g) Zhong-Ping Jiang gives his plenary talk "Learning-Based Control: A Theory Based on Robust Adaptive Dynamic Programming."

TECHNICAL PROGRAM

CCC19 received 2414 full-paper submissions by authors from 23 countries and regions including Australia, Canada, Chile, China (including Hong Kong, Macau, and Taiwan), the Czech Republic, Denmark, France, Germany, India, Japan, Korea, The Netherlands, Norway, Russia, Singapore, South Africa, Spain, Sweden, the United Kingdom, and the United States. After a rigorous peer-review process organized by the Conference Program Committee, 1600 papers were accepted and included in the proceedings, which will be incorporated into the IEEE Conference Publication Program with the IEEE catalog number CFP1940A.

Seven distinguished scientists delivered plenary lectures. Their speeches, on timely topics, were

» "Conundrums in Everyday Stochastic Control: the Excitation Price of Performance," by Robert Bitmead, University of California–San Diego, United States
» "High-Performance Detection Technology and Application," by Weihua Gui, Central South University, China
» "Integration of Control, Communications, and Computing in

An oral session in progress.

Participants enjoy one of the poster sessions.

Networked Systems," by Le Yi Wang, Wayne State University, United States

» "From Stabilizing to Economic Model Predictive Control: A Paradigm Shift Toward Increased Control Performance," by Frank Allgöwer, University of Stuttgart, Germany

» "Cyberphysical Systems in the Intelligence Age," by Xiaohong Guan, Xi'an Jiaotong University, China

» "Automotive Powertrain Control: Online Learning and Optimization," by Tielong Shen, Sophia University, Japan

» "Learning-Based Control: A Theory Based on Robust Adaptive Dynamic Programming," by Zhong-Ping Jiang, New York University, United States.

These plenary sessions were chaired by Lei Guo, Qianchuan Zhao, Ji-Feng Zhang, Lihua Xie, Renquan Lu, Yiguang Hong, and Minyue Fu, respectively.

In addition to these plenary speeches, there were 163 oral sessions, including 72 invited oral sessions, arranged in 27 parallel tracks, with a total of 967 oral session papers. There were also four poster sessions. The conference languages were Chinese and English; papers in the English sessions were presented in English, and papers in the other sessions could be presented in either English or Chinese.

AWARDS

The following awards were presented at the closing ceremony: the sixth TCCT Outstanding Contribution Award, the sixth Chen Han-Fu Award, the 25th Guan Zhao-Zhi Award, the 13th SCIS-CCC Poster Paper Award, the IEEE CSS Beijing Chapter Young Author Prize, and the Outstanding Volunteer Award. The winner of the sixth TCCT Outstanding Contribution Award was Jie Chen, Tongji University, China. The winner of the sixth Chen Han-Fu Award was Xiang Li, Fudan University, China. The winning papers for the 25th Guan Zhao-Zhi Award were "Distributed Output Feedback Consensus of Uncertain Nonlinear Multiagent Systems With Limited Data Rate" by Maopeng Ran and Lihua Xie and "Exact Computation of Delay Margin by PID Control: It

Han-Fu Chen (right), a member of the Technical Committee on Control Theory (TCCT) Advisory Committee, presents the TCCT Outstanding Contribution Award to Jie Chen.

Lei Guo (right), a member of the Technical Committee on Control Theory Advisory Committee, gives the Chen Han-Fu Award to Xiang Li.

Jie Chen (right), chair of the Evaluation Committee for the Guan Zhao-Zhi Award, confers the honorable mention award.

Zongli Lin (middle), chair of the Evaluation Committee for SCIS-CCC Poster Award, presents the award.

Jie Chen (right), chair of the Evaluation Committee for the Guan Zhao-Zhi Award, congratulates the awardees.

Robert Bitmead (right), IEEE Control Systems Society president, honors the winner of the IEEE CSS Beijing Chapter Young Author Prize.

Yiguang Hong (back row, right), general vice-chair, and Guoxu Zhou (back row, left), vice-chair of the Organizing Committee, present the Outstanding Volunteer Awards.

The panel discussion members for "Control and Automation: The Present and the Future."

The members of the panel discussion for "Forum of Young Outstanding Scholars on Advanced Control and Intelligent Systems."

The attendees listen during one of the development forums, "Intelligent Manufacturing Frontier."

of ADRC for Higher Performance" by Zhijun Yang, Hao Peng, Wenchao Xue, and Han Sun. The winner of the IEEE CSS Beijing Chapter Young Author Prize was Xiwang Dong from Beihang University, China, with the paper "Time-Varying Formation Feasibility Analysis for Linear Multiagent Systems With Time Delays and Switching Graphs." A total of 108 students from the Guangdong University of Technology were recognized with the Outstanding Volunteers Award.

PANEL DISCUSSIONS
Ben M. Chen from the Chinese University of Hong Kong, China, and Min Wu from the China University of Geosciences, Wuhan, organized two plenary panel discussions. "Control and Automation: The Present and the Future" included Jie Chen, Tongji University; Zhengtao Ding, University of Manchester, United Kingdom; Jie Huang, Chinese University of Hong Kong; and Zongli Lin University of Virginia, United States, as panelists. The second panel session, "Forum of Young Outstanding Scholars on Advanced Control and Intelligent Systems," featured Mou Chen, Nanjing University of Aeronautics and Astronautics, China; Jun Fu, Northeastern University, China; Ai-Guo Wu, Harbin Institute of Technology, Shenzhen, China; and Wen-An Zhang, Zhejiang University of Technology, China, as panelists. They discussed the problems in trends of control and automation and the future development and prospects of this area. The audience responded enthusiastically to the plenary panel discussions, and the face-to-face format created a warm atmosphere.

DEVELOPMENT FORUMS
Jian Chu from the Institute of Ningbo Artificial Intelligence and Shanghai Jiao from Tong University, China, organized the development forum, "Intelligent Manufacturing Frontier," which included Feng Qian, East China University of Science and Technology, China; Hansheng Suo, Research Institute of Petro-Cyberworks Information Technology; Pei Huang, e-works;

Suffices to Solve a Unimodal Problem!" by Jianqi Chen, Dan Ma, Yong Xu, and Jie Chen. The winning paper for the Honorable Mention Award of the 25th Guan Zhao-Zhi Award was "Global Consensus of Multiagent Systems With Intermittent Directed Communication in the Presence of Actuator Saturation," by Yijing Xie and Zongli Lin.

Two papers received the 13th SCIS-CCC Poster Paper Award: "An Approach to Linear Active Disturbance Rejection Controller Design With a Linear Quadratic Regulator for a Non–Minimum-Phase System" by Ryo Tanaka and Tetsunori Koga and "A Novel Motion Stage Design by Reducing Disturbance Bandwidth

Song Liu, Alibaba Group; and Haibin Yu, SUPCON, as speakers.

Feiqi Deng, South China University of Technology, organized the forum "Stochastic Systems and Control." The speakers were Tomás Caraballo, Universidad de Sevilla, Spain; Xuerong Mao, University of Strathclyde, United Kingdom; Huanshui Zhang, Shandong University, China; and Chanying Li, Academy of Mathematics and Systems Science, CAS.

Quan Pan from Northwestern Polytechnical University, China, and Yi Chai from Chongqing University, China, organized the forum "Education of Automation and Control." Chenghui Zhang, Shandong University; Ding Liu, Xi'an University of Technology; Li Li, Tongji University; and Zhong-Ping Jiang, New York University, were the speakers.

Juntong Qi from Tianjin University, China, organized the forum "Advances in Research and Application of Aerial Robots," which featured Quan Quan, Beihang University; Pakpong Chirarattananon, City University of Hong Kong, China; Cunjia Liu, Loughborough University, United Kingdom; Chao Xu, Zhejiang University; Guowei Cai, Fujian AeroTiger Unmanned Aerial Vehicle Co., Ltd., China; and Juntong Qi, Tianjin University, as the speakers.

PRECONFERENCE WORKSHOPS

Four preconference workshops, organized by Qingshan Jia, Tsinghua University, China; Yuanqing Li, South China University of Technology; Keyou You, Tsinghua University; and Benmei Chen, Chinese University of Hong Kong, were held at the Guangzhou Baiyun International Convention Center.

» "Control and Optimization for Networked Systems," included Ling Shi, Hong Kong University of Science and Technology, China; Fumin Zhang, Georgia Institute of Technology, United States; and Hua Geng, Tsinghua University, as speakers.

» "Advances on Brain Signal Processing," featured speakers Peng

The speakers for the "Stochastic Systems and Control" development forum.

The "Education of Automation and Control" development forum speakers.

Conference participants at the "Advances in Research and Application of Aerial Robots" development forum.

A preconference workshop in progress.

Xu, University of Electronic Science and Technology of China, China; Ming Dong, Tianjin University; and Xun Chen, University of Science and Technology of China.

» "Distributed Optimization Over Networks," had speakers Yiguang Hong, Academy of Mathematics and Systems Science, CAS; Lihua Xie, Nanyang Technological Uni-

versity, Singapore; and Keyou You, Tsinghua University.

» "Fully Autonomous Unmanned Aerial Systems," in which Ben M. Chen, Chinese University of Hong Kong; Biao Wang, Nanjing University of Aeronautics and Astronautics; Feng Lin, National University of Singapore; and Shupeng Lai, National University of Singapore, were speakers.

CONCLUDING REMARKS AND AN INVITATION TO CCC2020

Many individuals, authors, members of the conference committees, and general attendees made significant contributions to the success of the event. The program committee of approximately 300 members undertook the task of reviewing papers, compiling the final program, and editing the book of abstracts and proceedings. Nine program regional chairs were responsible for promoting the conference within their respective regions and organizing invited sessions: Tongwen Chen, University of Alberta, Canada; Xiaoming Hu, KTH Royal Institute of Technology, Sweden; Qinglong Han, Swinburne University of Technology, Australia; James Lam, University of Hong Kong, China; Guoping Liu, University of South Wales, United Kingdom; Wei Ren, University of California, Riverside, United States; Tielong Shen, Sophia University; Xiaohua Xia, University of Pretoria, South Africa; and Lihua Xie, Nanyang Technological University. The organizing committee successfully completed the daunting task of local arrangements. There were more than 100 faculty and staff volunteers and more than 200 student volunteers in conference logo shirts serving throughout the conference. Their smiles and considerate service provided a pleasant experience for attendees and helped the conference run smoothly.

The volunteers, dressed in conference shirts, provided thoughtful service throughout the conference.

Welcome to the 39th Chinese Control Conference in Shenyang.

The Technical Committee on Control Theory members during the 38th Chinese Control Conference.

At the closing ceremony, Guoxu Zhou, Organizing Committee vice-chair, gave a detailed summary of the conference and expressed sincere thanks to the units and individuals that made contributions to it. Guanghong Yang, general chair of CCC2020, reported on the progress of the preparations for that event and extended a warm invitation to colleagues to participate. CCC2020 will be held on July 27–29, 2020, in Shenyang, China, a prosperous and thriving metropolis that serves as the capital city of Liaoning Province as well as the economic, cultural, transportation, business, and trade center of northeastern China. It is known to the world as the birthplace of the Qing dynasty, the kingdom of two emperors, and features more than 1500 historic and cultural points of interest. Shenyang is also home to three World Heritage sites: the imperial palace of the Qing dynasty, the Fu tomb, and the Zhao tomb. More information on CCC2020 is available on the conference website: http://conf.neu.edu.cn/ccc2020/English/Home.html. We look forward to seeing you in Shengyang next July!

Zhixin Liu
General Secretary, TCCT and CCC2019

Ying Qu
Secretary, TCCT and CCC2019 Secretariat

The Third IEEE Conference on Control Technology and Applications (CCTA 2019)

The third IEEE Conference on Control Technology and Applications (CCTA 2019) was held at the City University of Hong Kong, China, August 19–21, 2019. The conference was preceded by technical workshops on August 18, 2019. The City University of Hong Kong was chosen as the venue due to its first-class facilities, excellent support, convenient location for transportation, and wide variety of food and accommodation options.

CCTA is the premiere event of the IEEE Control Systems Society (CSS), dedicated to advances in the technologies and applications of systems and control. Built on the legacy of its predecessor, the IEEE Multiconference on Systems and Control (MSC), CCTA 2017 and CCTA 2018 took place on the Big Island of Hawaii and in Copenhagen, Denmark, respectively. The year 2019 marked the third appearance of this flagship event and the first time that CCTA or MSC had ever been held in Asia. CCTA 2019 was organized in

Miroslav Krstic delivering his plenary talk.

Xiaohong Guan presenting his plenary talk.

Robert R. Bitmead asks a question while Jing Sun chairs the plenary talk by Dawn Tilbury, which was the first ever Conference on Control Technology and Applications intercontinental plenary talk, delivered from Ann Arbor, Michigan, to Hong Kong.