



第五届全驱系统理论与应用会议

The 5th Conference on Fully Actuated System Theory and Applications
(FASTA 2026)

程序册 Final Program

主办单位

IEEE 系统、人与控制论学会
燕山大学

承办单位

IEEE SMC 学会全驱系统方法技术委员会
燕山大学电气工程学院

Organizing Institutions

IEEE Systems, Man, and Cybernetics Society
Yanshan University

Host

Technical Committee on Fully Actuated System Approach, IEEE SMC Society
School of Electrical Engineering, Yanshan University

2026年5月22-24日, 中国·秦皇岛
May 22-24, 2026, Qinhuangdao, China

协办单位

IEEE Beijing Section
河北省自动化学会
东北大学秦皇岛分校
河北科技大学

Technically Co-Sponsored

IEEE Beijing Section
Hebei Association of Automation
Northeastern University at Qinhuangdao
Hebei University of Science and Technology



照片直播



会议议程



欢迎辞

第五届全驱系统理论与应用会议 (The 5th Conference on Fully Actuated System Theory and Applications, FASTA2026) 将于 2026 年 5 月 22-24 日在河北省秦皇岛市召开。会议总主席由中国科学院院士、哈尔滨工业大学段广仁教授担任，会议程序委员会主席由国家杰青、教育部高层次人才、燕山大学华长春教授担任。会议旨在为从事全驱系统理论与应用相关领域研究的国内外专家、学者及工程技术人员提供一个学术交流平台，推动全驱系统理论与应用研究的发展。会议的工作语言为中文和英文。

在此，我们谨代表会议程序委员会与组织委员会对所有投稿作者及参会人员表示衷心的感谢与最热烈的欢迎！

本届会议由 IEEE 系统、人与控制论学会和燕山大学共同主办，IEEE SMC 学会全驱系统方法技术委员会和燕山大学电气工程学院承办，IEEE 北京分会、河北省自动化学会、东北大学秦皇岛分校、河北科技大学协办。会议共收到来自中国（含港澳地区）、新加坡、孟加拉国、英国、法国、匈牙利、美国、墨西哥、澳大利亚等 11 个国家和地区的投稿 545 篇（包括论文 472 篇，长摘要 73 篇），经过严格、认真的评审程序，共有 424 篇论文和 68 篇长摘要被会议录用。本次会议安排口头报告 46 组，共 332 篇论文和长摘要，会议期间共安排 14 个会议室进行四轮口头报告交流。会议安排张贴报告 2 组，共 132 篇论文和长摘要。

我们很荣幸地邀请了 3 位国际知名学者作大会报告，他们是姜斌教授（南京航空航天大学，中国），Peng Shi 教授（阿德莱德大学，澳大利亚），Sergey Dashkovskiy 教授（维尔茨堡大学，德国）。本次会议特别设立主编论坛，由高会军教授担任论坛主席，论坛嘉宾分别为 IEEE TAI 主编、香港城市大学王钧教授，IEEE TC 主编、阿德莱德大学 Peng Shi 教授，IEEE TSMCS 主编、哈尔滨工业大学高会军教授，IEEE TFS 主编、华中科技大学伍冬睿教授，以及 IEEE TII 共同主编、华东理工大学唐漾教授。会议组织了两个分会场报告，邀请了青岛大学侯忠生教授、山东科技大学张焕水教授、浙江大学柴利教授、山东大学刘帅教授、南京航空航天大学张柯教授、上海交通大学宁超教授、燕山大学李阔教授、哈尔滨工业大学李湛教授担任主讲嘉宾。会议还精心组织了顶刊论坛、特邀论坛、巾帼论坛、总师论坛、成长论坛等，特别邀请到来自国内外知名高校的 50 余位控制领域杰出学者，分别担任报告人、主持人及点评专家等角色，围绕领域前沿展开深度学术分享与交流。

本次会议特设“优秀青年论文奖”、“最佳学生论文奖”和“最佳张贴论文奖”，旨在激励更多青年科研工作者与学生投身全驱系统控制理论及应用研究；同时设立“优秀志愿者奖”，表彰在会议筹备与召开期间作出突出贡献的学生志愿者。尤为重要的是，本次会议将为第二届“全驱奖”和“青年全驱奖”获得者隆重颁奖，以奖励和表彰在全驱系统理论与应用领域取得创新性研究成果、具有重要学术影响力的学者。

在此，我们谨向所有为本届会议顺利召开做出贡献的人士致以我们最真诚的谢意！感谢审稿人及程序委员会委员对投稿论文的严谨评审！感谢组委会和志愿者提供的热情服务！感谢大会报告人与分会场报告人接受会议邀请，与大家一同分享他们最新的研究成果！最后，我们谨代表程序委员会衷心感谢所有投稿作者和参会人员第五届全驱系统理论与应用会议的支持！第五届全驱系统理论与应用会议欢迎您！



段广仁院士
会议总主席



华长春教授
会议程序委员会主席

会议总主席

会议程序委员会主席

Welcome Address

The 5th Conference on Fully Actuated System Theory and Applications (FASTA2026) will be held from May 22 to 24, 2026, in Qinhuangdao, Hebei Province, China. The General Chair is Professor Guangren Duan, an Academician of the Chinese Academy of Sciences from Harbin Institute of Technology. The Program Committee Chair is Professor Changchun Hua, recipient of the National Science Fund for Distinguished Young Scholars and high-level talent of the Ministry of Education, from Yanshan University. The conference aims to provide an academic exchange platform for experts, scholars, and engineers from around the world engaged in research related to fully actuated system theory and applications, so as to promote the advancement of research in this field. The working languages of the conference are Chinese and English.



Guangren Duan
General Chair



Changchun Hua
Program Committee Chair

On behalf of the conference Program Committee, we would like to express our heartfelt thanks and warmest welcome to all the contributors and participants!

The conference is co-sponsored by the IEEE Systems, Man, and Cybernetics Society, and Yanshan University, hosted by Technical Committee on Fully Actuated System Approach, IEEE SMC Society, and the School of Electrical Engineering at Yanshan University, and co-organized by the IEEE Beijing Section, Hebei Association of Automation, Northeastern University at Qinhuangdao, and Hebei University of Science and Technology. The conference received a total of 545 submissions (including 472 full papers and 73 extended abstracts) from 11 countries and regions, including China (including Hong Kong and Macao), Singapore, Bangladesh, the United Kingdom, France, Hungary, the United States, Mexico, and Australia. After a strict and careful review process, 424 papers and 68 extended abstracts were accepted by the conference. During the conference, 14 conference rooms are assigned for 4 rounds of oral presentation, including 46 oral sessions that cover a total of 332 papers. Two poster sessions, including a total of 132 papers, are also scheduled during the conference.

We are honored to invite three internationally famous scholars to deliver Plenary Lectures. They are Prof. Bin Jiang (Nanjing University of Aeronautics and Astronautics, China), Prof. Peng Shi (University of Adelaide, Australia), and Prof. Sergey Dashkovskiy (University of Würzburg, Germany). The conference has specially organized an Editor-in-Chief Forum, chaired by Prof. Huijun Gao. The forum guests include Prof. Jun Wang from City University of Hong Kong (Editor-in-Chief of IEEE TAI), Prof. Peng Shi from University of Adelaide (Editor-in-Chief of IEEE TC), Prof. Huijun Gao from Harbin Institute of Technology (Editor-in-Chief of IEEE TSMCS), Prof. Dongrui Wu from Huazhong University of Science and Technology (Editor-in-Chief of IEEE TFS), and Prof. Yang Tang from East China University of Science and Technology (Co-Editor-in-Chief of IEEE TII). The conference has organized two Semi-plenary Lectures, inviting Prof. Zhongsheng Hou from Qingdao University, Prof. Huanshui Zhang from Shandong University of Science and Technology, Prof. Li Chai from Zhejiang University, Prof. Shuai Liu from Shandong University, Prof. Ke Zhang from Nanjing University of Aeronautics and Astronautics, Prof. Chao Ning

from Shanghai Jiao Tong University, Prof. Kuo Li from Yanshan University, and Prof. Zhan Li from Harbin Institute of Technology as the keynote speakers. Furthermore, the conference has meticulously organized various forums, including the Top Journal Forum, Invited Forum, Women in Science Forum, Chief Engineer Forum, and Growth Forum. More than 50 distinguished scholars in the field of control from renowned universities at home and abroad were specially invited to serve as speakers, chairs, and panelists, engaging in in-depth academic sharing and exchange on the frontiers of the field.

The conference set up the "Outstanding Youth Paper Award", "Best Student Paper Award" and "Best Poster Paper Award", aiming to encourage more young researchers and students to devote themselves to the research on control theory and applications of fully actuated systems. Meanwhile, the "Outstanding Volunteer Award" has been set up to recognize student volunteers who have made outstanding contributions during the preparation and convening of the conference. Most importantly, a grand award ceremony will be held during the conference for the 2nd "Full-Actuation Award" and "Youth Full-Actuation Award" to recognize and honor scholars who have achieved innovative research results and exert significant academic influence in the field of fully actuated system theory and applications.

We would like to express our most sincere gratitude to all those who contributed to the successful convening of this conference! Thanks to the reviewers and members of the Program Committee for their rigorous review of the submitted papers! Thank the organizing committee and volunteers for their warm service! We would like to thank the plenary speakers, the semi-plenary speakers and the invited forum speakers for accepting the conference invitation and sharing their latest research findings with us! Finally, on behalf of the Program Committee, we would like to thank all contributors and participants for their support of the 5th Conference on Fully Actuated System Theory and Applications! The FASTA 2026 welcomes you!

Guangren Duan
General Chair

Changchun Hua
Program Committee Chair

会议程序总览

第五届全驱系统理论与应用会议

中国·秦皇岛

5月22日 (星期五) May 22 (Friday)		5月23日 (星期六) May 23 (Saturday)	
08:00 | 22:00	注册/Registration 地点/Location: 一楼国际会议中心	08:30-09:00	开幕式致辞 / Opening Ceremony Address
		09:00-09:05	合影/Group Photograph
		09:05-09:45	大会报告1 姜斌 / Plenary Lecture 1 by Bin Jiang 主持人: 周东华 Chair: Donghua Zhou
		09:45-10:25	大会报告2 石碰 / Plenary Lecture 2 by Peng Shi 主持人: 刘晓平 Chair: Xiaoping Liu
		10:25-10:40	茶歇/Tea Break
		10:40-11:20	大会报告3 / Plenary Lecture 3 by Sergey Dashkovskiy 主持人: 顾国祥 Chair: Guoxiang Gu
		11:20-12:00	主编论坛: 王钧 石碰 高会军 伍冬睿 唐漾 Editors-in-Chief Forum: Jun Wang, Peng Shi, Huijun Gao, Dongrui Wu, Yang Tang 主持人: 段广仁 Chair: Guangren Duan
		12:00	午餐自助 / Buffet Lunch 地点/Location: 三楼宴会厅/一楼自助区
		13:30-15:30	分组报告一、张贴报告一/Regular Session I, Poster Presentation I
		15:30-15:50	茶歇/Tea Break
20:00 | 21:00	IEEE SMC TC FASTA、ACA TC FASTA、CAA TC FASTA 全体委员工 作会议 地点/Location: 三楼宴会厅	15:50-17:50	特邀论坛一 / Invited Forum I 报告人: 邓飞其 刘万泉 周彤 徐胜元 刘允刚 Speakers: Feiqi Deng, Wanquan Liu, Tong Zhou, Shengyuan Xu, Yungang Liu 主持人: 邓飞其 刘允刚 Chairs: Feiqi Deng, Yungang Liu 地点/Location: 一楼国际会议中心A厅
		15:50-17:50	特邀论坛二 / Invited Forum II 报告人: 刘勇 赵旭东 韩红桂 刘准钊 游科友 Speakers: Yong Liu, Xudong Zhao, Honggui Han, Zhunga Liu, Keyou You 主持人: 刘勇 游科友 Chairs: Yong Liu, Keyou You 地点/Location: 一楼国际会议中心B厅
		15:50-17:50	成长论坛A / Growth Forum A 点评专家: 赵新 徐静 张伟 吴争光 温广辉 Advisors: Xin Zhao, Jing Xu, Wei Zhang, Zhengguang Wu, Guanghui Wen 主席: 张立宪 Chair: Lixian Zhang 地点/Location: 一楼贵宾厅
		15:50-17:50	巾帼论坛 / Women Scientists Forum 报告人: 董宏丽 张颖伟 张皓 马倩 丁伟利 Speakers: Hongli Dong, Yingwei Zhang, Hao Zhang, Qian Ma, Weili Ding 主持人: 董宏丽 张皓 Chairs: Hongli Dong, Hao Zhang 地点/Location: 一楼国际会议中心C厅
		优秀青年论文评选/Outstanding Young Scholar Paper Competition 地点/Location: 北京厅	
		最佳学生论文评选/Best Student Paper Competition 地点/Location: 江苏厅	
		分组报告二/ Regular Session II	
		17:50-19:30 晚餐自助/Buffet Dinner 地点/Location: 三楼宴会厅/一楼自助区	

Program at a Glance

The 5th Conference on Fully Actuated System Theory and Applications

Qinhuangdao, China

		5月24日 (星期日) May 24 (Sunday)	
08:30-10:30	分会场报告1 / Semi-plenary Session 1 侯忠生/Zhongsheng Hou 主持人: 忻欣/Chair: Xin Xin 张焕水/Huanshui Zhang 主持人: 冯俊娥/Chair: June Feng 柴利/Li Chai 主持人: 郭戈/Chair: Ge Guo 刘帅/Shuai Liu 主持人: 林志贇/Chair: Zhiyun Lin 地点/Location: 一楼国际会议中心BC厅	分会场报告2 / Semi-plenary Session 2 张柯/Ke Zhang 主持人: 陈谋/Chair: Mou Chen 宁超/Chao Ning 主持人: 余翔/Chair: Xiang Yu 李阔/Kuo Li 主持人: 刘明/Chair: Ming Liu 李湛/Zhan Li 主持人: 刘涛/Chair: Tao Liu 地点/Location: 一楼国际会议中心A厅	
			10:30-10:50 茶歇/Tea Break
10:50-12:20	分组报告三、张贴报告二/Regular Session III, Poster Presentation II		
12:20	午餐自助 / Buffet Lunch 地点/Location: 五楼秦皇汇/一楼自助		
14:00-16:00	顶刊论坛 / Top Journal Forum 报告人: 庄松霖 文力 徐天添 边桂彬 吴志刚 李阿明 胡延庆 俞江帆 苏奇 Speakers: Songlin Zhuang, Li Wen, Tiantian Xu, Guibin Bian, Zhigang Wu, Aming Li, Yanqing Hu, Jiangfan Yu, Qi Su 主持人: 高会军 张海涛 庄松霖 Chairs: Huijun Gao, Haitao Zhang, Songlin Zhuang 地点/Location: 三楼贵宾厅		
	特邀论坛三 / Invited Forum III 报告人: 顾国祥 张纪峰 王大轶 段海滨 孙健 Speakers: Guoxiang Gu, Jifeng Zhang, Dayi Wang Haibin Duan, Jian Sun 主持人: 张纪峰 段海滨 Chairs: Jifeng Zhang, Haibin Duan 地点/Location: 闻涛厅	特邀论坛四 / Invited Forum IV 报告人: 沈红斌 胡庆雷 王友清 邱剑彬 Speakers: Hongbin Shen, Qinglei Hu, Youqing Wang, Jianbin Qiu 主持人: 沈红斌 邱剑彬 Chairs: Hongbin Shen, Jianbin Qiu 地点/Location: 明华厅	
	成长论坛B / Growth Forum B 点评专家: 刘浩 王东 刘腾飞 刘方猛 Advisors: Hao Liu, Dong Wang, Tengfei Liu, Fangmeng Liu 主席: 李彬 Chair: Bin Li 地点/Location: 明光厅	总师论坛 / Chief Engineer Forum 报告人: 全胜 朱庆华 丁建钊 张英辉 Speakers: Sheng Quan, Qinghua Zhu, Jianzhao Ding, Yinghui Zhang 主持人: 韩飞 Chair: Fei Han 地点/Location: 一楼贵宾厅	
分组报告四 / Regular Session IV			
16:00-17:00	闭幕式/Closing Ceremony		地点/Location: 一楼国际会议中心
17:00-20:00	晚宴/Banquet		

Proceedings of FASTA 2026

FASTA2026网站: <http://fasta2026.fasta.org.cn>

Website of FASTA2026: <http://fasta2026-en.fasta.org.cn/>

会议程序册下载 (Program Download) : <http://fasta2026.fasta.org.cn/index/lists?id=339>

口头报告信息 (Oral Sessions): <http://fasta2026.fasta.org.cn/index/lists?id=344>

张贴报告信息 (Poster Sessions): <http://fasta2026.fasta.org.cn/index/lists?id=344>

FASTA2026会议论文管理系统网址: (Website of FASTA2026 Paper Management System):

<http://cms.amss.ac.cn/>

联系方式

	负责人	分工	联系方式
会务组	杨亚娜, 李亚峰	总体负责	13613376385 (杨)
	李 丽, 张翠华	现场注册	18833553222 (李)
	刘国聘, 张 宇	交通安排	13731788315 (刘)
	钱 承, 关 哲	住宿安排	18713520340 (钱)
	赵广磊, 李晓磊	会场安排	15703375568 (赵)
	张 宇, 陈健楠	餐饮安排	15603384306 (张)
酒店	秦皇国际大酒店		0335-8368000 (前台)
			18849373481 (葛经理)

目 录 (Contents)

会议信息

组织机构 (Conference Committees) 08

口头报告与张贴报告要求 (Instruction for Oral and Poster Presentations) 14

交通和会议室分布 (Transportation and Meeting Room Layout)..... 15

燕山大学简介 (Introduction of Yanshan University) 20

全驱系统方法技术委员会(Technical Committee on Fully Actuated System Approaches) ... 21

Technical Program

大会报告 (Plenary Lectures) 23

主编论坛 (Editors-in-Chief Forum) 26

分会场报告 (Semi-plenary Lectures)..... 31

顶刊论坛 (Top Journal Forum) 39

特邀论坛 (Invited Forum) 46

巾帼论坛 (Women Scientists Forum)..... 63

总师论坛 (Chief Engineer Forum) 68

成长论坛 (Growth Forum) 71

Oral Sessions 75

Poster Sessions 124

Author Index 138

Chair/Co-Chair Index 155

会议笔记区 (Conference Notes) 157

组织机构 (Conference Committees)

主办单位: IEEE Systems, Man, and Cybernetics Society
燕山大学

承办单位: Technical Committee on Fully Actuated System Approach, IEEE SMC Society
燕山大学电气工程学院

协办单位: IEEE Beijing Section
河北省自动化学会
东北大学秦皇岛分校
河北科技大学

秘书长: 周 磊 河北科技大学
梁振虎 燕山大学
刘国聘 燕山大学

副秘书长: 张 宇 燕山大学
钱 承 燕山大学

张贴论文主席: 李亚峰 燕山大学

评奖论文主席: 周 彬 哈尔滨工业大学

出版委员会

主席: 周孟奇 IEEE Beijing Section
吴爱国 哈尔滨工业大学(深圳)
刘 爽 燕山大学

副主席: 丁伟利 燕山大学
赵广磊 燕山大学
李军朋 燕山大学

会议组织

顾问委员会

于登云	中国航天科技集团	于海斌	中国科学院沈阳自动化研究所
王耀南	湖南大学	包为民	中国航天科技集团有限公司
付梦印	南京理工大学	乔 红	中国科学院自动化所
陈 杰	哈尔滨工业大学	郑南宁	西安交通大学
桂卫华	中南大学	曹喜滨	哈尔滨工业大学
管晓宏	西安交通大学	谭铁牛	南京大学

会议总主席

段广仁 哈尔滨工业大学

程序委员会

主席: 华长春 燕山大学

区域主席: 高会军 哈尔滨工业大学
林 参 香港大学
刘德荣 安徽大学
施 阳 维多利亚大学
谢立华 南洋理工大学
王子栋 布鲁内尔大学

程序委员会秘书长: 杨亚娜 燕山大学
张 颖 哈尔滨工业大学(深圳)

程序委员会副秘书长: 张柳柳 燕山大学
张 营 燕山大学
陈健楠 燕山大学

程序委员会委员: IEEE SMC 全驱系统方法技术委员会、亚洲控制学会全驱系统理论与应用专业委员会委员以及部分特邀专家

组织委员会

组织委员会主席: 郭小强 燕山大学
赵 勇 东北大学
马 锴 燕山大学

组织委员会副主席: 闫 敬 燕山大学
李 阔 燕山大学

国际程序委员会委员

Abu-Rub, Haitham	Texas A&M University at Qatar
Ahn, Choon Ki	Korea University
Ahn, Hyo-Sung	Gwangju Institute of Science and Technology
Al-Dabbagh, Ahmad	The University of British Columbia
Alcaide, Abraham Marquez	University of Seville
Almuzakki, Muhammad Zaki	University of Groningen
Anwar, Ali	University of Antwerp
Arvin, Farshad	Durham University
Azuma, Shun-ichi	Kyoto University
Bandyopadhyay, Bijnan	Indian Institute of Technology
Basin, Michael V.	The Autonomous University of Nuevo Leon
Bayhan, Sertac	Hamad Bin Khalifa University
Bessa, Iury	Federal University of Amazonas
Borja, Pablo	University of Plymouth
Boyd, Stephen	Stanford University
Brito-Palma, Luis	NOVA University Lisbon
Buccella, Concettina	University of L'Aquila
Buticchi, Giampaolo	University of Nottingham Ningbo China
Cecati, Carlo	University of L'Aquila
Celentano, Laura	University of Naples Federico II
Chadli, Mohammed	University Paris-Saclay
Colombo, Armando	University of Applied Sciences Emden
Constantine, Daniela	University of Victoria
Cucuzzella, Michele	University of Pavia

Defoort, Michael	University Polytechnique Hauts-de-France	Rubio, José De Jesús	Instituto Politecnico Nacional
Flores, Jeferson Vieira	Federal University of Rio Grande do Sul	Rudas, Imre J.	Óbuda University
Franquelo, Leopoldo G.	University of Seville	Salton, Aurélio T.	Federal University of Rio Grande do Sul
Galambos, Peter	Óbuda University	Shamte, Kawambwa	University of Dar es Salaam
Galvan, Jose Ignacio Leon	University of Seville	Sharma, Sanjay	University of Plymouth
Gomes, Luis	NOVA University Lisbon	Shtessel, Yuri B.	University of Alabama in Huntsville
Günter, Sandro	University of Nottingham Ningbo China	Sreeram, Victor	University of Western Australia
Hancke, Gerhardus Petrus	University of Pretoria	Stynski, Sebastian	Warsaw University of Technology
Holderbaum, William	University of Reading	Tan, Chee Pin	Monash University
Iwasaki, Makoto	Nagoya Institute of Technology	Tarashev, Alexander M.	UrB RAS and Ural Federal University
Jasinski, Marek	Warsaw University of Technology	Teo, Kok Lay	Curtin University
Jenabzadeh, Ahmadreza	Shenzhen University	Usova, Anastasiia	UrB RAS and Ural Federal University
Karimi, Hamid Reza	Politecnico di Milano	Vargas, Alessandro N.	Parana Federal University of Technology
Kawano, Yu	Hiroshima University	Vazquez, Aldo J. M.	Texas A&M University
Kaynak, Okyay	Bogazici University	Vazquez, Sergio	University of Seville
Lee, Tae Hee	Jeonbuk National University	Virgala, Ivan	Technical University of Košice
Leitao, Paulo	The Polytechnic Institute of Bragança	Whidborne, James	Cranfield University
Lam, James	The University of Hong Kong	Williamson, Sheldon Sudin	University of Ontario Institute of Technology
Maiseli, Baraka	University of Dar es Salaam	班晓军 哈尔滨工业大学	李 湛 哈尔滨工业大学 王秀博 东北大学秦皇岛分校
Malinowski, Mariusz	Warsaw University of Technology	蔡光斌 火箭军工程大学	李 瑞 电子科技大学 王 茜 杭州电子科技大学
Marelli, Damian	Guangdong University of Technology	蔡晨晓 南京理工大学	李繁飙 中南大学 王 鹏 上海交通大学
Mbembati, Hadija	University of Dar es Salaam	蔡 苗 东南大学	李 芃 哈尔滨工业大学（深圳） 魏 懿 北京控制工程研究所
Mercelis, Siegfried	University of Antwerp	曹科才 苏州科技大学	李莉莉 大连海事大学 魏才盛 中南大学
Mokarram, Mrzieh	Shiraz University	陈亮名 南方科技大学	李 辉 清华大学 温长云 南洋理工大学
Morgan, Kiani	Texas Christian University	陈小杰 电子科技大学	李铁山 电子科技大学 吴爱国 哈尔滨工业大学（深圳）
Mwambela, Alfred	University of Dar es Salaam	陈彩莲 上海交通大学	李 鹏 哈尔滨工业大学（深圳） 吴立刚 哈尔滨工业大学
Nagamune, Ryoza	University of British Columbia	陈志华 北京控制工程研究所	李鹏鹤 哈尔滨工业大学 吴 芬 北卡罗来纳州立大学
Navarro-Alarcon, David	The Hong Kong Polytechnic University	陈文华 香港理工大学	林宗利 弗吉尼亚大学 吴雨瑶 国防科技大学
Navaratne, Rukshan	Cardiff University	陈新开 芝浦工业大学	林志赟 南方科技大学 武云丽 北京控制工程研究所
Nounou, Hazem	Texas A&M University at Qatar	陈本美 香港中文大学	刘万泉 中山大学 夏元清 北京理工大学
Ogura, Masaki	Osaka University	陈 杰 哈尔滨工业大学	刘健行 哈尔滨工业大学 夏建伟 聊城大学
Palhares, Reinaldo Martinez	Federal University of Minas Gerais	陈立群 上海大学	刘国平 南方科技大学 谢晓晨 哈尔滨工业大学（深圳）
Park, Jessie	Yeungnam University	陈 翔 加拿大温莎大学	刘 帅 山东大学 忻 欣 东南大学
Peixoto, Márcia Luciana daCosta	Federal University of Minas Gerais	程松松 安徽大学	刘德荣 安徽大学 徐娟娟 山东大学
Quevedo, Daniel	Queensland University of Technology	崔凯鑫 太原理工大学	刘方舟 哈尔滨工业大学 徐 峰 清华大学深圳国际研究生院
Ramírez, Pablo Cesar Rodríguez	Autonomous University of Nuevo Leon	崔玉康 深圳大学	刘 明 华东理工大学 徐明亮 郑州大学
Rathore, Akshay Kumar	Concordia University	崔 阳 辽宁科技大学	刘明曦 犹他大学 徐 翔 南方科技大学
Rodriguez-Andina, Juan Jose	University of Vigo	丁伟利 燕山大学	刘晓平 加拿大湖首大学 徐胜元 南京理工大学

丁克蜜	南方科技大学	刘 杨	北京航空航天大学	肖 峰	华北电力大学	华长春	燕山大学	孙慧杰	中南大学	赵春晖	浙江大学
丁协平	杜伊斯堡-埃森大学	刘 涛	南方科技大学	闫 飞	西南交通大学	黄 捷	香港中文大学	孙振东	山东科技大学	赵 晔	佐治亚理工学院
丁正桃	曼彻斯特大学	刘 璐	香港城市大学	杨 东	曲阜师范大学	黄 玲	哈尔滨理工大学	孙维超	哈尔滨工业大学	赵 琳	新加坡国立大学
董海荣	同济大学	刘腾飞	东北大学	杨亚娜	燕山大学	黄秀韦	广东工业大学	滕 宇	中科加能科技(宁波)有限公司	郑卫新	西悉尼大学
董道义	澳大利亚国立大学	刘青松	武汉科技大学	杨学博	哈尔滨工业大学	黄腾龙	西北农林科技大学	王 伟	山东大学	郑 凯	大连海事大学
段广仁	哈尔滨工业大学	龙立军	东北大学	杨 懿	北京航空航天大学	姜 斌	南京航空航天大学	王博群	哈尔滨工业大学	郑南宁	西安交通大学
樊 渊	安徽大学	卢安洋	东北大学	杨成刚	西英格兰大学	姜钟平	纽约大学	王占山	东北大学	钟麦英	山东科技大学
樊琛琛	香港理工大学	吕玲玲	华北水利水电大学	杨 浩	南京航空航天大学	靳水林	哈尔滨工业大学	王好谦	清华大学深圳国际研究生院	周东华	东南大学
范 元	安徽大学	马 丹	东北大学	杨紫雯	上海交通大学	孔 贺	南方科技大学	王子栋	伦敦布鲁内尔大学	周克敏	南京大学
范军芳	北京信息科技大学	马宪东	兰卡斯特大学	姚秀明	北京交通大学	李军朋	燕山大学	王宏霞	山东科技大学	周 彬	哈尔滨工业大学
方勇纯	南开大学	马 磊	中国矿业大学	雍可南	南京航空航天大学	李子静	哈尔滨工业大学	王建格	燕山大学	周武元	上海交通大学
冯俊娥	山东大学	马立丰	南京理工大学	余 弦	深圳大学	李少远	上海交通大学	王晓玲	南京邮电大学	周 静	阿格德尔大学
冯 刚	香港城市大学	梅 杰	哈尔滨工业大学(深圳)	余长君	上海大学	李 彬	四川大学	王 桐	哈尔滨工业大学	朱博浩	香港大学深圳研究院
冯志光	哈尔滨工程大学	苗子博	哈尔滨工业大学(深圳)	袁德明	南京理工大学	李晓磊	燕山大学	王 森	赫瑞-瓦特大学	朱庆华	上海控制技术研究所
付敏跃	南方科技大学	牟少帅	普渡大学	于兴虎	宁波智能装备技术有限公司	李智斌	山东科技大学	王浩平	南京理工大学	朱延正	山东科技大学
符方舟	中山大学	那 靖	昆明理工大学	张世杰	河南工业大学	李朝艳	哈尔滨工业大学	王玉龙	上海大学	邹 云	南京理工大学
高会军	哈尔滨工业大学	潘亚军	达尔豪斯大学	张中才	曲阜师范大学	李渝哲	东北大学	王 璇	乔治梅森大学		
高 庆	北京航空航天大学	齐文海	曲阜师范大学	张保勇	南京理工大学						
高福荣	香港科技大学	秦家虎	中国科学技术大学	张 凯	四川大学						
高芳征	南京工程学院	秦志强	深圳市中科鸥鹏智能科技有限公司	张 刘	吉林大学						
葛树志	新加坡国立大学	丘 立	香港中文大学(深圳)	张化光	东北大学						
顾国祥	路易斯安那州立大学	邱 丽	深圳大学	张友民	康考迪亚大学						
顾大可	东北电力大学	邱剑彬	哈尔滨工业大学	张启春	布拉德福德大学						
郭 晓	南威尔士大学	任 伟	加州大学河滨分校	张国峰	哈尔滨工业大学						
郭美辰	代尔夫特理工大学	余 维	郑州大学	张宏伟	哈尔滨工业大学(深圳)						
韩嘉熙	哈尔滨工业大学	余锦华	东京工科大学	张文龙	亚利桑那州立大学						
韩红桂	北京工业大学	申铁龙	大连理工大学	张 柯	南京航空航天大学						
韩 飞	上海航天控制技术研究所	施 阳	维多利亚大学	张 源	北京理工大学						
郝明瑞	北京机电工程研究所	石国栋	悉尼大学	张 烽	中国运载火箭技术研究院						
贺 亮	西北工业大学	石 尚	南京邮电大学	张焕水	山东大学						
贺 杰	江苏杰士德精密工业有限公司	石 碰	阿德莱德大学	张立宪	哈尔滨工业大学						
侯忠生	青岛大学	舒 展	阿尔伯塔大学	张锦绣	中山大学						
侯明哲	哈尔滨工业大学	宋申民	哈尔滨工业大学	张 颖	哈尔滨工业大学(深圳)						
侯明宇	哈尔滨工业大学	孙 伟	聊城大学	赵 亮	大连理工大学						
胡俊彦	杜伦大学	孙光辉	哈尔滨工业大学	赵 军	东北大学						
胡 军	哈尔滨理工大学	孙希明	大连理工大学	赵国良	内蒙古大学						
胡庆雷	北京航空航天大学	孙康康	哈尔滨工业大学	赵广磊	燕山大学						

口头报告与张贴报告要求 (Instruction for Oral and Poster Presentations)

口头报告 (Oral Presentations)

●每篇论文口头报告时间为15分钟(包含讨论), 口头报告分组请参见会议程序册(<http://fasta2026.fasta.org.cn/index/lists?id=339>)。

●Oral Presentation: 15 minutes (including discussion). Please refer to the final program (<http://fasta2026.fasta.org.cn/index/lists?id=339>) about the arrangement of oral presentations.

张贴报告 (Poster Presentations)

●会议将为每篇张贴论文提供一块标准展板(宽0.8m, 高1.2m)。张贴论文要求内容简洁、字迹清晰, 版面可进行一定的艺术加工, 字体至少可在1米以外清晰可见, 用双面胶或透明胶粘贴。张贴报告PPT模板请到会议网站下载

(<http://fasta2026.fasta.org.cn/index/lists?id=344>)

●The conference will provide an exhibition board (width 0.8m, height 1.2 m) for each poster paper. The boards will be arranged in the order of the papers in the final program. Tape and other materials will be provided on site, and volunteers will provide necessary help. Posters are required to be condensed and attractive. The characters should be large enough so that they are visible from 1 meter apart. Please download the poster template at the conference website: <http://fasta2026.fasta.org.cn/index/lists?id=344>

交通和会议室分布 (Transportation and Meeting Room Layout)

秦皇岛秦皇国际大酒店傲临中国第一座世界级海岸长廊“金梦海湾”万米碧浪金滩之上。酒店占地面积为 1.7 万平方米, 建筑面积为 8.5 万平方米。酒店呈双塔形结构, 酒店整体设计风格兼容秦皇朝文化与现代时尚风尚, 坐拥一线的海景、绝佳的景观。

详细地址: 秦皇岛市海港区闻涛路 2 号。

抵达方式:

地点	直线距离 (大约) /公里
秦皇岛站	9公里
北戴河站	15公里
山海关站	25公里
秦皇岛北戴河机场	63公里

秦皇岛火车站 至 秦皇国际大酒店

1. 出租车: 9 公里, 非高峰时段 25 分钟左右到达, 费用约 25 元。
2. 公交: 乘坐 19 路 (金梦海湾一号方向) 到秦皇国际大酒店站下车, 步行 179 米到达酒店, 全称约 1 小时 6 分。

北戴河火车站 至 秦皇国际大酒店

1. 出租车: 15 公里, 非高峰时段 30 分钟左右到达, 费用约 40 元。
2. 公交: 乘坐 6 路 (秦皇岛火车站方向) 到桥西站下车, 步行 1.2 公里到达酒店, 全称约 1 小时 12 分。

山海关火车站 至 秦皇国际大酒店

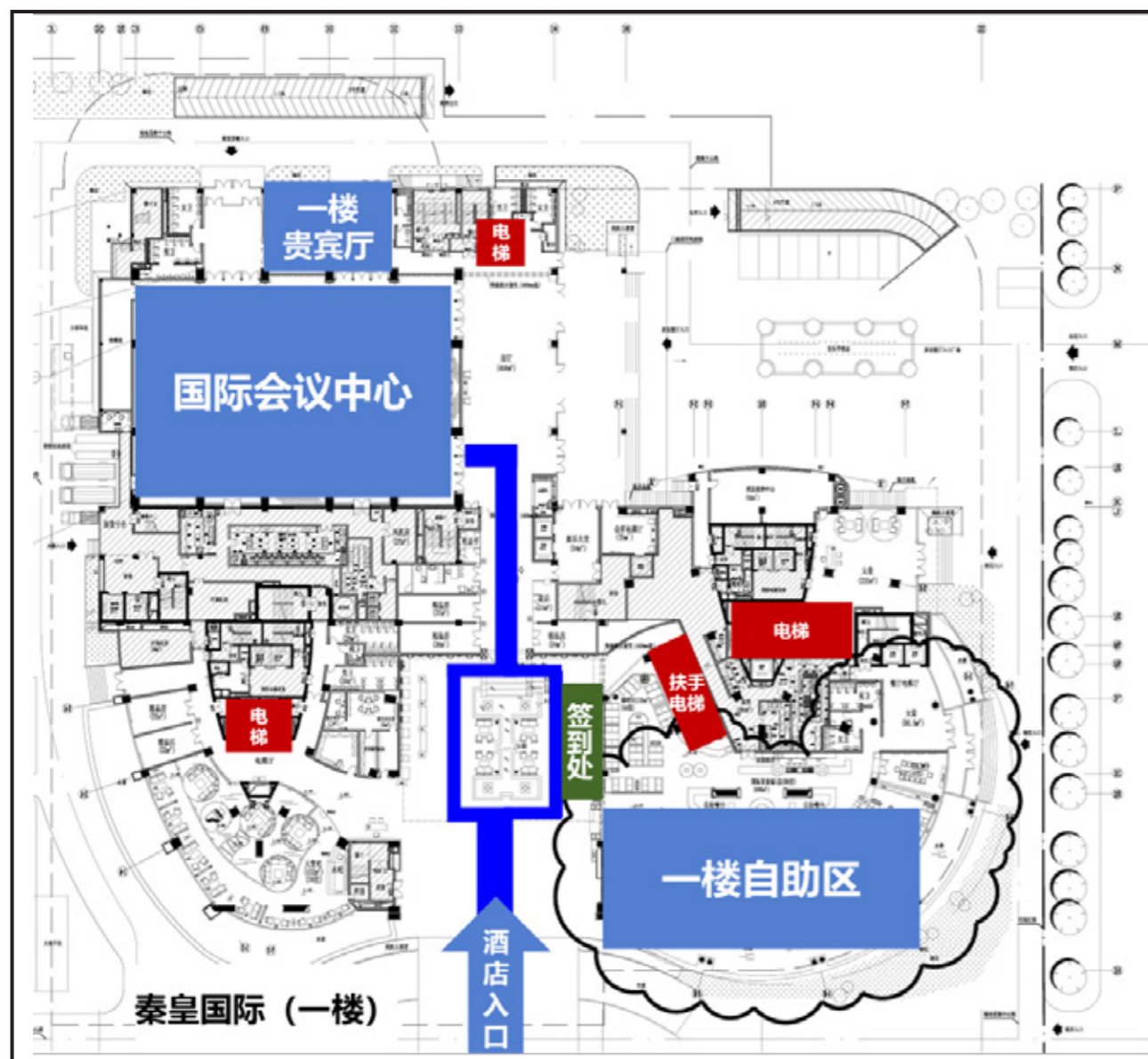
1. 出租车: 25 公里, 非高峰时段 45 分钟左右到达, 约 60 元。
2. 公交: 由秦皇岛工人医院站乘坐 25 路 (海港医院方向) 到第三中学站下车, 换乘 32 路 (金屋半岛方向) 到桥西站下车, 步行 1.5 公里到达酒店, 全称约 2 小时 5 分。

秦皇岛北戴河机场 至 秦皇国际大酒店

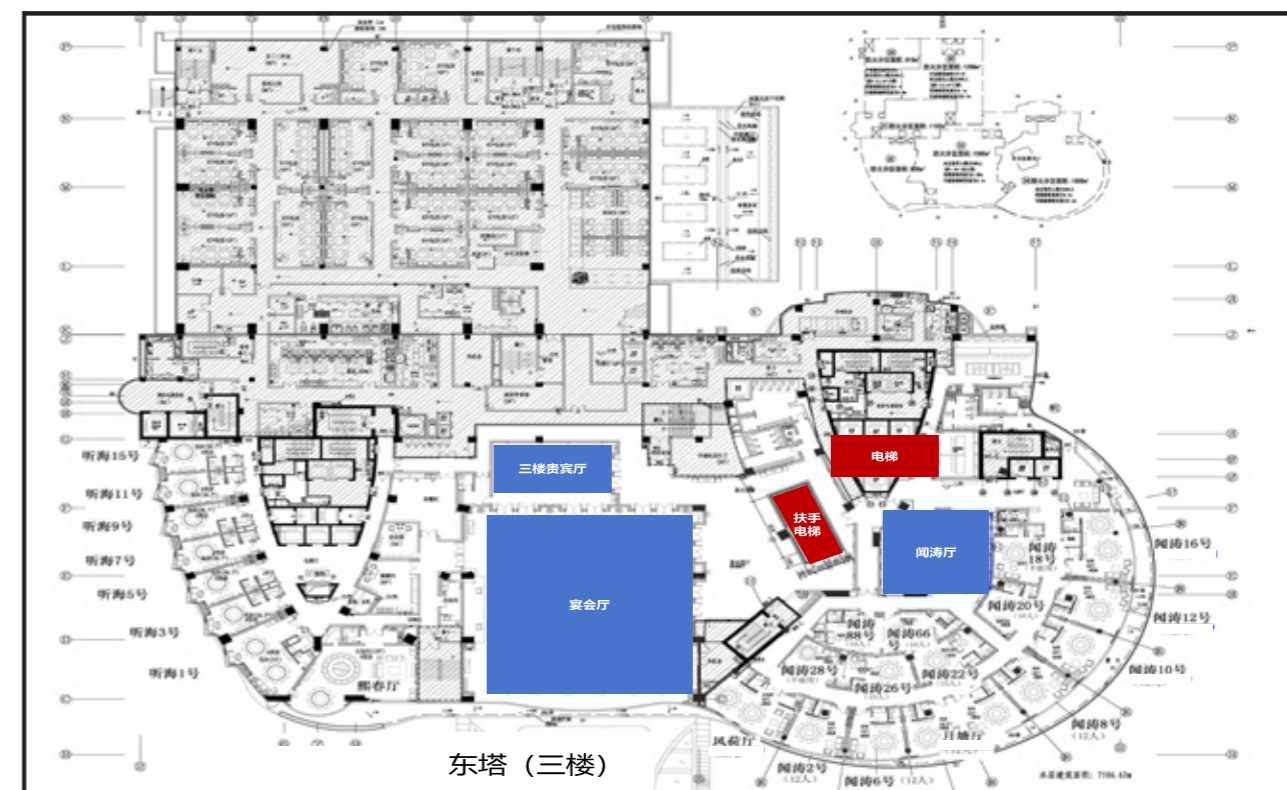
1. 出租车: 63 公里, 非高峰时段 1 小时 11 分左右到达, 约 150 元。
2. 公交: 北戴河机场大巴 (机场宾馆方向) 到在水一方站下车, 换乘 21 路 (森林逸城汽车站方向) 到秦皇国际大酒店站下车, 步行 600 米到达酒店, 全称约 2 小时 19 分。

会议室分布图(Meeting Room Layout):

秦皇国际一楼/ Qinhuang Conference Hall,1st Floor

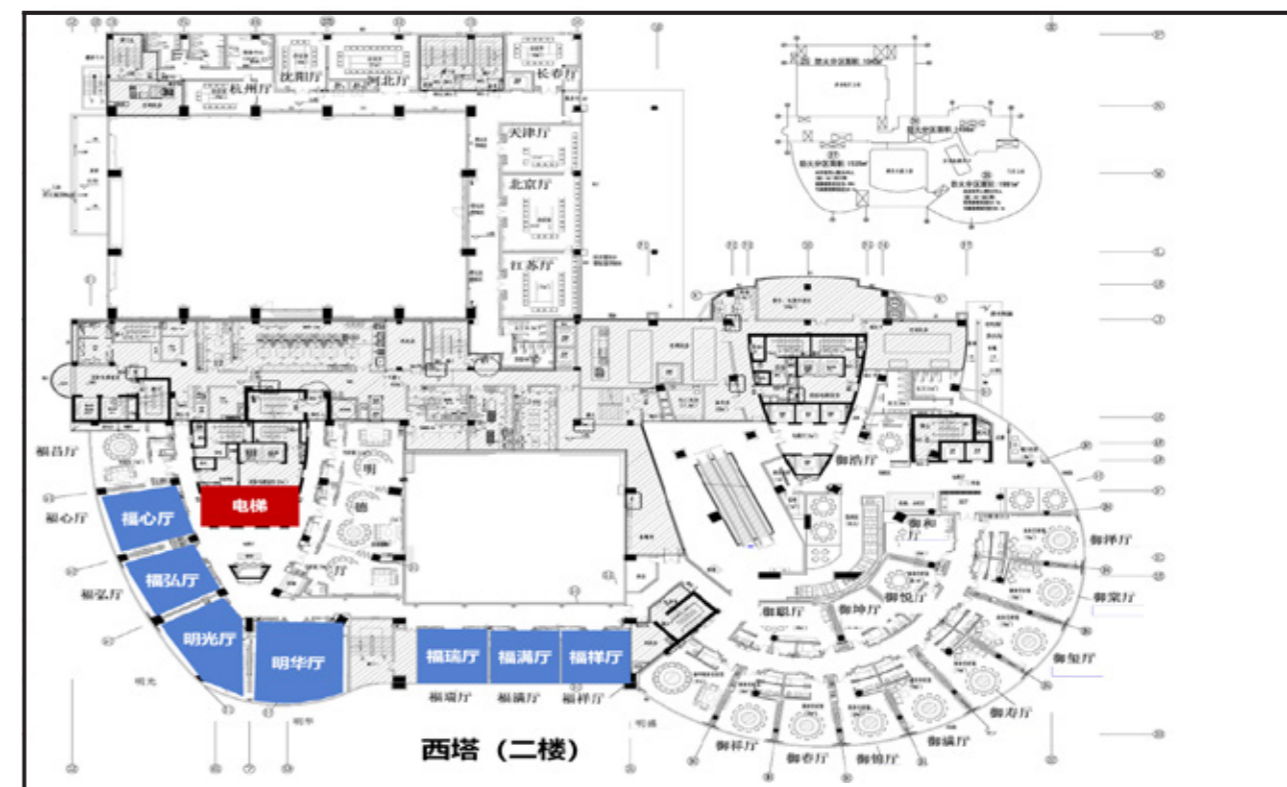


东塔三楼/East Tower, 3rd Floor



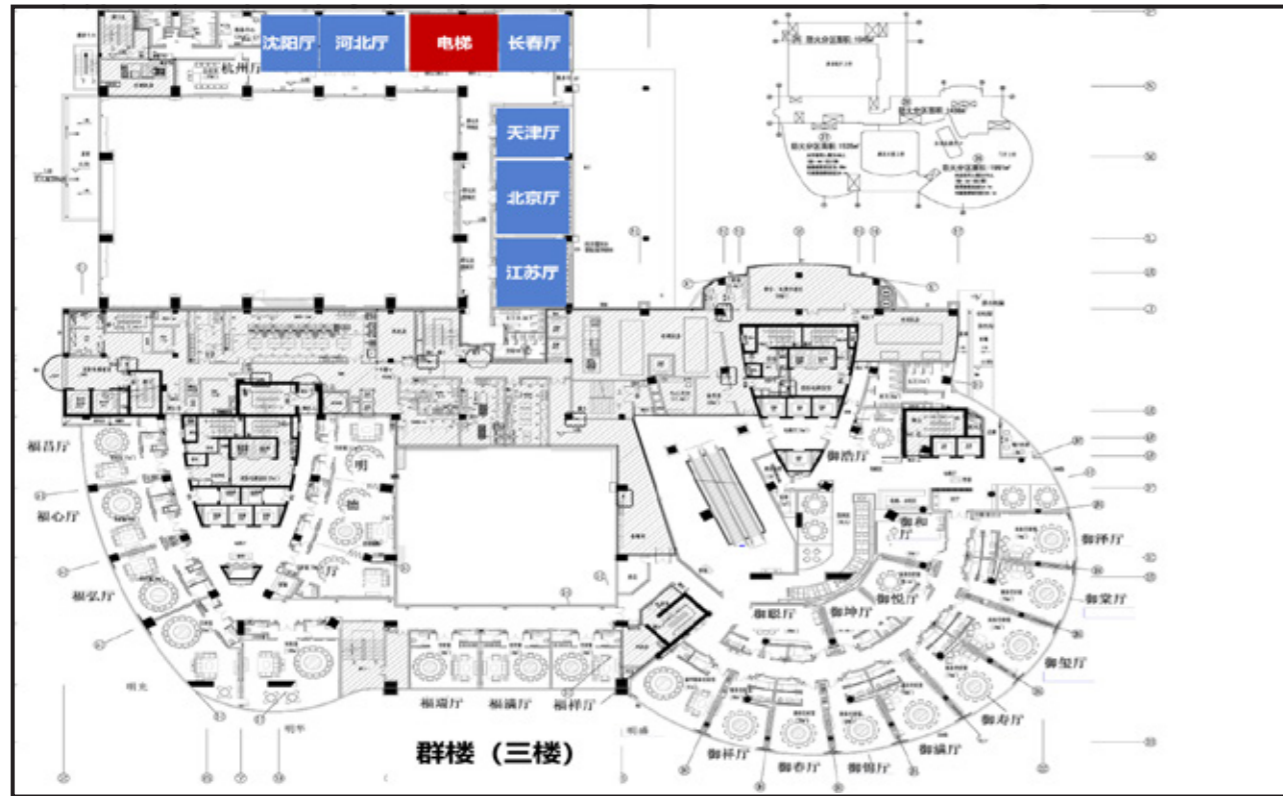
东塔 (三楼)

西塔二楼/West Tower, 2nd Floor

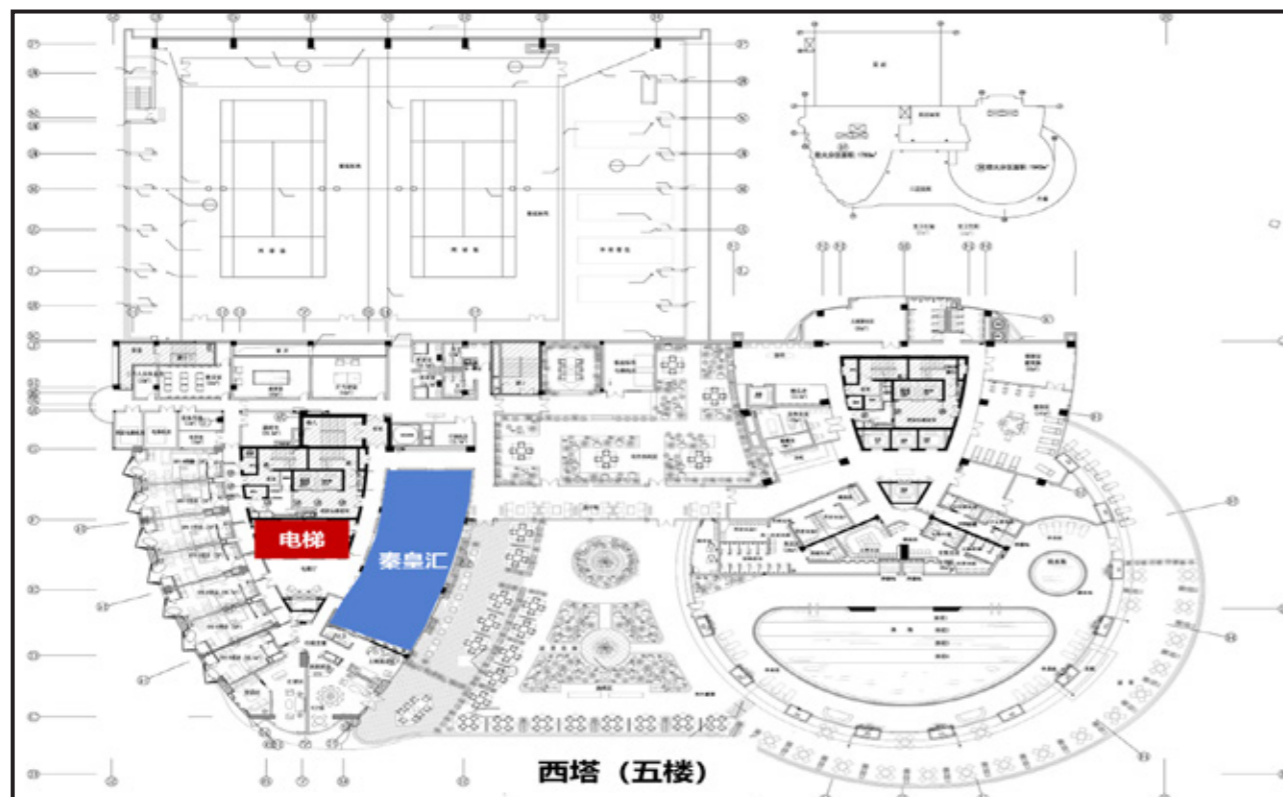


西塔 (二楼)

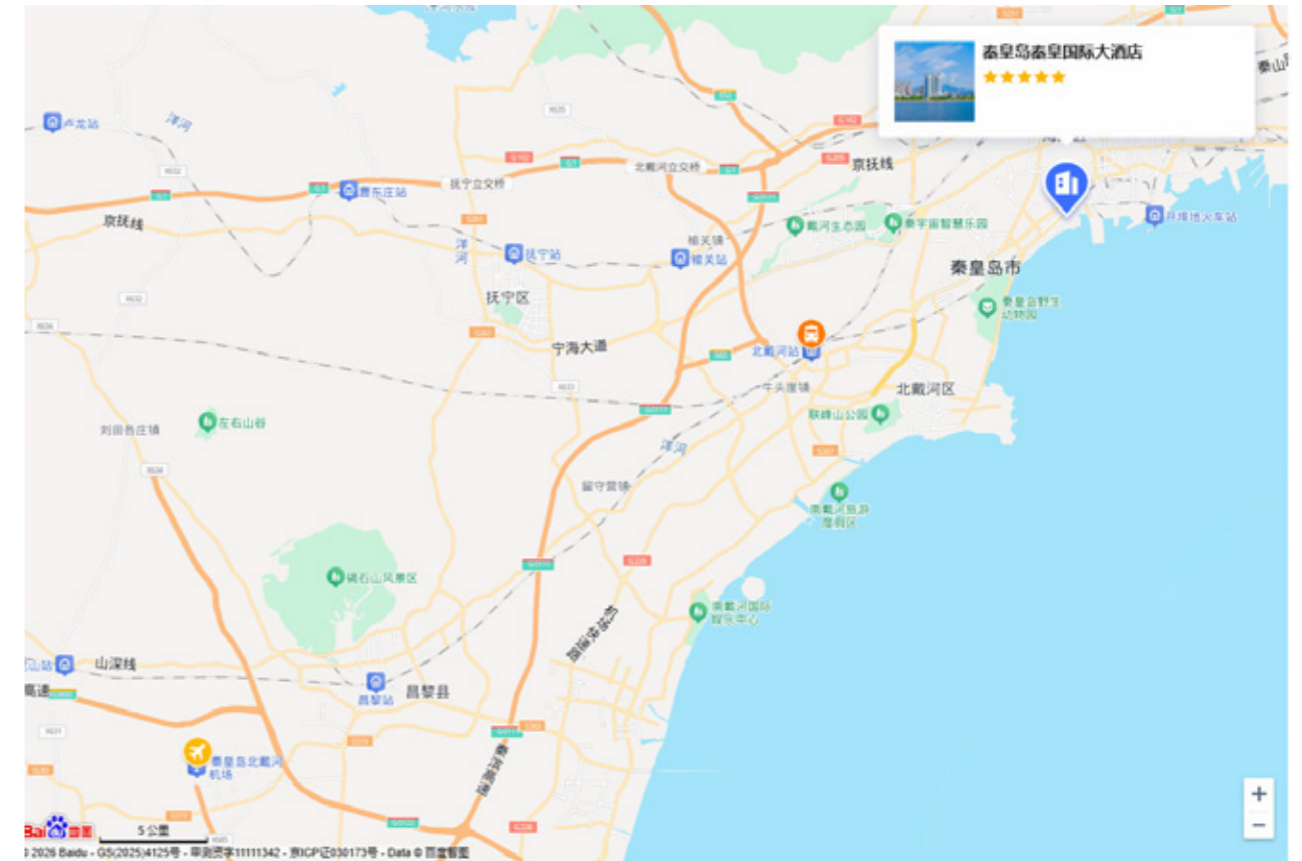
群楼三楼/Annex Building, 3rd Floor



西塔五楼/West Tower, 5th Floor



会场交通周边:



秦皇国际大酒店是位于河北省秦皇岛市海港区文涛路2号的五星级豪华酒店,东邻国家足球训练基地;西倚新澳海底世界、海豚表演馆等游乐场所。

	景区名称	距离
海港区	新澳海底世界	500米
	金梦海湾海滩	2.3公里
	秦皇岛野生动物园	8.7公里
	秦皇小巷 (美食文化街, 夜市)	2.1公里
北戴河方向	鸽子窝公园	10公里
	老虎石海上公园	14公里
	联峰山公园	15公里
	阿那亚黄金海岸	44公里
山海关方向	西港花园	7.5公里
	山海关景区 (天下第一关、老龙头)	25公里

燕山大学简介

燕山大学是河北省人民政府、教育部、工业和信息化部、国家国防科技工业局四方共建的全国重点大学，河北省重点支持的国家一流大学和世界一流学科建设高校，北京高科大学联盟成员。学校占地面积 4000 亩，建筑面积 125 万平方米。现有普通高等教育在校生约 40000 人。现有教职工约 3200 人，包含专职教师约 2200 人，其中，教授 538 人，副教授 925 人。学校设有研究生院和 19 个直属学院，共 12 个博士后流动站，14 个博士学位一级学科，3 个博士专业学位类别，30 个硕士学位一级学科，19 个硕士专业学位类别，60 个本科专业。

学校在重型机械成套设备、亚稳材料科学与技术、并联机器人理论与技术、流体传动与电液伺服控制技术、工业自动化控制理论与技术、精密塑性成型技术、大型锻件锻造工艺与热处理技术、极端条件下机械结构与材料科学等研究领域具有国际先进水平。2013 年和 2014 年，学校连续有 2 项科研成果入选“中国科学十大进展”和“中国高校十大科技进展”；1 项合作科研成果入选 2023 年度“中国高校十大科技进展”。

燕山大学电气工程学院简介

电气工程学院创建于 1960 年，它的前身可以追溯到哈尔滨工业大学的“电力拖动及工业自动化”专业，是原东北重型机械学院最早的三个专业之一。学院现下设自动化系、仪器科学与工程系、电气工程系 3 个系，1 个电子实验中心，学院综合办公室、学生工作办公室 2 个行政办公机构。学院在职教职工 247 人，其中专任教师 196 人，教授 68 人、副教授 78 人、讲师 50 人、实验教师 19 人、辅导员 17 人、管理人员 15 人。现有国家级人才 2 人，国家杰出青年基金获得者 3 人，国家优秀青年基金获得者 3 人，国家级青年人才 2 人。

学院现有控制科学与工程、仪器科学与技术和电气工程 3 个博士后科研流动站，3 个博士学位授权一级学科，3 个硕士学位授权一级学科，3 个工程硕士专业学位授予权领域，6 个本科专业。拥有 1 个河北省强势学科，3 个河北省重点学科，4 个河北省重点实验室，1 个国家级实验教学示范中心，1 个教育部工程研究中心，1 个国家级特色专业，1 个国防主干学科，1 个河北省本科教育创新高地，3 个河北省教学团队，3 个河北省教学示范中心，2 个河北省发展和改革委员会工程研究中心。

近年来，学院在科研立项方面取得了可喜的成绩，承担了国家优秀青年基金、国家重点基金、国家联合资助基金、国际合作与交流等一大批国家级项目；荣获国家自然科学基金二等奖、河北省自然科学一等奖、中国自动化学会自然科学奖一等奖等省部级及以上科技荣誉和奖励近 20 项。

在学院科技创新能力培养与思想道德品质塑造并驱的育人理念下，学生们在各类科技竞赛中屡获佳绩：在 2021 和 2022 年中，中国国际“互联网+”大学生创新创业大赛全国总决赛连续获得两年金奖；在“挑战杯”大学生课外学术科技作品大赛中，获得国家二等奖 1 项，国家三等奖 3 项，省级特等奖 6 项，省级一等奖 2 项，省级二等奖 5 项。学院重视国内外学术交流与合作，成功举办了多次学术会议。近年来，邀请国内外知名专家学者 100 余人次来学院讲学和从事合作研究；派出学术骨干 100 余人次赴国外著名高校或科研单位进修、考察和参加国际学术会议。学院与新加坡南洋理工大学、新加坡国立大学、丹麦奥尔堡大学、美国托利多大学、日本上智大学、英国纽卡斯尔大学、波兰华沙理工大学、澳大利亚科廷大学、俄罗斯圣彼得堡彼得大帝理工大学等国外大学有着长期密切的合作关系。

电气工程学院秉承“团结、进取、求是、创新”的院风，深化内涵建设，推进特色发展，提升创新能力，全面提高办学质量，在人才培养、科技创新、社会服务等方面做出更大贡献。

全驱系统方法技术委员会

IEEE 系统、人与控制论学会 (IEEE SMC) 下属的全驱系统方法技术委员会旨在开创并在全世界范围内推进这一变革性的控制系统方法论。该委员会由段广仁教授 (IEEE/IFAC/CAA 会士、中国科学院院士) 领衔，全驱系统方法代表了控制设计领域的一种范式转变。它摒弃了在控制理论领域主导数百年、但在处理非线性和多变量系统时遇到瓶颈的传统状态空间模型，转而采用数学上更具一般性的全驱系统模型。这一创新框架巧妙地解决了非线性控制中诸多此前难以处理的问题，包括鲁棒镇定、自适应控制、扰动抑制及多输入多输出系统设计，同时将理论研究与机器人、航空航天、能源系统及智能制造等实际应用紧密连接。

本技术委员会以促进学术交流为宗旨，为全驱系统方法框架下的系统分析与控制全域研究领域，提供学术思想交流平台。正如控制领域先驱 Alberto Isidori 所观察到的：“从 1990 年中期开始，关于多变量非线性系统反馈设计问题的研究就出现了几乎完全的停滞。”对于多变量非线性系统控制，许多理论与实际问题仍未得到解决。本技术委员会将基于全驱系统视角推广前沿控制设计策略与方案，促进科研人员与工程技术人员的知识共享，解决传统状态空间方法难以有效处理的技术难题。特别地，委员会致力于促进全球范围内该新兴领域研究者的成果与思想交流，同时为青年科学家构建下一代科学共同体提供有力支持，并弥合理论概念与实际应用之间的鸿沟。

技术委员会的核心活动包括以下内容：

1. 组织全驱系统理论与应用年会 (FASTA)，并努力使其成为 IEEE 附属会议；
2. 在 IEEE 决策与控制会议 (CDC)、中国控制会议 (CCC)、美国控制会议 (ACC)、国际自动控制联合会世界大会 (IFAC World Congress) 等顶级会议上，围绕系统与方向组织特邀专题分会场及公开特邀专题论坛，聚焦全驱系统方法的理论与工程应用；
3. 在知名控制期刊上推动关于全驱系统方法及其应用的特刊；
4. 鼓励 IEEE 会员投身全驱系统研究，探索新的应用领域，从而提升本领域的地位与认可度。

本技术委员会在 IEEE SMC 框架下组建，由主席段广仁教授 (中国哈尔滨工业大学) 及三位副主席顾国祥教授 (美国路易斯安那州立大学)、Michael V. Basin 教授 (墨西哥新莱昂自治大学) 和 Levente Kovács 教授 (匈牙利欧布达大学) 领导。杰出的顾问委员会成员包括 Stephen Boyd (美国斯坦福大学)、Okay Kaynak (土耳其博阿齐奇大学) 和 Imre Rudas (匈牙利欧布达大学)，为委员会提供战略指导。目前委员会拥有来自超过 15 个国家的 120 余名成员，其中包括 40 余位 IEEE 会士，体现了广泛的国际合作。

我们诚邀全球的研究人员、工程师及学生加入这一充满活力的共同体。欢迎您参加 FASTA 会议、为期刊特刊投稿，并探索产学研合作机会。如有垂询，请联系技术委员会秘书：张颖教授 (zhangyinghit@hit.edu.cn) 与刘涛教授 (liut6@sustech.edu.cn)。

Technical Committee on Fully Actuated System Approaches

The Technical Committee (TC) on the Fully Actuated System (FAS) Approach is established under the IEEE Systems, Man, and Cybernetics Society (IEEE SMC) to pioneer and globally advance a transformative methodology in control systems. Spearheaded by Prof. Guang-Ren Duan (IEEE/IFAC/CAA Fellow, Academician of the Chinese Academy of Sciences), the FAS approach represents a paradigm shift in control design. It replaces traditional state-space models—which have dominated control theory for centuries but struggle with nonlinear and multivariable systems—with mathematically generalized FAS models. This innovative framework elegantly solves previously intractable problems in nonlinear control, including robust stabilization, adaptive control, disturbance rejection, and MIMO system design, while bridging theoretical research with practical applications in robotics, aerospace, energy systems, and intelligent manufacturing.

The goal of this TC is to provide a forum for idea exchange in the general research area of system analysis and control based on the FAS approach. As control pioneer Alberto Isidori observed, "from the mid 1990s, the study of problems of feedback design for MIMO nonlinear systems came to a (almost complete) stall." For multivariable nonlinear system control, many theoretical and practical problems remain unsolved. This TC will promote state-of-the-art control design strategies and schemes from the FAS perspective, aiming to share knowledge among scientists and engineers and to solve problems that the traditional state-space approach cannot solve well. In particular, the TC seeks to facilitate the exchange of achievements and ideas among worldwide researchers in this emerging field, while providing strong support for young scientists to build the next-generation scientific community. It will also bridge the gap between theoretical concepts and practical applications.

The TC's mission includes the following core activities:

1. Organize the Annual Conference on Fully Actuated System Theory and Applications (FASTA) and work toward making it IEEE-affiliated;
2. Organize invited sessions or open invited tracks on systems and control at major conferences, such as the IEEE Conference on Decision and Control (CDC), Chinese Control Conference (CCC), American Control Conference (ACC), and IFAC World Congress, with a focus on both theory and applications of the FAS approach;
3. Promote special issues on the FAS approach and its applications in well-known control journals;
4. Encourage IEEE members to engage in FAS research to explore new applications, thereby enhancing the community's stature and recognition.

Organized under the IEEE SMC framework, the TC is led by Chair, Prof. Guang-Ren Duan (Harbin Institute of Technology, China), and three Vice Chairs: Prof. Guoxiang Gu (Louisiana State University, USA), Prof. Michael V. Basin (Autonomous University of Nuevo Leon, Mexico), and Prof. Levente Kovács (Óbuda University, Hungary). An eminent Advisory Board featuring Stephen Boyd (Stanford University, USA), Okyay Kaynak (Bogazici University, Turkey), and Imre Rudas (Óbuda University, Hungary) provides strategic guidance. With over 120 members spanning more than 15 countries—including 40+ IEEE Fellows—the TC embodies international collaboration.

Researchers, engineers, and students worldwide are invited to join this dynamic community. We welcome your participation in FASTA conferences, contributions to journal special issues, and exploration of industry-academia partnerships. For inquiries, please contact the TC Secretaries, Prof. Ying Zhang (zhangyinghit@hit.edu.cn) and Prof. Tao Liu (liut6@sustech.edu.cn).

大会报告 (Plenary Lectures)

Plenary Lecture 1

5月23日 9:05-9:45 一楼国际会议中心

May 23, 9:05-9:45 Qinhuang Conference Hall, 1st Floor

Bin Jiang

Nanjing University of Aeronautics and Astronautics, China

Cooperative Safety Control of Multiagent Systems: A Fully Actuated System Approach

Chair: Donghua Zhou, Southeast University, China

Abstract: In recent years, with the growing complexity of multi-agent systems, such systems have become increasingly vulnerable to various disturbances and faults during operation, which directly threaten the stability and safety of the entire system. Consequently, the demand for high-security multi-agent systems has become ever more urgent, drawing significant research attention from scholars worldwide on anti-disturbance and fault-tolerant control. This report aims to present the research achievements of multi-agent systems in three aspects based on the fully actuated system approach: anti-disturbance control, fault-tolerant control, and fault-tolerant game control, so as to ensure the safe and reliable operation of such systems. In the anti-disturbance control module, targeting typical scenarios such as UAV swarms, multi-spacecraft systems, and tilt-rotor helicopters, we propose anti-disturbance methods under the fully actuated framework, including distributed event-triggered control and discrete-time fractional-order sliding mode control integrated with disturbance observers. These approaches can effectively suppress external disturbances and guarantee precise tracking and stable coordination of the system in complex environments. In the fault-tolerant control module, for UAVs, unmanned helicopters, air-ground cooperative heterogeneous systems and other platforms, we develop fault-tolerant control methods based on adaptive algorithms, prescribed-time control, hierarchical design, incremental fully actuated models and other theories. These methods realize rapid fault estimation and compensation, enabling these systems to achieve robust recovery and sustained coordination even under faulty conditions. Furthermore, fault-tolerant game control methods based on differential games and Stackelberg games are proposed, which strike a balance between fault tolerance and optimal formation performance, ensuring the simultaneous achievement of stability and optimal performance for multi-agent systems.

Bin Jiang received the Ph.D. degree in automatic control from Northeastern University, Shenyang, China, in 1995. He has served as a Post-Doctoral Fellow, a Research Fellow, an Invited Professor, and a Visiting Professor in Singapore, France, USA, and Canada, respectively. He is currently the President of the Nanjing University of Aeronautics and Astronautics and Chair Professor of Cheung Kong Scholar Program with the Ministry of Education. He has authored eight books and over 200 referred international journal papers. His current research interests include intelligent fault diagnosis and fault tolerant control and their applications to aircraft, high-speed trains, et al. Dr. Jiang was a recipient of the Second-Class Prize of



National Natural Science Award of China. He is a Fellow of IEEE and Chinese Association of Automation (CAA). He is also a Chair of Control Systems Chapter in IEEE Nanjing Section, a member of IFAC Technical Committee on Fault Detection, Supervision, and Safety of Technical Processes. He currently serves as a Senior Editor of International Journal of Control, Automation and Systems, an Associate Editor or an Editorial Board Member for a number of journals, such as the IEEE Transactions on Cybernetics, IEEE Transactions on Neural Networks and Learning Systems, IEEE Transactions on Industrial Informatics, et al.

Plenary Lecture 2

5月23日 9:45-10:25 一楼国际会议中心
May 23, 9:45-10:25 Qinhuang Conference Hall, 1st Floor

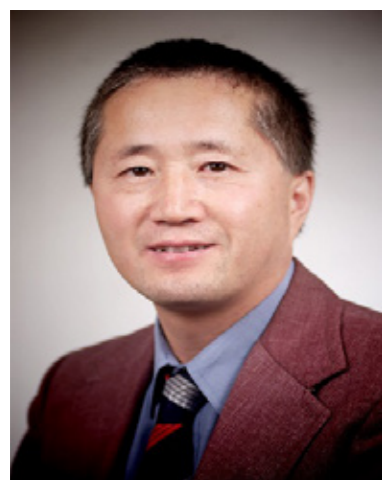
Peng Shi

Adelaide University, Australia

Collaborative Control for Multi-Agent Systems: Analysis and Design

Chair: Xiaoping Liu, Lakehead University, Canada

Abstract: Multi-agent systems (MAS) have emerged as a key paradigm for orchestrating large-scale, networked systems, with applications spanning autonomous mobility, robotic swarms, and smart infrastructures. A fundamental challenge in these systems is collaborative decision-making—how agents, operating with partial information and limited communication, can collectively achieve coherent, efficient, and reliable global behavior. This talk reviews recent advances in distributed decision-making frameworks, including consensus protocols, cooperative control, and distributed optimization. Particular attention is given to mechanisms that ensure scalability and robustness in the face of uncertainties, communication constraints, and dynamic environments. The growing synergy between model-based control and data-driven approaches—such as learning-enabled control and graph-based representations—will be highlighted as a pathway to enhanced adaptability and performance. The talk further examines critical issues in resilience and trustworthiness, including robustness against cyber-attacks, fault tolerance, and privacy-preserving coordination. Illustrative examples from autonomous and cyber-physical systems will demonstrate the practical relevance and impact of these developments.



Peng Shi is now a Distinguished Professor at the School of Electrical and Mechanical Engineering, and the Director of Advanced Unmanned Systems Laboratory, and Cyber-Physical-Human Systems Laboratory, at Adelaide University (AU), Australia. His research interests include systems and control theory and applications to autonomous and robotic systems, cyber-physical systems, and multi-agent systems. His contributions to the fields have been broadly acknowledged, and his distinctions include the IEEE Lotfi Zadeh Pioneer Award (SMCS, 2025); IEEE Nibert Wiener Award (SMCS, 2024); the Annual Scientific Award (2024) and Ramesh Agarwal Life-time Achievement Award (2023) from the International Engineering and Technology Institute; the IEEE Meritorious Service Award (SMCS, 2023); the MA Sargent Medal from

Engineers Australia (2022); the Honor of Life-time Achiever Leaderboard and Field Leader from The AUSTRALIAN Research Review (2019-2024); the Recognition of Highly Cited Researcher (Clarivate, 2014-2025), Outstanding Research Award (AU, 2020), Excellency in Research Supervision Award (AU, 2025), and the Chancellor's Gold Medal Research Award (Victoria University, 2018). Currently he serves as the Editor-in-Chief of IEEE Transactions on Cybernetics and Senior Editor of IEEE Access. His professional services also include as the Member of Board of Governors (2018-2020) and Vice President of IEEE SMC Society (2021-2022), and IEEE Distinguished Lecturer (SMCS, 2021-2026). He is a Fellow of Australian Academy of Technological Sciences and Engineering; Foreign Fellow of Engineering Academy of Japan, the Romanian Academy of Scientists, and Academia Europaea, as well as a Fellow of IEEE, IEA, IET and CAA. He received the PhD degree in Electrical Engineering from the University of Newcastle, Australia and the PhD degree in Mathematics from the University of South Australia. He was awarded two Higher Doctorates, the Doctor of Science degree from the University of Glamorgan, UK and the Doctor of Engineering degree from the University of Adelaide, Australia.

Plenary Lecture 3

5月23日 10:40-11:20 一楼国际会议中心
May 23, 10:40-11:20 Qinhuang Conference Hall, 1st Floor

Sergey Dashkovskiy

University of Würzburg, Germany

Stability of interconnected systems: Existing approaches and challenges

Chair: Guoxiang Gu, Louisiana State University, USA

Abstract: In this talk we will give an overview of different existing approaches to study stability of interconnected systems. This will in particular include: vector Lyapunov functions, comparison method, small-gain theory, conic conditions and other methods. We will discuss how these approaches allow to construct a scalar Lyapunov function for a coupled system on the base of Lyapunov functions of subsystems. Also, we will discuss an approach which allows to treat interconnections with unstable components. As well we will discuss a recently introduced notion of integral gains for time varying systems.



Sergey Dashkovskiy received the M.Sc. degree in applied mathematics from the Lomonosov University of Moscow, Russia, in 1996, the Ph.D. degree in mathematics from the University of Jena, Germany, in 2002, and the Habilitation (venia legendi) degree in mathematics from the University of Bremen, Bremen, Germany, in 2009. He held positions with the Arizona State University, Tempe, AZ, USA, the University of Bayreuth, Germany, and the University of Applied Sciences Erfurt, Germany. Since 2016, he has been a Professor and the Head of the Research Group Dynamics and Control, Institute for Mathematics, University of Würzburg, Germany. His research interests are in stability theory of dynamical systems and networks. Dr. Dashkovskiy is currently the Editorial Board Member of several journals related to this research area,

in particular, of IEEE Transactions on Automatic Control, IET Journal on Control Theory and Applications, and Nonlinear Analysis: Hybrid Systems.

主编论坛(Editor-in-Chief Forum)

5月23日 11:20-12:00 一楼国际会议中心
May 23, 11:20-12:00 Qinhuang Conference Hall, 1st Floor

Speakers: Jun Wang (Editor-in-Chief of IEEE Transactions on Artificial Intelligence), City University of Hong Kong, China
 Peng Shi (Editor-in-Chief of IEEE Transactions on Cybernetics), Adelaide University, Australia
 Huijun Gao (Editor-in-Chief of IEEE Transactions on Systems, Man, and Cybernetics: Systems), Harbin Institute of Technology, China
 Dongrui Wu (Editor-in-Chief of IEEE Transactions on Fuzzy Systems), Huazhong University of Science and Technology, China
 Yang Tang (Co-Editor-in-Chief of IEEE Transactions on Industrial Informatics), East China University of Science and Technology, China
 Chair: Guangren Duan, Harbin Institute of Technology, China

Speaker: Jun Wang (Editor-in-Chief of IEEE Transactions on Artificial Intelligence), City University of Hong Kong, China
 Title: Introduction to IEEE Transactions on Artificial Intelligence and Sharing of Writing Experience

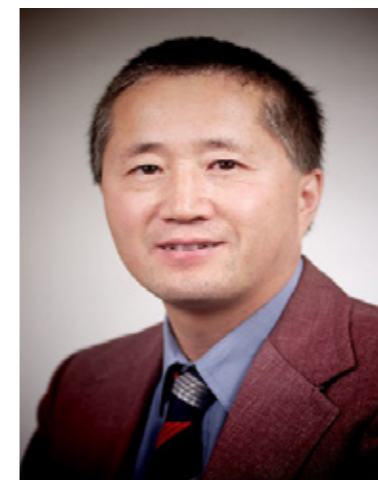
Abstract: IEEE Transactions on Artificial Intelligence (TAI) is a multidisciplinary journal. It mainly publishes papers on theories and methodologies of artificial intelligence, and also covers applied research in this field. This report introduces the journal IEEE TAI and shares relevant paper writing experience.



Jun Wang, Chair Professor at City University of Hong Kong. His main research interests include neural networks, computational intelligence, intelligent data processing and intelligent control. He once served as Yangtze River Chair Professor at Shanghai Jiao Tong University. He has been a member of the IEEE Fellow Selection Committee, and served as General Chair of international conferences including ICONIP 2006, IEEE WCCI 2008 and ICONIP 2018, as well as Program Chair of IEEE SMC 2012. He currently serves as the Editor-in-Chief of IEEE Transactions on Artificial Intelligence. He previously held the position of Editor-in-Chief of IEEE Transactions on Cybernetics and served as an editorial board member of multiple SCI-indexed international journals such as IEEE Transactions on Neural Networks. He has published over 360 SCI papers, with more than 37,000 total citations on Google Scholar and an H-index of 110. He has received 4 awards from international academic organizations and 8 provincial and ministerial-level science and technology awards.

Speaker: Peng Shi (Editor-in-Chief of IEEE Transactions on Cybernetics), Adelaide University, Australia
 Title: Essentials to Publish Research Work

Abstract: Research is not truly complete until its findings are disseminated through publication. However, publishing in journals and conferences remains challenging for a variety of reasons. It requires not only demonstrating the novelty of the work but also making significant contributions to the field. Moreover, the publication process plays a vital role in developing academic writing skills and supporting career advancement, including graduation and promotion. In this talk, I will first introduce IEEE Transactions on Cybernetics. I will then present my perspectives on several key aspects of research publication, including manuscript preparation, submission strategies, peer review, and responding to reviewers. It is hoped that this talk will help improve the clarity and quality of your writing and enhance your chances of publishing in suitable high-impact journals.



Peng Shi is now a Distinguished Professor at the School of Electrical and Mechanical Engineering, and the Director of Advanced Unmanned Systems Laboratory, and Cyber-Physical-Human Systems Laboratory, at Adelaide University (AU), Australia. His research interests include systems and control theory and applications to autonomous and robotic systems, cyber-physical systems, and multi-agent systems. His contributions to the fields have been broadly acknowledged, and his distinctions include the IEEE Lotfi Zadeh Pioneer Award (SMCS, 2025); IEEE Nobert Wiener Award (SMCS, 2024); the Annual Scientific Award (2024) and Ramesh Agarwal Life-time Achievement Award (2023) from the International Engineering and Technology Institute; the IEEE Meritorious Service Award (SMCS, 2023); the MA Sargent Medal from Engineers Australia (2022); the Honor of Life-time Achiever Leaderboard and Field Leader from The AUSTRALIAN Research Review (2019-2024); the

Recognition of Highly Cited Researcher (Clarivate, 2014-2025), Outstanding Research Award (AU, 2020), Stephen Cole The Elders Excellency in Research Supervision Award (AU, 2025), and the Chancellor's Gold Medal Research Award (Victoria University, 2018). Currently he serves as the Editor-in-Chief of IEEE Transactions on Cybernetics and Senior Editor of IEEE Access. His professional services also include as the Member of Board of Governors (2018-2020) and Vice President of IEEE SMC Society (2021-2022), and IEEE Distinguished Lecturer (SMCS, 2021-2026). He is a Fellow of Australian Academy of Technological Sciences and Engineering; Foreign Fellow of Engineering Academy of Japan, the Romanian Academy of Scientists, and Academia Europaea, as well as a Fellow of IEEE, IEA, IET and CAA. He received the PhD degree in Electrical Engineering from the University of Newcastle, Australia and the PhD degree in Mathematics from the University of South Australia. He was awarded two Higher Doctorates, the Doctor of Science degree from the University of Glamorgan, UK and the Doctor of Engineering degree from the University of Adelaide, Australia.

Speaker: Huijun Gao (Editor-in-Chief of IEEE Transactions on Systems, Man, and Cybernetics: Systems), Harbin Institute of Technology, China
 Title: Introduction to IEEE Transactions on Systems, Man, and Cybernetics: Systems

Abstract: This journal covers the field of systems engineering, including problem formulation, analysis and modeling, decision-making, and problem interpretation across all phases of the systems engineering lifecycle related to the definition, development and deployment of large-scale systems. Other topics encompass system management, systems engineering processes, and a variety of systems engineering methods such as optimization, modeling and simulation. This report presents the latest advances of IEEE TSMCS and provides suggestions for manuscript submission.



Huijun Gao: Professor and doctoral supervisor at Harbin Institute of Technology; Yangtze River Scholar Distinguished Professor, recipient of the National Science Fund for Distinguished Young Scholars, Foreign Member of the European Academy of Sciences, IEEE Fellow, and Honorary Professor of the University of Hong Kong. He has won 2 Second Class Prizes of the National Natural Science Award (ranking 1st and 5th), 1 Special Prize and 6 First Class Prizes of provincial/ministerial and society-level Science and Technology Awards (all ranked 1st). He has also received numerous honors, including the Ho Leung Ho Lee Foundation Prize for Scientific and Technological Innovation, China Golden Patent Award, Tan Kah Kee Young Scientist Award, China Youth Science and Technology Award, Science Exploration Award, and National Model Worker. He serves as President-Elect of the IEEE Industrial Electronics Society and Editor-in-Chief of IEEE Transactions on Systems, Man, and Cybernetics: Systems. His academic distinctions include the IEEE Norbert Wiener Award and the IEEE Eugene Mittelmann Achievement Award.

Speaker: Dongrui Wu (Editor-in-Chief of IEEE Transactions on Fuzzy Systems), Huazhong University of Science and Technology, China
 Title: Introduction to IEEE Transactions on Fuzzy Systems

Abstract: IEEE Transactions on Fuzzy Systems (TFS, IF: 11.9) covers theoretical research, design methods and application studies of fuzzy systems, involving all levels from hardware to software. The journal encourages submissions that report significant technological breakthroughs, exploratory developments, and performance investigations of practical systems based on fuzzy models. It places particular emphasis on engineering applications. This report introduces the latest developments of IEEE TFS and provides paper submission suggestions.



Dongrui Wu, Distinguished Chief Professor and doctoral supervisor at Huazhong University of Science and Technology. He is an IEEE Fellow, Editor-in-Chief of IEEE Transactions on Fuzzy Systems (IF=11.9), and a national leading talent. His research focuses on brain-computer interfaces and machine learning. He has published over 200 papers in journals including Proceedings of the IEEE, IEEE TPAMI and National Science Review, with more than 18,000 Google Scholar citations and an H-index of 70. He has been listed in the World's Top 2% Scientists by Stanford University for six consecutive years. His research achievements have been applied in China State Shipbuilding Corporation, Huawei, Alibaba and other enterprises. He has received the Youth Science Award of the Ministry of Education, the First Prize of Natural Science Award and Young Scientist Award from the Chinese Association of Automation, as well as seven international best paper awards from journals such as IEEE Transactions on Biomedical Engineering, IEEE Transactions on Neural Systems and Rehabilitation Engineering, IEEE Transactions on Fuzzy Systems and Acta Automatica Sinica. From 2019 to 2025, his team won national individual or overall championships in the China Brain-Computer Interface Competition for seven consecutive years, and relevant achievements have been reported by CCTV News, Focus Interview and other mainstream media.

Speaker: Yang Tang (Co-Editor-in-Chief of IEEE Transactions on Industrial Informatics), East China University of Science and Technology, China
 Title: Introduction to IEEE Transactions on Industrial Informatics

Abstract: The IEEE Transactions on Industrial Informatics is a multidisciplinary journal publishing technical papers that bridge the gap between theory and application practice of informatics in industrial environments. Its scope encompasses the use of information in intelligent, distributed, agile industrial automation and control systems. Included are knowledge-based and AI enhanced automation; intelligent computer control systems; flexible and collaborative manufacturing; industrial informatics aspects in software-defined vehicles and robotics, computer vision, industrial cyber-physical and industrial IoT systems; real-time and networked embedded systems; security in industrial processes; industrial communications; systems interoperability and human machine interaction. This talk presents the latest advances of IEEE Transactions on Industrial Informatics and provides suggestions for manuscript submission strategies.



Tang Yang, IEEE Fellow, national high-level talent, Young Scientific and Technological Innovation Leading Talent of the Ministry of Science and Technology, and national high-level young talent. He is an IEEE Distinguished Lecturer (2026-2027), an Outstanding Academic Leader of Shanghai, and an Alexander von Humboldt Fellow. His research interests mainly cover intelligent unmanned systems, multi-agent intelligence, industrial intelligence, embodied intelligence, and bioinformatics. He has published more than 260 papers in authoritative journals including Nature journals, among which nearly 200 are papers in Automatica, IEEE Transactions and CCF-A publications. He has applied for, published and authorized over 20 patents. He has presided over key R&D projects and programs of the Ministry of Science and Technology of China, as well as multiple key projects supported by the National Natural Science Foundation of China. He currently serves as Co-Editor-in-Chief of IEEE

Transactions on Industrial Informatics, Senior Area Editor of IEEE TCASI, and Associate Editor/Editorial Board Member of numerous international journals, including IEEE TNNLS, IEEE TCYB, IEEE/ASME TMECH, IEEE TCASI, IEEE TCDS, IEEE TETCI, IEEE SJ, EAAI (IFAC Journal), Science China Information Sciences, Science China Technological Sciences, and Acta Automatica Sinica. He was awarded the First Prize of Shanghai Natural Science Award (as the first completer) in 2019.

分会场报告 (Semi-plenary Lectures)

分会场报告一 / Semi-plenary Session 1

5月24日 8:30-10:30 一楼国际会议中心BC厅
 May 24, 8:30-10:30 Qinhuang Conference Hall B&C, 1st Floor

Speakers: Zhongsheng Hou, Qingdao University, China
 Huanshui Zhang, Shandong University of Science and Technology, China
 Li Chai, Zhejiang University, China
 Shuai Liu, Shandong University, China

Speaker: Zhongsheng Hou, Qingdao University, China
 Title: State Space Model vs Dynamic Linearization Data Model: Comparisons and Prospects
 Chair: Xin Xin, Southeast University, China

Abstract: This talk consists of four parts. The first part will review the state-space model and challenges faced by the model-based control (MBC) theory. The second part mainly introduce the dynamic linearization data model of the model-free adaptive control (MFAC) theory with its main differences compared with the state-space model, followed by the research progresses of MFAC. The third part will discuss the possible difficulties when MBC theory applies in the age of AI and networked control. The last part is the conclusion.



Zhongsheng Hou, is a Chief Professor at Qingdao University, a Fellow of the Chinese Association of Automation, an IEEE Fellow, and an AAIA Fellow. He is the founding Chair of the Technical Committee on "Data-Driven Control, Learning, and Optimization" of the Chinese Association of Automation, and the founding Chair of the Technical Committee on Data-Driven Control Systems of the Asian Control Association. He is the founding General Chair of the IEEE Data-Driven Control and Learning Systems (DDCLS) Conference. He is the PI for following research projects including three key projects and one major international collaborative project funded by the National Natural Science Foundation of China. He has published over 300 journal papers, including 100+ papers in

IEEE Transactions. His publications have been cited 24,528 times on Google Scholar with an H-index of 75. Main Academic Achievements: 1. He established and refined the "Model-Free Adaptive Control (MFAC) theory", which includes PID and adaptive control for LTI system as special cases. The MFAC has been cited in whole chapters or more in 27 monographs or 2 textbooks and has been applied in over 300 different practical systems. 2. He with his former Ph.D students collaboratively established and developed the Model-Free Adaptive Iterative Learning Control theory. 3. He pioneered the use of MFAC and Model-Free Adaptive Iterative Learning Control theories in

transportation systems including the urban traffic/freeway/high-speed train/subway/vehicles systems with a systematic data-driven control methods for transportation systems.4. He introduced the concept of "Data-Driven Control Theory" for the first time as a disciplinary branch and is one of the leading scholars in the research field of data-driven control. (Please refer to <https://assc.qdu.edu.cn/kxyj/sjqdkxygc.htm> for details)

Speaker: Huanshui Zhang, Shandong University of Science and Technology, China
 Title: OCP Optimization Method and Application
 Chair: June Feng, Shandong University, China

Abstract: Optimization plays a crucial role in applied mathematics and is also an important scientific foundation in engineering and information fields. The development of optimization theory has a history of several hundred years, during which classic algorithms such as gradient descent, improved gradient descent, Newton method, and enhanced quasi-Newton methods have emerged. Although these algorithms have their own advantages, they also have limitations: gradient descent is stable but often converges slowly, while Newton iteration converges quickly but is prone to divergence, and its improved versions also have similar problems. This report presents a new optimization algorithm that combines fast convergence and stability. Its core idea stems from the optimal control principle (OCP). This algorithm regards the update step size during the iterative process as a control input. By designing this input to minimize the sum of the objective function and control energy at future times, the algorithm ensures the fastest convergence while minimizing the control energy to guarantee stability. Through approximation processing using Taylor expansion, this algorithm is further transformed into an iterative form, thus avoiding the complexity of solving nonlinear forward-backward difference equations. Rigorous theoretical analysis shows that this algorithm can achieve superlinear convergence similar to Newton iteration, while maintaining the stability of gradient descent. In addition, this algorithm can cover gradient descent, Newton method, improved accelerated gradient descent, and regularized Newton method, thereby providing a unified theoretical framework for these algorithms in the mathematical domain. The report concludes with the successful applications of OCP in intelligent vehicle trajectory tracking, 3D image restoration, power system power flow calculation, large-scale deep learning, and other fields.



Huanshui Zhang, received Ph.D. in Engineering from Northeastern University in 1997. Joined Taishan University in 1986 and was promoted to Associate Professor in 1994. Joined the School of Control Science and Engineering, Shandong University in 1999, with promotion to Professor in the same year. Elected as one of the first Taishan Scholars of Shandong Province in 2006; awarded the National Science Fund for Distinguished Young Scholars in 2008; and appointed as the Distinguished Professor of Yangtze River by the Ministry of Education in 2010. Currently serving as a Distinguished Professor at both the College of Automation, Shandong University of Science and Technology and Shandong University.

Research Interests of Prof. Huanshui Zhang include optimization and optimal control theory, stochastic systems, time-delay systems, distributed/decentralized optimal control, game control, and optimization theory. He has served as an editorial board member for several domestic and international journals, such as IEEE Trans. on Automatic Control.

Speaker: Li Chai, Zhejiang University, China
 Title: A Universal Decomposition of Distributed Optimization Algorithms in Graph Frequency Domain
 Chair: Ge Guo, Northeastern University at Qinhuangdao, China

Abstract: In this talk, we introduce a universal decomposition for three typical first-order distributed optimization algorithms, namely EXTRA, DIGing and AugDGM. By using the graph Fourier transform (GFT). We show that the algorithm iteration can be divided into two subsystems, of which one represents the dynamics of the average state of all agents converging to the optimal solution, and another the dynamics of the high-frequency error subsystems converging to zeros, provided that the whole algorithm converges. Different to existing decomposition methods, our method generates a partially decoupled structure, which shows that the convergence of the algorithm iteration is totally determined by the high-frequency error subsystem. Moreover, in the novel decomposition structure, the average state subsystems are exactly the same for three different algorithms. The differences among three algorithms are characterized by the high-frequency error subsystem. These observations enable new insights on the analysis and design of distributed optimization algorithms, about which we will also make a brief discussion.



Li Chai is a Qiushi Distinguished Professor at Zhejiang University. He has been a Distinguished Young Scholar of Chinese National Science Foundation, and an expert honored with the State Council Special Allowance. He has won the Second Prize of Hubei Natural Science Award, and the honor of Hubei Province Outstanding Worker. Professor Chai has been selected for prestigious talent programs such as Hubei High-End Talent Cultivation Program, Hubei New Century High-Level Talent Program, and MOE New Century Excellent Talents Support Program. His research interests include multi-agent systems, distributed optimization, graph signal processing, and networked control systems. He has published over 100 fully refereed papers in prestigious journals and leading conferences. He has served as the associate editor of IEEE Transactions on Circuit and Systems II: Express Briefs, Control and Decision and Journal of Image and Graphs.

Speaker: Shuai Liu, Shandong University, China
 Title: Yanghui's Triangle, Full-Measured Systems, and Nonlinear Chaotic Systems
 Chair: Zhiyun Lin, Southern University of Science and Technology, China

Abstract: Based on the full-measured canonical form (FMCF) of full-measured systems, a nonlinear observer with linear error dynamics can be obtained. However, transforming a general nonlinear system into a full-measured system requires first converting it into a nonlinear observer canonical form and then from the observable canonical form (OCF) to the FMCF. Obtaining the OCF involves two steps: verifying necessary and sufficient conditions (requiring $O(N^2)$ Lie derivatives and Lie brackets plus solving an n-D linear equations) and solving a nonlinear diffeomorphism (requiring an n-D PDE system and a nonlinear transformation). This indirect

procedure is cumbersome. We aim to bypass the OCF and directly obtain the FMCF.

This report presents preliminary results and a conjecture. By successively differentiating the output function, we obtain $x^{(n)} = p(x)$. The necessary and sufficient condition for the existence of the FMCF is that the lower-right block of the Hessian matrix of $p(x)$ is zero, and the coefficients of all parameters in its upper-left block form a Yanghui triangle. The nonlinear terms in the FMCF are obtained by taking indefinite integrals of the coefficients of the linear terms of all $x^{(i)}$ in $p(x)$. Our results reveal an intriguing relationship between the ancient Yanghui triangle and the emerging FMCF, reducing heavy computations (Lie derivatives/brackets, linear/PDE systems) to solving a Hessian matrix and n indefinite integrals, thus greatly simplifying the derivation of the FMCF.



Shuai Liu received his Ph.D. degree from Nanyang Technological University, Singapore, in 2012. From 2011 to 2017, he was a Senior Research Fellow at the Singapore-Berkeley Research Initiative (University of California, Berkeley). He was selected for the National Thousand Young Talents Program (2017), and is also a Distinguished Taishan Scholar of Shandong Province, a Distinguished Young Scholar of Shandong University. His research interests include distributed optimization, intelligent control, optimal estimation, reinforcement learning, integrated energy systems, smart grids, and fault diagnosis. He has led and participated in numerous international and national research projects. He has authored over 100 SCI journal papers. He has received the Shandong Provincial Natural Science Award, the Natural Science Award and Science and Technology Progress Award of the Chinese Association of Automation (CAA), the Shandong Automation Society Natural Science Award etc. He has also been awarded

multiple best paper awards. He serves as an Associate Editor for several top-tier journals, including IEEE Journal of Automatica Sinica (JAS) and IEEE Transactions on Cybernetics (T-CYBER). He is a member of the IEEE CSS Conference Editorial Board, as well as the IEEE CSS Technical Committees on Nonlinear Systems and Control and on Smart Cities. He is also an Executive Member of the Embodied Intelligence Committee of the Chinese Command and Control Society, a member of its Swarm Intelligence and Cooperative Control Committee, and a committee member of the CAA Technical Committees on Hybrid Intelligence, Industrial Internet of Things, Fault Diagnosis and Safety, and New Energy & Energy Storage Control. He has frequently served as Regional Chair, Program Chair, Invited Chair, and Publicity Chair for prestigious international control conferences.

分会场报告二/Semi-plenary Session 2

5月24日 8:30-10:30 一楼国际会议中心A厅
May 24, 8:30-10:30 Qinquang Conference Hall A 1st Floor

Speakers: Ke Zhang, Nanjing University of Aeronautics and Astronautics, China

Chao Ning, Shanghai Jiao Tong University, China

Kuo Li, Yanshan University, China

Zhan Li, Harbin Institute of Technology, China

Speaker: Ke Zhang, Nanjing University of Aeronautics and Astronautics, China

Title: Fully Actuated System Approach-Based Fault-Tolerant Control of Helicopter Formation

Chair: Mou Chen, Nanjing University of Aeronautics and Astronautics, China

Abstract: The fully actuated system approach (FASA) can reconstruct the strongly coupled and underactuated nonlinear helicopter dynamics into a fully actuated form, simplifying controller design and providing a unified framework for formation fault-tolerant control (FTC). This talk presents recent progress on FASA-based FTC of helicopter formation. First, FASA is combined with prescribed-time control to achieve faster fault compensation. Second, a game-based optimization mechanism is introduced to effectively mitigate the adverse impact of fault estimation errors on formation tracking accuracy. Furthermore, an incremental fully actuated FTC strategy is designed to enhance the system's robustness against sudden faults and uncertainties. These results demonstrate that FASA significantly improves the fault-tolerant performance of helicopter formations.



Ke Zhang obtained his doctoral degree from Nanjing University of Aeronautics and Astronautics in 2012. He is currently a professor at the College of Automation Engineering of Nanjing University of Aeronautics and Astronautics, a recipient of the Outstanding Youth Fund in Jiangsu Province, a young academic leader in the "Qing Lan" Project in Jiangsu Province, a core member of the National Key Laboratory of Helicopter Aeromechanics, and a senior member of IEEE. His research focuses on fault diagnosis, cooperative safety control, and planning decision-making for unmanned swarm systems. He current serves as an editor for the "Unmanned System Technologies" series of books published by Springer Publishing. He has presided over two 2 military special projects, three projects of the National Natural Science Foundation of China, and the innovation project of the "the Belt and Road" international scientific and technological cooperation in Jiangsu Province. He has published four English monographs as the first

author in Springer, with over 150 academic papers, including more than 80 SCI indexed international journal papers. His paper has been selected as an ESI highly cited paper, an excellent paper of the year in the Journal of ACTA Automation Sinica, and the best paper at the ISAS2023 international conference. He has also been granted 26 national invention patents. He has been selected as one of the top 2% global scientists for six consecutive years from 2020 to 2025. The research achievements won one second prize of the State Natural Science Award, two first prizes of the Jiangsu Provincial Science and Technology Award, one first prize of the Natural Science Award of the Ministry of Education and the first "Youth Full-Actuation Award".

Speaker: Chao Ning, Shanghai Jiao Tong University, China

Title: AI-Empowered Distributionally Robust MPC of Uncertain High-Order Fully Actuated Systems

Chair: Xiang Yu, Beihang University, China

Abstract: Catalyzed by Artificial Intelligence (AI), data-driven control under uncertainty is becoming an emerging paradigm that integrates model-based and data-driven systems for decision-making under uncertainty. This organic integration of machine learning with control theory leads to data-driven control frameworks that close the loop between data analytics and decision support. This presentation will introduce a novel online learning-based Distributionally Robust Model Predictive Control (DR-MPC) framework for discrete-time High-Order Fully Actuated (HOFA) systems subject to additive stochastic disturbances and state constraints. Leveraging the appealing properties of HOFA systems, its nonlinear dynamics is transformed into a linear representation, thereby circumventing computational burden. The proposed framework features the exploitation of online Bayesian nonparametric learning via a Dirichlet Process Mixture Model to construct a data-stream-driven ambiguity set that captures the time-varying disturbance distribution. Theoretical analysis rigorously establishes the recursive feasibility and the closed-loop stability. Numerical experiments and an application to hydrogen electrolyzer temperature control are used to demonstrate the merits of the proposed approach.



Chao Ning is a tenure-track associate professor and doctoral supervisor at Shanghai Jiao Tong University, recognized as a National High-Level Young Talent, Shanghai Pujiang Talent, Shanghai Leading Talent, and Xiaomi Young Scholar. He focuses on AI-driven optimization and control under uncertainty, as well as research on green electricity-hydrogen-chemical coupling systems. He has led eight research projects, including the National Science Fund for Excellent Young Scholars (Overseas), National Natural Science Foundation General Program, National Natural Science Foundation Youth Program, and sub-projects under the National Key R&D Program. As the first author or corresponding author, he has published over 50 academic papers in international authoritative journals and conferences such as ICML, NeurIPS, Automatica, IEEE Transactions on Automatic Control, IEEE Transactions on Power Systems, Applied Energy, and AIChE Journal, with six papers cited over 100 times on Google Scholar. He has won four best paper awards as the first author, including the O. Hugo Schuck Best Paper Award at the American Control Conference (ACC), the Best Paper Award at the International Conference on Industrial Artificial Intelligence, the Best Paper Award at IEEE International Electrical and Energy Conference, and the Student Paper Award at the Sustainable Engineering Forum of AIChE. and AAIA.

Speaker: Kuo Li, Yanshan University, China

Title: Distributed Control of Multi-Agent Systems with Multi-Source Sensing-End Problems

Chair: Ming Liu, Harbin Institute of Technology, China

Abstract: Sensing measurement ends may face a series of issues such as unknown sensor measurement sensitivity, measurement delays, measurement noise, and sensor deception attacks. The presence of these issues poses significant challenges to the distributed controller design for multi-agent systems. To address the problem of unknown sensor measurement sensitivity, a more general sensor measurement model is established, and a distributed fault-tolerant cooperative control algorithm as well as a distributed adaptive dynamic compensation cooperative control strategy based on a state reconstructor are proposed. To address the problems of measurement delays and noise, the distributed consensus control methods based on switching classification are designed. To address the problem of sensor deception attacks, a more stealthy deception attack model is established, and the distributed resilient secure cooperative control strategy based on output feedback is proposed. Based on Lyapunov stability theory and algebraic graph theory, the effectiveness of the above-proposed algorithms is rigorously proved. The results provide a feasible technical path for resilient and autonomous distributed control systems oriented towards practical applications.



Kuo Li is a professor at Yanshan University, a National Youth Talent, and a Humboldt Fellow in Germany. He has been named to the World's Top 2% Most Influential Scientists list for both 2024 and 2025. He is the recipient of the Outstanding Doctoral Dissertation Award from the Chinese Association of Automation as well as the Outstanding Doctoral Dissertation Award of Hebei Province. He has led several national and provincial-level projects, including the National High-level Youth Talent Project, the Ministry of Education U40 Project, the Alexander von Humboldt Research Fellowship, and the Hebei Province High-level Talent Project. He has published 20 papers in the leading control journals Automatica and IEEE-TAC, and an additional 30 papers in other IEEE Trans. journals.

Speaker: Zhan Li, Harbin Institute of Technology, China
 Title: Toward Flying Robot with Omni-manipulability: FAST based Control and Applications
 Chair: Tao Liu, Southern University of Science and Technology, China

Abstract: Flying robot combines hovering platform and robot system, which has the ability to perform various aerial manipulations that normally dangerous, expensive and low-efficient for manned operations. However, complex physical interactions exist among hovering platform, robot system, target objectives, and environmental disturbance sources, which make the fundamental control tasks such as attitude, position, contact force, fault-tolerance, and subsystem control, very challenging. FAST (Fully Actuated System Theory) provides powerful tools to handle those challenging control tasks in flying robot systems. The presentation introduces the FAST based control system design for thrust-vectoring fully-actuated flying robot, and presents the latest progress in aerial contact-based applications represented by wind turbine blades inspection.



Zhan Li is a Professor and Doctoral Supervisor at the School of Astronautics, Harbin Institute of Technology. He has long been engaged in research on intelligent unmanned aerial systems for aerial manipulation. He has published over 50 SCI-indexed papers and holds more than 40 granted Chinese invention patents and 2 US invention patents, with 10 patents successfully commercialized. His work has been recognized with eight major scientific and technological awards from the Chinese Association of Automation, Tianjin Province, Heilongjiang Province, the Gold Medal at the International Exhibition of Inventions of Geneva, the Gold Medal at the Nuremberg International Invention Exhibition. Since 2026, he has founded Feiyan Zhikong (Shenzhen) Technology Co., Ltd., dedicated to developing aerial robots based on thrust-vectoring fully-actuated flight platforms for contact-based operations, aiming to pioneer technologies and applications in aerial embodied intelligence.

顶刊论坛/Top Journal Forum

5月24日 14:00-16:00 三楼贵宾厅
 May 24, 14:00-16:00 VIP Hall, 3rd Floor

Speakers: Songlin Zhuang, Yongjiang Laboratory, China
 Li Wen, Beihang University, China
 Tiantian Xu, Shenzhen Institute of Advanced Technology,
 Chinese Academy of Sciences, China
 Guibin Bian, Institute of Automation, Chinese Academy of Sciences, China
 Zhigang Wu, Huazhong University of Science and Technology, China
 Aming Li, Peking University, China
 Yanqing Hu, Southern University of Science and Technology, China
 Jiangfan Yu, The Chinese University of Hong Kong, China
 Qi Su, Shanghai Jiao Tong University, China
 Chairs: Huijun Gao, Harbin Institute of Technology, China
 Haitao Zhang, Huazhong University of Science and Technology, China
 Songlin Zhuang, Yongjiang Laboratory, China

Speaker: Songlin Zhuang, Yongjiang Laboratory, China
 Title: Intelligent Micromanipulation Technology and Instruments for Organoids

Abstract: Organoids are highly biomimetic "mini-organs" cultivated in vitro, which hold broad application prospects in regenerative medicine and represent a cutting-edge international research hotspot. This report presents intelligent micromanipulation technologies, instruments, and applications for organoids. To address the challenges in controllable organoid culture, this report will explore flexible micromanipulation of stem cells, intelligent state perception of organoids, and closed-loop regulation technologies for developmental processes. This report also introduces intelligent micromanipulation instruments developed for the culture of tumor organoids and various functional organoids, aiming to advance the significant applications of organoids in biomedicine, including organ development, drug discovery, and personalized diagnosis and treatment.



Songlin Zhuang is a Researcher and Director of the Intelligent Control and Systems Research Center at Yongjiang Laboratory. He is a recipient of the National High-level Young Talent Program and the Zhejiang Provincial Outstanding Youth Science Foundation. He has long been engaged in research on micromanipulation theory, technology, and instrumentation, publishing over 30 papers in Nature/Science sub-journals and IEEE transactions, and authoring one English monograph published by Springer. As a core member, he has participated in winning two first-prize awards for science and technology at provincial/ministerial level and from academic societies, as well as three gold awards at the Geneva and Nuremberg International Invention Exhibitions. He currently serves on the Editorial Board of IEEE/ASME Transactions on Mechatronics.

Speaker: Li Wen, Beihang University, China

Title: 复杂环境下的多模态机器人



文力，北京航空航天大学教授，国家杰出青年科学基金获得者，机械工程及自动化学院副院长。主要研究方向为仿生机器人、软体机器人、水下及深海机器人、柔性电子机器人、AI 赋能软体机器人。发表 Science Robotics, Nature Machine Intelligence, PNAS, Nature Communications, Science Advances 等论文 130 余篇，被 Science/Nature 7 次撰文报道。获得中国自动化学会自然科学奖一等奖，国家教育教学成果二等奖，斯提芬·沃格尔青年探索者奖，熊有伦院士智湖优秀青年奖等。担任国际顶刊 Science Robotics, IEEE Transactions on Robotics (IEEE TRO), International Journal of Robotics Research (IJRR) 等杂志的编委及副主编。担任 2018 年软体机器人理论与技术学术研讨会大会执行主席，中国电子学会机器人分会副主席。

Speaker: Tiantian Xu, Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, China

Title: Magnetically Actuated Microrobots for Precision Medicine

Abstract: Magnetically actuated microrobots can be remotely and wirelessly controlled via magnetic fields, enabling them to navigate complex and confined spaces that are otherwise inaccessible in the human body. This technology holds great promise for precision biomedical applications. In this talk, the speaker will present a comprehensive research framework spanning from microscale to human-scale systems. He has developed a human-scale magnetic actuation system and corresponding software platform, enabling applications from targeted drug delivery at the micro/nanoscale to remote control of continuum interventional robots at the whole-body scale. A flexible Hall sensor array patch and a two-stage magnetic localization paradigm are proposed to achieve sub-millimeter in vivo localization. Reinforcement learning-based control strategies are introduced to enable high-precision trajectory tracking under ultrasound guidance and in highly disturbed environments. Furthermore, a biohybrid magnetic hydrogel fiber robot constructed from autologous blood is proposed for precise targeting and treatment of glioma. In addition, a magnetically actuated flexible fiber electrode robot is developed for reconfigurable, long-term, multi-channel in vivo electrophysiological monitoring, breaking the traditional paradigm of static implanted electrodes.



Tiantian Xu is a Professor at the Shenzhen Institutes of Advanced Technology (SIAT), Chinese Academy of Sciences, and a recipient of the NSFC young outstanding scholarship. She has led multiple major research projects, including the NSFC Joint Key Program, the National Key R&D Program (Young Scientists Project), the Guangdong Provincial Key Program, the Shenzhen Outstanding Young Scientist Program, and Shenzhen Key Projects. Her research focuses on magnetically driven microrobots for targeted therapy, where she has conducted long-term, systematic studies. She has established methods for autonomous path planning and coordinated control of microrobots, developed integrated system platforms, and advanced their biomedical applications. She has published over 30 high-impact IEEE Transactions papers as first or corresponding author (including four in IEEE Transactions on Robotics), and more than 10 papers as corresponding author

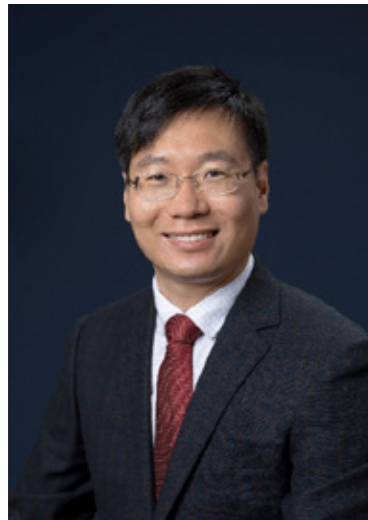
in leading journals such as Nature (2 papers), Nature Biomedical Engineering, Nature Sensors, and Advanced Materials. Eight of her publications are recognized as ESI Highly Cited Papers. She has also authored one English monograph. She received the IROS 2019 Best Application Paper Award (1st out of 2,494 submissions), the First Prize of Natural Science from CIE (ranked first), the Second Prize of CAAI Wu Wenjun Award for Artificial Intelligence (first author), the First Prize of Guangdong Provincial Science and Technology Progress Award, CAA Young Scientist, etc. She currently serves as an Associate Editor or Editorial Board Member for several leading robotics journals, including IEEE T-RO, T-MECH, T-ASE, and RAL.

Speaker: Guibin Bian, Institute of Automation, Chinese Academy of Sciences, China

Title: Intelligent Microsurgical Robots

Abstract: Microscopic surgical robots represent an integrated advancement in precision surgery and intelligent control. They assist surgeons in a variety of microsurgical procedures by enabling highly accurate, dexterous, and standardized operations, and constitute a significant branch of medical surgical robotics. Focusing on microscopic ophthalmic surgery, this lecture reviews the historical development and leading advances in the field, and describes how innovations in surgical microscopes and instruments have catalyzed progress. The next generation of microscopic ophthalmic surgical robots is characterized by greater operational autonomy and flexibility, higher control precision, more comprehensive assistive functions, and improved postoperative feedback. The talk details several key enabling technologies, including the development of intelligent surgical instruments, intraoperative real-time multimodal navigation methods, robotic intelligent control strategies, and automated surgical assessment. The lecture concludes with an outlook on future opportunities and challenges for microscopic ophthalmic surgical robotics.

Guibin Bian is a Professor at the Institute of Automation, Chinese Academy of Sciences, and a nationally recognized leading talent. His research focuses on intelligent surgical robotics. He has led projects including a National Key R&D Program, the National Natural Science Foundation's Major Scientific Instrument Development project, joint foundation projects, and an Innovation & Interdisciplinary Team project of the Chinese Academy of Sciences. He has authored over 190 high-quality academic papers, 99 of which are indexed by SCI, and received seven international paper awards. He holds 72 granted domestic and international invention patents and participated in drafting one national standard. His honors include the First Prize of the China Instrument and Control Society's Technological Invention Award, the First Prize of the China Invention Association's Invention &



Innovation Award, the “Strengthening-Nation Young Scientist” nomination from the Communist Youth League and China Youth Daily, and the Robot Science Leading Award. He serves on expert panels for the 14th Five-Year National Key R&D Program (Special Projects on “Fundamental Research Infrastructure and Major Scientific Instruments and Equipment Development” and “Intelligent Robotics”), and is a member of the expert working group for the AI domain guideline of the “Strategic Science & Technology Innovation Cooperation” key program. He is President of the Chinese Academy of Sciences Youth Innovation Promotion Association, a member of the Academic Committee of the PLA Key Laboratory for Combat Injury Specialized Treatment, and an editorial board member of IEEE Transactions on Instrumentation and Measurement (TIM), IEEE Transactions on Automation Science and Engineering (TASE), and The Innovation. He has been recognized as an Outstanding Member of the CAS Youth Innovation Promotion Association, Beijing Outstanding Young Scientist, and Beijing Science & Technology Rising Star.

Speaker: Zhigang Wu, Huazhong University of Science and Technology, China
 Title: Programmable Functionality and Mechanical Strengthening for Soft Origami Robots

Abstract: Soft elastomeric materials are attractive for soft robotics because of their flexibility, deformability, and adaptability. Through programmable surface modification and selective swelling, planar elastomeric sheets can be transformed into complex three-dimensional origami structures with integrated actuation and sensing functionalities. Such strategies provide an effective route for constructing multifunctional soft origami robots with programmable morphologies and reconfigurable behaviors. However, despite their high deformability and configurability, these soft origami systems often remain mechanically fragile due to the intrinsically compliant polymer matrix and weak interfacial coupling between soft and stiff materials. Their limited structural stability and load-bearing capability restrict further applications in functional soft structures and robotics. To address this challenge, hierarchical interfacial shrink fitting is further introduced to strengthen PDMS-based origami structures. As a result, the mechanically strengthened soft origami structures can support loads exceeding 58,100 times their own weight while maintaining programmable spatial morphologies. Together, these works provide a route toward soft origami systems with both programmable functionality and mechanical robustness.



Zhigang Wu (Member, IEEE) received his Ph.D. degree in mechanical engineering from Nanyang Technological University, Singapore, in 2005, and is currently a Professor with the State Key Laboratory of Intelligent Equipment and Manufacturing, Huazhong University of Science and Technology. Before his current position, he was an associate professor at Uppsala University, Sweden, and held a Junior Research Fellowship with the Swedish Research Council. He was also an Editorial Board Member of the Journal of Micromechanics and Microengineering, Institute of Physics, U.K., Micromachines/AI for Engineering, MDPI, and an advisory Board Member in Soft Science, OAE. His research interests mainly include AI-based algorithms, AI-based robot design, and embodied intelligence.

Speaker: Aming Li, Peking University, China
 Title: Collective Game and Intelligent Control

Abstract: As one of the fundamental theories of artificial intelligence, collective intelligence theory has attracted extensive attention from researchers across multiple disciplines in recent years. The complex networked collective game framework, which takes agents as network nodes and individual game interactions as network edges, provides an effective theoretical modeling and analytical tool for revealing the emergence mechanism of collective intelligence in complex systems. With the in-depth interdisciplinary integration of evolutionary game theory, complex networks, control theory, system science and artificial intelligence, network reciprocity has been reported as the core mechanism driving the emergence of collective intelligent behaviors. That is, the introduction of specific complex network topologies can impel agents to abandon the individually optimal Nash equilibrium strategy in collective games, and realize the emergence of group-optimal strategies through strategy coordination and evolution. Nevertheless, it remains a major scientific challenge in this field to theoretically analyze the quantitative relationship between complex network structures (especially their dynamic evolutionary characteristics) and the emergence of group-optimal strategies, and to establish a universal analytical framework and regulation criteria. This talk will introduce the research progress made by our research group in recent years on the emergence mechanism of collective intelligence, the regulation and optimal design of collective games, and other related aspects.



Aming Li is an Assistant Professor at the School of Advanced Manufacturing and Robotics, Peking University, and also holds a joint appointment at the Institute for Artificial Intelligence, Peking University. His research mainly focuses on collective game and intelligent control, and his works have been published in journals such as Science, Nature Communications and PNAS. He has been supported by the Youth Program (A) of the National Natural Science Foundation of China, and the Young Scientist Project of the National Key R&D Program of the Ministry of Science and Technology. He has been awarded the Interdisciplinary Fellowship Award by the International Human Frontier Science Program Organization, Beijing Nova Program Award, and the Xiong Youlun Zhihu Outstanding Young Scholar Award. He also serves as a member of the Editorial Working Group of National Science Review, a young editorial board member of Science China:

Information Sciences, an editorial board member of PLOS Complex Systems, and a member of the Technical Committee on Control Theory (TCCT) of the Chinese Association of Automation.

Speaker: Yanqing Hu, Southern University of Science and Technology, China
 Title: Win-Loss Phase Transition in Collective Confrontation

Abstract: Collective swarm confrontation is prevalent in many scenarios, including biological population competition, business competition, and military confrontation. It generally manifests collective synergy and scale effects, featuring properties such as threshold dependence, nonlinear amplification of marginal advantages, and abrupt win-lose transitions. However, traditional confrontation models, such as the Lanchester equations, mainly describe gradual attrition and the boundary between victory and defeat, while failing to fully incorporate collective synergy effects. Consequently, they are incapable of characterizing the abrupt win-lose transition triggered by subtle competitive advantages. Inspired by the confrontation mechanism of bacterial swarms, we construct a bilateral synergistic swarm confrontation model and rigorously analyzes the phase transition behavior. Under identical confrontation conditions for both sides, the confrontation outcome undergoes spontaneous bifurcation regulated by the synergy parameter, shifting from a scenario of mutual destruction to unilateral collapse. Furthermore, when the synergy effect is sufficiently strong, the confrontation result exhibits a first-order phase transition with changes in the relative competitive strength of the two sides, enabling an abrupt win-lose reversal driven by only a marginal advantage. Furthermore, by analyzing the conditional reversal probability, we reveal that under phase transition conditions, the final win-lose result becomes locked at the early stage of confrontation. This study provides a novel analytically solvable model for understanding the mechanism of abrupt win-lose transitions in swarm confrontation.



Yanqing Hu received his PhD degree from Beijing Normal University in 2011. He was a Postdoctoral Researcher at the Levich Institute of City University of New York, from 2011 to 2013. Currently, he is a Professor at Department of Statistics and Data Science of Southern University of Science and Technology. His research interests mainly focus on using big data to explore the mechanisms inside complex systems.

Speaker: Jiangfan Yu, The Chinese University of Hong Kong, China
 Title: Microrobots: Next-generation Biomedical Platforms

Abstract: As a young technology, micro-nano robots have shown amazing potential in biomedical and other fields in recent years. It has the ability to play a role in hard-to-reach spaces, including living organisms, and it has great potential in non-invasive or minimally invasive diagnosis. This seminar will introduce the developments in soft microrobots and microrobotic swarms, including their design, automatic control and biomedical applications.



Jiangfan Yu is currently an Assistant Professor and Presidential Young Fellow in SSE, CUHK-SZ. He is also the Director of the Research Center on Microrobotics, Shenzhen Institute of AI and Robotics for Society (AIRS). He is the academic leader in China Merchants Group-AIRS Joint Lab for Future Medical Robotics. His research interests mainly focus on micro/nanorobotics, including their modelling, actuation, control and medical applications. He has published over 70 top journal and international conference papers, including Nature Machine Intelligence, Science Advances, Nature Communications, IJRR, IEEE TRO and Advanced Materials. His works have been indexed as ESI highly cited papers, and have been highlighted

in Science, Nature and international press reports, such as CNN. He has also published 2 monographs and 1 edited book. He is an IEEE Senior Member, and has won impactful awards, including IEEE RAS Early Academic Career Award, IROS Best Student Conference Paper, Frontiers of Science Award on International Congress of Basic Science, IEEE 3M-NANO Rising Star Award, Wu Wen Jun AI Science & Technology Award, Baidu Global Chinese Young Scholar in AI, and T-Mech Best Paper Award Finalist. He serves as a reviewer for top journals and conferences, including Science Robotics, Nature Nanotechnology, Nature Sensors, Nature Electronics, Science Advances, Nature Communications and PNAS.

Speaker: Qi Su, Shanghai Jiao Tong University, China
 Title: Evolutionary Game Theory and Collective Intelligence on Complex Networks

Abstract: Collective intelligence, which emphasizes that systems can rely on cooperation and coordination among individuals to achieve goals that are impossible by any individual alone to achieve, proves to be an increasingly promising research direction in artificial intelligence. In collective intelligence, one of the most cutting-edge questions is how and when cooperation and coordination emerge, especially when individuals have the cognitive ability to make their own behavioral decisions and simultaneously face conflicts between their own and collective interests. Classic game theory based on the assumption of perfect rationality has predicted a convergence towards the Nash Equilibrium state, i.e., the collapse of cooperation. In this talk, I give a brief overview of studies about system structures' effects on the evolution of cooperation. Besides, I present four works about the evolution of cooperation on complex networks, which respectively accounts for the directionality of interactions, the coupling of multiple systems, the time-varying features of system structures, and the higher-order effects. We derive rigorous analytical conditions to predict when a system evolves away from the Nash Equilibrium and reveal that the interaction directionality, the coupling of multiple systems, structural changes, and the high-order interactions, can promote the evolution of cooperation by orders of magnitude.

苏奇, 上海交通大学自动化与感知学院副教授, 国家级青年人才, 上海市海外高层次人才, 上海市浦江人才。于华中科技大学取得学士学位、北京大学取得博士学位。曾在哈佛大学和波士顿大学开展博士联合培养, 入选美国西蒙斯博士后学者计划, 在宾夕法尼亚大学开展博士后研究。主要研究兴趣为人机交互及增强智能、复杂网络和复杂系统、博弈理论和群体智能。发表学术论文 30 余篇, 包括以第一 / 通讯作者身份发表 10 余篇 Nature/Science 子刊、美国科学院院刊 PNAS 论文。



特邀论坛1/Invited Forum 1

5月23日 15:50-17:50 一楼国际会议中心A厅
May 23, 15:50-17:50 Qinhuang Conference Hall A, 1st Floor

Speakers: Feiqi Deng, South China University of Technology, China
Wanquan Liu, Sun Yat-sen University, China
Tong Zhou, Tsinghua University, China
Shengyuan Xu, Nanjing University of Science and Technology, China
Yungang Liu, Shandong University, China
Chairs: Feiqi Deng, South China University of Technology, China
Yungang Liu, Shandong University, China

Speaker: Feiqi Deng, South China University of Technology, China
Title: Modeling, Analysis, Numerical Simulation of the Delayed Stochastic Systems with Applications

Abstract: The understanding of the talker about the stochastic phenomenon and the stochastic system models, as well as the recent progresses achieved by his group about the research on the theory of the delayed stochastic systems, will be introduced, including: 1. Those on the fundamental theories, e.g. the nonnegative semi-martingale boundedness lemma, the improvement on the Doob's martingale inequality, the implication theorem for the stability of the delayed stochastic systems; 2. Some interesting discoveries on the control theory of the delayed stochastic systems, e.g. the reachability the states of the delayed stochastic systems to zeros, the stabilizability of some uncontrollable systems by delayed feedbacks, the stabilization of the stochastic systems by feedbacks with unbounded or over large time delays; 3. Some progresses on the control theory of the delayed stochastic systems, e.g. the divided feedback stabilization of the stochastic systems, the accurate numerical schemes of the stochastic systems with sampled data with applications, the stability of the networked control systems. Besides, some challenges will be presented, e.g., the event-triggering control of the stochastic systems, the boundedness of the solutions of the stochastic systems by deterministic bounds, etc. Communications on related topics with the participants are expected.



Feiqi Deng received the Ph.D. degree in control theory and control engineering from South China University of Technology, Guangzhou, in June 1997. Since October 1999, he has been a professor with the School of Automation Science and Engineering, South China University of Technology. He is currently a senior member of IEEE, a fellow of CAA, a member of Technical Committee on Control Theory (TCCT) of CAA, now he is serving as the chair of the IFAC Technical Committee on Stochastic Systems, the chair of the IEEE Technical Committee on the Cybernetics of the Complex Systems, the chair of the IEEE CSS Guangzhou Chapter, the director of the TCCT Technical Committee on Stochastic System Control, and the associate editor of Mathematical Modeling and Control etc. His main research interests include stability, stabilization and Control of complex systems, including time delay systems and stochastic systems, as well as the intelligent technologies etc.

Speaker: Wanquan Liu, Sun Yat-sen University, China
Title: Applications of the Fully Actuated System Theory on the Nonlinear Control of Robots and UAVs

Abstract: In this seminar, I will establish some novel strategies for robot control within the recently proposed fully actuated system framework. Some critical challenges, including predefined-time consensus, input constraints, nonholonomic constraints, and heterogeneous cooperation, are systematically addressed. Firstly, for omnidirectional mobile robots operating in complex environments, a predefined-time consensus control scheme is developed under input constraints, nonholonomic constraints, and collision-free formation requirements. A novel fully actuated predefined-time behavioral control strategy is developed by integrating a predefined-time cooperative protocol with a null-space-based behavioral control mechanism, thereby enabling distributed formation control. Secondly, for tendon-driven manipulators, a fully actuated control framework based on model predictive control (MPC) is established to address input constraints, strong coupling, and vibration induced by high-frequency torque variations. In both cases, by exploiting the fully actuated transformation, complex nonlinear dynamics are reformulated into a tractable linear form, significantly reducing controller design complexity. Finally, for heterogeneous air-ground cooperative systems, a unified fully actuated modelling and control approach is developed to address dynamic discrepancies among heterogeneous robots and to reduce reliance on accurate nonlinear models. By transforming the dynamics of unmanned aerial vehicles and ground vehicles into a unified, fully actuated representation, distributed consensus-based formation control can be achieved, resulting in better coordination accuracy and system stability. In summary, a unified fully actuated system control framework is established for some typical robot control problems, to systematically address critical issues brought by the nonlinear complexity.



Wanquan Liu (Senior Member, IEEE): He is a Chair Professor in the School of Intelligent Systems Engineering at Sun Yat-sen University. He received the B.Sc. degree in Mathematics from Qufu Normal University, P.R. China, in 1985; the M.Sc. degree in Control Theory and Operations Research from the Chinese Academy of Sciences in 1988, and the PhD degree in Automation from Shanghai Jiaotong University, Shanghai, P.R. China, in 1993. He has been awarded an Australian Research Council (ARC) Fellowship, a University of Sydney U2000 Research Fellowship, and a Japan Society for the Promotion of Science (JSPS) Fellowship. He has been awarded the Excellent Pearl River Scholar by Guangdong Province in 2022, and received the honor of National Distinguished Scholar conferred by the National Education Committee of China in 2023. He has also secured research funding from multiple funding bodies. He has published over 520 papers in reputed journals and international conferences, with more than 8,400 citations and an h-index of 43. He is the Editor-in-Chief for the journal Mathematical Foundations of Computing and serves on the editorial board of several international journals. His research interests include intelligent control, artificial intelligence and smart home technology for the aged.

Speaker: Tong Zhou, Tsinghua University, China

Title: Structure Identification for Networked Dynamic Systems under Slow and Non-uniform Samplings

Abstract: Networked dynamic systems (NDS) have been attracting research attentions for a long time. With technology developments, especially those in communications and computers, the scale of an NDS increases rapidly. Moreover, some new issues also arise, such as attack prevention, random communication delay/failure, etc. In addition, recent marvelous success in artificial intelligence greatly stimulates constructions of artificial NDSs with a huge number of nodes. Nevertheless, some fundamental issues including revealing the structure of an NDS from measurements, computationally efficient conditions for NDS controllability/ observability verifications, etc., remain challenging still.

In this talk, a model is introduced for a large scale NDS in which subsystems are connected through their internal outputs in an arbitrary way, and subsystems may have distinctive dynamics. A matrix rank based necessary and sufficient condition is given for the global identifiability of subsystem interactions, which leads to several conclusions about NDS structure identifiability when there is some a priori information. This matrix also leads to an explicit description for the set of subsystem interactions that cannot be distinguished from experiment data only. Importance of "structure identifiability degree" is also revealed through some numerical simulations, with a discussion on its influences on model prediction capabilities and system performances. Two metrics are suggested respectively for measuring absolute and relative sloppiness of an NDS structure, whose explicit formulas are also derived for some application significant cases. An explicit relation is derived between steady-state response of an LTI plant and its tangential interpolation conditions. On the basis of this relation, a procedure is suggested to estimate parameters of a continuous dynamic system directly, in which uniform sampling is no longer necessary and satisfaction of the Nyquist sampling rate is not required. Extensions to nonlinear dynamic systems, as well as to asynchronous samplings are also discussed. Several numerical examples are included to illustrate characteristics of this estimation procedure, which include direct estimation of damping ratios and natural frequencies that are widely regarded to be practically challenging.



Tong Zhou received the B.S. in automation and M.S. degrees in control theory and application from the University of Electronic Science and Technology of China, Chengdu, China, in 1984 and 1989, respectively, and the second M.S. degree in electrical and information engineering from Kanazawa University, Kanazawa, Japan, in 1991, and the Ph.D. degree in industry machinery from Osaka University, Osaka, Japan, in 1994.

After visiting several universities in The Netherlands, Japan, and China, he joined Tsinghua University, Beijing, China, in 1999, where he is currently a Professor of control theory and control engineering. His current research interests include networked dynamic systems, distributed/robust estimation and control, system identification and their applications to real-world problems in molecular cell biology and communication systems, etc.

Dr. Zhou was the recipient of the First-Class Natural Science Prize in 2020 from the Chinese Association of Automation (CAA), the First-Class Natural Science Prize in 2003 from the Ministry of Education, China, and the National Outstanding Youth Foundation of China in 2006. He was an Associate Editor for IEEE TRANSACTIONS ON AUTOMATIC CONTROL, and is now on the editorial board of Automatica. He is a CAA Fellow and an IEEE Fellow.

Speaker: Shengyuan Xu, Nanjing University of Science and Technology, China

Title: Analysis and Control of Stochastic Nonlinear Systems

Abstract: This talk focuses on the multi-faceted, coupled challenges including stochastic disturbances, inherent nonlinearities, and signal time delays encountered by complex equipment such as high-precision fire control systems. Centering on three core frontier issues in the control of stochastic nonlinear systems--the complete elimination of nonlinear growth conditions, the effective reduction of controller complexity, and the transformative enhancement of system dynamic performance, the talk systematically elucidates the latest theoretical breakthroughs in this field. It establishes a comprehensive stability theory framework designed to guarantee the rapid and precise convergence of such systems, aiming to provide the theoretical framework and methodological support necessary for the construction of high-performance stochastic control systems.



Shengyuan Xu is a recipient of the National Science Fund for Distinguished Young Scholars, Distinguished Professor of the Chang Jiang Scholars Program of the Ministry of Education, Academic Leader of the Innovation Team of the Ministry of Education, Principal Investigator of the Innovative Research Group Program of the National Natural Science Foundation of China, and Winner of the Second Class National Natural Science Award in 2019. He received his Bachelor of Science degree from Hangzhou Normal University in 1990, Master of Science degree from Qufu Normal University in 1996, and Doctor of Engineering degree from Nanjing University of Science and Technology (NJUST) in 1999. He carried out postdoctoral research at KU Leuven in Belgium from December 2000 to November 2001 and at the University of Alberta in Canada from December 2001 to September 2002. He served as a William Mong Young Research Fellow

at the University of Hong Kong from September 2002 to September 2003. Currently, he is a Professor and PhD Supervisor at the School of Automation, Nanjing University of Science and Technology.

Speaker: Yungang Liu, Shandong University, China
 Title: Hyperexponential stability and stabilization for uncertain nonlinear systems

Abstract: This talk discusses hyperexponential stability and hyperexponential stabilization for uncertain nonlinear systems. A definition of hyperexponential stability is first given in the widely-recognized manner. Its connections with the existing definitions of hyperexponential stability are identified. Necessary and sufficient conditions are then established to demonstrate the possibilities and impossibilities of pursuing hyperexponential stability. A time-varying-gain-based strategy is finally developed to achieve global hyperexponential stabilization for a class of uncertain nonlinear systems.



Yungang Liu received the Ph.D. degree in control theory and control engineering from Shanghai Jiao Tong University, Shanghai, China, in 2000. He is currently a Changjiang Scholar Chair Professor with the School of Control Science and Engineering, Shandong University, China. He is the Director of the Key Laboratory of Machine Intelligence and System Control, Ministry of Education of China; the Director of the Institute of Artificial Intelligence and Systems and Control, SDU; the Director of the Technical Committee on Artificial Intelligence and Machine Vision, Shandong Institute of Electronics; and the Director of the SDU-IBM Research Center on Big Data and Analytics. He is also the Vice Director of the Engineering Research Center of Intelligent Unmanned System, Ministry of Education of China. His current research interests include stochastic control, nonlinear control design and system analysis, cooperative control, distributed parameter systems, adaptive control and applications, robots and motion control, and artificial intelligence. Dr. Liu was a recipient of the National Outstanding Youth Science Foundation of China, the Special Government Allowances of State Council of China, and the Taishan Scholar Climbing Professor of Shandong Province of China. He was a recipient of the Guan Zhaozhi Award in Chinese Control Conference in 2004, the Second Prize of the National Natural Science Award of China in 2015, the Excellent Doctoral Dissertation Award of Chinese Association of Automation (CAA) in 2018, and the Outstanding Graduate Student Instructor Awards of Shandong University and Shandong Province in 2019 and 2021.

特邀论坛2/Invited Forum 2

5月23日15:50-17:50一楼国际会议中心B厅
 May 23, 15:50-17:50 Qinhuang Conference Hall B, 1st Floor

Speakers: Yong Liu, Zhejiang University, China
 Xudong Zhao, Dalian University of Technology, China
 Honggui Han, Beijing University of Technology, China
 Zhunga Liu, Northwestern Polytechnical University, China
 Keyou You, Tsinghua University, China
 Chairs: Yong Liu, Zhejiang University, China
 Keyou You, Tsinghua University, China

Speaker: Yong Liu, Zhejiang University, China
 Title: From Artificial Intelligence to Embodied Intelligence

Abstract: Embodied intelligence has promising application potential across various fields, including industrial manufacturing, autonomous driving, logistics and transportation, household services, medical care and elderly health, among others. This report will briefly review the historical evolution from the boom of artificial intelligence to the emergence of embodied intelligence, and outline its core components and implementation approaches.



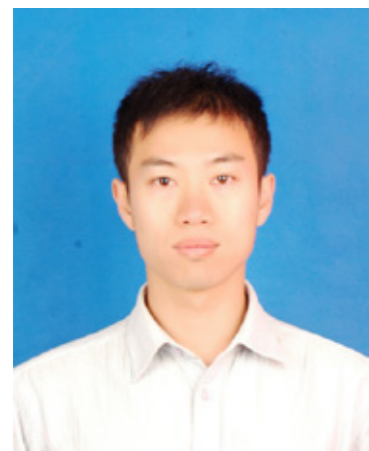
Yong Liu is a Professor at the College of Control Science and Engineering, Zhejiang University. He serves as Director of the Center for Intelligent Driving and Future Transportation, College of Control Science and Engineering, Zhejiang University; Director of the Zhejiang University-SODA CORE Joint R&D Center for Advanced Intelligent Computing; Deputy Director of the Research Center for Advanced Intelligent Systems, Zhejiang University; Member of the Party Committee of the College of Control Science and Engineering, Zhejiang University; and an expert for the "Machine Replacement" program in Zhejiang Province. He has presided over the National Natural Science Foundation for Young Scientists (General Program, Category A) and the Outstanding Youth Science Foundation of Zhejiang Province. His honors include the Silver Award of China Patent Award, First Prize of Natural Science Award of Zhejiang Province, First Prize of Science and Technology Award of Zhejiang Province, First Prize of Science and Technology Progress Award of Zhejiang Province, First Prize of Intellectual Property Patent Award of Zhejiang Province, and Second Prize of Natural Science Academic Award of Zhejiang Province. He has been selected as a Young Top-notch Talent of the National "Ten Thousand Talents Program" (Organization Department of the Central Committee of the CPC), Young Scientific and Technological Talent with Outstanding Contributions of Zhejiang Province, Qianjiang Distinguished Expert of Hangzhou (2022), and a talent of the "151 Talent Project" of Zhejiang Province. He has published more than 100 papers as first author or corresponding author in prestigious journals and top conferences in robotics and computer vision, including IEEE Transactions on

Pattern Analysis and Machine Intelligence (TPAMI), IEEE Transactions on Robotics (TRO), International Journal of Computer Vision (IJCV), Journal of Machine Learning Research (JMLR), IEEE Transactions on Image Processing (TIP), CVPR, ICCV, ECCV, NeurIPS, ICLR, ICRA, and IROS. His main research interests include autonomous robots and intelligent systems, autonomous planning and navigation control of robots, visual recognition and pattern recognition, SLAM technology, and multi-sensor fusion technology.

Speaker: Xudong Zhao, Dalian University of Technology, China

Title: 面向复杂环境的仿海胆机器人机动技术

摘要: 针对抢滩登陆中浅滩、礁石等复杂地形环境下隐蔽侦察任务的机动需求, 发挥仿生类无人系统高隐蔽性和“不怕伤亡”天然优势, 及可快速部署并进入到有人作战力量无法或不便涉足的危险、恶劣环境和空间中等特点。开展自适应类海胆仿生机器人总体技术研究和基于深度学习和自主学习的控制研究, 研制原理样机并开展实验验证。本报告将介绍仿海胆机器人研发的几个研究结果, 主要包括: 设计灵感及硬件结构设计、基于动力学的运动控制、基于强化学习的运动控制、仿真及样机实验。



赵旭东, 大连理工大学教授, 博士生导师, “工业装备智能控制与优化教育部重点实验室”副主任。入选国家级领军人才支持计划。近年来在切换系统、不确定系统、几类非线性系统的稳定性、鲁棒控制、智能控制及其在航空发动机、机器人的应用等领域取得了一系列的研究成果。在 Automatica 及 IEEE Transactions 系列汇刊发表论文 160 余篇, 其中包括控制领域顶级期刊 Automatica 和 IEEE TAC 20 余篇。科研成果被引用 20000 余次, 多篇学术论文入选 ESI-TOP 高被引论文。主持国家科技重大专项(首席科学家), 国家重点研发计划项目, 国家自然科学基金重点项目, 国家优秀项目, JKW 某工程项目, 两机重大专项课题等多个重要项目。获得全球高被引科学家奖(Web of Science)、USERN 青年科学家奖、中国自动化学会青年科学家奖; 获得教育部自然科学二等奖、中国自动化学会自然科学一等奖等科技奖励 8 项; 出版英文专著 2 部; 授权国家发明专利 10 余项。担任中国指挥与控制学会智能控制与系统专业委员会常务委员、集群智能与协同控制专业委员会常务委员, 中国空天动力联合会发动机控制技术专业委员会委员, 中国机械学会机器人专业委员会委员。担任《自动化学报》、《控制工程》及 SCI 期刊《IEEE Transactions on Systems, Man and Cybernetics: Systems》、《Nonlinear Analysis: Hybrid Systems》等编委工作, 同时担任《Engineering Reports》顾问委员会委员。

Speaker: Honggui Han, Beijing University of Technology, China

Title: Multi-objective dynamic collaborative optimization for the municipal wastewater treatment process

Abstract: Municipal wastewater treatment is an effective way to protect the environment and realize water resource recycling. However, due to the multi-processes, multi-working conditions, time-varying and other characteristics of municipal wastewater treatment process, optimal control based on a single scale, a single level, and a single goal cannot guarantee the optimum of the overall operation. Multi-objective collaborative optimization control achieves multi-objective optimization between local and global, short-term and long-term, and efficiency and safety in the municipal wastewater treatment process by constructing performance indicators at different time scales and designing a multi-conflict objective dynamic optimization method. It solves the problem of real-time dynamic optimization setting of key variables in the municipal wastewater treatment

process, and effectively reduces the operating cost.



Honggui Han, professor, doctoral supervisor, and dean of the School of Computer Science. He has been engaged in research on intelligent control of complex systems, and has been selected for the National Science Fund for Distinguished Young Scholars, the National Science Fund for Excellent Young Scholars, the Young Beijing Scholar, the Young Scientist of the Chinese Automation Society, and the Outstanding Young Scientist of Beijing Universities, etc. As a result of the research, he has published more than 100 academic papers and written 5 books; he has obtained more than 60 authorized Chinese/American invention patents, has presided over/participated in the formulation of more than 10 national/group/local standards. He has won the second prize of the National Science and Technology Progress Award, the first prize of the Ministry of Education Science and Technology Progress Award, and the first prize of the Wu Wenjun Artificial Intelligence Science and Technology Progress Award, etc. He is currently the director of the "Digital Community" Engineering Research Center of the Ministry of Education and the director of the Beijing Key Laboratory of "Computational Intelligence and Intelligent Systems". He also serves as an editorial board member of journals such as China Science: Technical Sciences, IEEE Transactions on Cybernetics, etc.

Speaker: Zhunga Liu, Northwestern Polytechnical University, China

Title: Multi-source Fusion-based Intelligent Localization and Perception for UAVs

Abstract: Unmanned aerial vehicle (UAV) autonomous navigation and target perception play critical roles in mission execution. In visual navigation, differences in image viewpoints and modalities make image matching and localization highly challenging. In target perception, long-range targets often exhibit weak visual characteristics and are embedded in complex backgrounds, making timely detection difficult. This report introduces an intelligent cross-modal image matching method based on multi-source information fusion for images captured from different viewpoints, aiming to improve the localization accuracy of UAV visual navigation. In addition, a multi-feature information fusion approach for weak and small target detection is presented to enable rapid detection and recognition of long-range targets in complex environments.



Zhunga Liu is a Professor and Ph.D. Supervisor at the School of Automation, Northwestern Polytechnical University, and a recipient of the National Science Fund for Distinguished Young Scholars. His research interests include intelligent information fusion, target recognition and tracking, and navigation and guidance systems. He has led several major research projects, including key projects funded by the joint program of the National Natural Science Foundation of China. He has received numerous awards and honors, including the First Prize of the Shaanxi Natural Science Award, the First Prize of Natural Science from the Chinese Association for Artificial Intelligence, and the Youth Science and Technology Award from the Chinese Society of Aeronautics and Astronautics. He currently serves as an Associate Editor or Editorial Board Member for journals including IEEE Transactions on Cybernetics, Science China Information Sciences, and Acta Aeronautica et Astronautica Sinica, and is also a council member of the Chinese Society of Aeronautics and Astronautics.

Speaker: Keyou You, Tsinghua University, China

Title: Direct closed-loop data-driven design for LQ control with unknown dynamics

Abstract: Direct data-driven design for the linear quadratic regulator (LQR) typically relies on offline or episodic data batches, leaving online adaptation an open challenge. In this work, we propose a direct adaptive method for learning the LQR from online closed-loop data. First, we introduce a policy parameterization based on the sample covariance, leading to a direct data-driven LQR formulation that is equivalent to the certainty-equivalence LQR and enjoys optimal guarantees. Second, we develop a data-enabled policy optimization (DeePO) method that directly updates the policy using only a batch of persistently exciting data, with an explicit gradient computation. Third, we establish global convergence through a projected gradient dominance property. By performing one-step projected gradient descent per closed-loop sample, DeePO enables adaptive LQR learning via an explicit recursive policy update. Under bounded noise, the regret achieves the optimal rate of $O(1/\sqrt{T})$ plus a bias term that decays inversely with a newly defined signal-to-noise ratio. We further extend this framework to the linear quadratic tracking (LQT) problem, showing that DeePO applies directly while preserving the same algorithmic structure, convergence guarantees, and regret bounds. Simulations validate the theoretical findings and demonstrate the efficiency of the proposed approach for both regulation and tracking tasks.



Keyou You (SM'17) received the B.S. degree in Statistical Science from Sun Yat-sen University, Guangzhou, China, in 2007 and the Ph.D. degree in Electrical and Electronic Engineering from Nanyang Technological University (NTU), Singapore, in 2012. After briefly working as a Research Fellow at NTU, he joined Tsinghua University in Beijing, China where he is now a tenured Associate Professor in the Department of Automation. He held visiting positions at Politecnico di Torino, Hong Kong University of Science and Technology, University of Melbourne and etc. His current research interests include networked control systems, distributed optimization and learning, and their applications. Dr. You received the Guan Zhaozhi award at the 29th Chinese Control Conference in 2010 and the ACA (Asian Control Association) Temasek Young Educator Award in 2019. He received the National Science Fund for Excellent Young Scholars in 2017. He is currently an Associate Editor for *Automatica*, *IEEE Transactions on Automatic Control* and *IEEE Transactions on Control of Network Systems*.

特邀论坛3/Invited Forum 3

5月24日 14:00-16:00 闻涛厅
May 24, 14:00-16:00 Wentao Hall

Speakers: Guoxiang Gu, Louisiana State University, USA

Jifeng Zhang, Zhongyuan University of Technology/Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China

Dayi Wang, Beijing Institute of Spacecraft System Engineering, China

Haibin Duan, Beihang University, China

Jian Sun, Beijing Institute of Technology, China

Chairs: Jifeng Zhang, Zhongyuan University of Technology/Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China

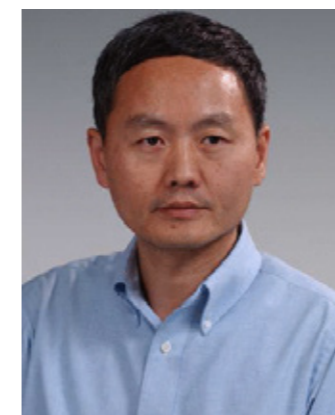
Haibin Duan, Beihang University, China

Speaker: Guoxiang Gu, Louisiana State University, USA

Title: Robust Optimal Adaptive Control for Fully Actuated Uncertain Nonlinear Systems with Applications

Abstract: We investigate adaptive control for a class of fully actuated uncertain nonlinear systems under state feedback. It is shown that adaptive control of such a class of nonlinear systems is hinged on the linear part. New results include:

- Global asymptotic stabilization (GAS).
- Input-to-state stability (ISS) and exponential stability (ES).
- Output regulation (OR) with full information (FI) and LQR control.
- Robust control and disturbance rejection under H_∞ -framework.
- Applications to platoon control in achieving disturbance string stability (DSS). The results are illustrated by simulation studies.



Guoxiang Gu (F'10) received the Ph.D. degree in Electrical Engineering from University of Minnesota, Minneapolis, MN, USA, in 1988. From 1988 to 1990, he was with the Department of Electrical Engineering, Wright State University, Dayton, OH, USA, as a Visiting Assistant Professor. He has held visiting positions with Wright-Patterson Air Force Base, OH, USA, and with the Hong Kong University of Science and Technology, Hong Kong. He worked for Louisiana State University (LSU), Baton Rouge, LA, USA, and was a Professor of Electrical and Computer Engineering and F. Hugh Coughlin/CLECO Distinguished Professor of LSU. He has authored two books, over 90 archive journal papers, and numerous book chapters and conference papers. His research interests include networked control systems, modeling and identification, and industrial applications. Dr. Gu served as an Associate Editor for *IEEE Transactions on Automatic Control* from January 1998 to December 2001 and from January 2018 to December 2021, *SIAM Journal on Control and Optimization* from 2006 to 2009, and *Automatica* from 2006 to 2012. He is currently a Professor of Xinan Jiaotong University, an Emeritus Professor in ECE of LSU and Fellow of IEEE.

Speaker: Jifeng Zhang, Zhongyuan University of Technology/Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China
 Title: Fundamental problems of finite-information systems

Abstract: In networked systems, how to reduce the cost of data measurement and transmission for each node, and how to eliminate the adverse effects that uncertainties in measurement and transmission bring to closed-loop system performance, is a fundamental problem that control theory urgently needs to solve, and is also an extremely challenging issue. Theoretically, this requires addressing the question of 'how much information is needed to accomplish a given control task, and methodologically, it requires solving the integrated design problem of communication and control in multi-agent systems. This report will introduce some of the results our research group has achieved in recent years in this area, including parameter identification and control based on quantized and aggregated data, integrated design methods for communication and control in multi-agent systems, and convergence control design and closed-loop system performance analysis based on low-capacity channels.



Jifeng Zhang is an Academic Vice-President of Zhongyuan University of Technology, and full professor of the Academy of Mathematics and Systems Science (AMSS), Chinese Academy of Sciences (CAS). His research focuses on the analysis and control of stochastic systems, finite-information systems, and multi-agent systems. He has twice won the Second Prize of the National Natural Science Award and is currently an IEEE Fellow, IFAC Fellow, Member of the European Academy of Sciences and Arts, Fellow of the Chinese Association of Automation, and Fellow of the Chinese Society for Industrial and Applied Mathematics. He has served as Director of the Institute of Systems Science at AMSS,CAS; Convener of the Systems Science Evaluation Group of the Academic Degrees Committee of the State Council, Vice-President of the Technical Board of the International Federation of Automatic Control(IFAC), Vice-President of the Chinese Association of Automation, the Chinese

Mathematical Society, and the Chinese Society of Systems Engineering, as well as Editor-in-Chief, Associate Editor or Editorial Board member of more than 10 important domestic and international academic journals. He is the founding Editor-in-Chief of the popular science journal "Systems and Control in Depth". He was the PI of many major research projects including the National Science Fund for Distinguished Young Scholars, Key projects, as well as key R&D projects of the Ministry of Science and Technology, and 973 Program sub-projects.

Speaker: Dayi Wang, Beijing Institute of Spacecraft System Engineering, China
 Title: Quantitative Characterization of Observation Capability and Autonomous Navigation

Abstract: Autonomous navigation and autonomous diagnosis/reconfiguration are two key cores for the autonomous operation of spacecraft, among which autonomous navigation is the prerequisite for achieving fully autonomous operation. Focusing on unmanned systems under stringent resource constraints, the presenter takes the quantitative characterization of observation capability as the theoretical innovation breakthrough, and the optimized construction and information selection of sequential images as the key technical breakthroughs. A sequential-image-based autonomous navigation technology driven by quantitative observation capability characterization is proposed, contributing to the safe and reliable autonomous operation of spacecraft.



Dayi Wang is a Research Fellow at the Beijing Institute of Spacecraft System Engineering and Director of its Science and Technology Committee. He is a recipient of the National Science Fund for Distinguished Young Scholars, the Outstanding Young Scientist Award in National Defense Science and Technology, and the Leading Talent of the National Ten Thousand Talents Program. He has also served as Chief Technical Scientist of a National 973 Program project and is an expert receiving the State Council Special Allowance. He has long been engaged in research on theoretical methods for the quantitative characterization of observation, diagnosis, and reconfiguration capabilities, as well as autonomous operation technologies for spacecraft. His achievements were selected as outstanding

accomplishments of the National Natural Science Foundation of China during the 13th Five-Year Plan period. He has made important contributions to the success of major national missions such as China's deep-space exploration and the BeiDou-3 Navigation Satellite System. He has received numerous honors, including the inaugural National Outstanding Engineer Award, the Second Prize of the State Technological Invention Award, the Special Prize of the State Science and Technology Progress Award, the Ho Leung Ho Lee Foundation Prize for Scientific and Technological Innovation, the National Innovation Excellence Award, and the Qian Xuesen Outstanding Contribution Award. He is also recognized as a Young and Middle-Aged Expert with Outstanding Contributions to the Nation.

Speaker: Haibin Duan, Beihang University, China

Title: UAV Swarm Inspired by Bird Flock Intelligence Incentive and Convergence

Abstract: Nature is a rich source of human creativity. On the basis of a series of flight experiments on bird flock behavior in nature, the internal mechanism of different behavior phenomena of birds is analyzed through collecting and processing the experimental data of different flight behavior of birds, and the bird flock intelligence incentive and convergence behaviors are modeled. The positive and negative feedback mechanism model of bird flock intelligence emergence is constructed. The mapping relationship between the bird flock intelligence incentive and convergence and the flight of unmanned aerial vehicles (UAVs) is studied. Inspired by the different behavior models of bird flock intelligence incentive and convergence, the UAV cooperative searching method based on the bird flock intelligence incentive and the UAV swarm countermeasure method based on the bird flock intelligence convergence are proposed. The recent progresses in incentive and convergence in bird flock intelligence will also be highlighted.



Haibin Duan received his Ph.D. degree in control theory and engineering from Nanjing University of Aeronautics and Astronautics (NUAA) in 2005. He is a Full Professor with the School of Automation Science and Electrical Engineering, Beihang University, Beijing, China. He is the Head of the Bio-Inspired Autonomous Flight Systems (BAFS) Research Group, Beihang University, Beijing, China. He received the National Science Fund for Distinguished Young Scholars of China in 2014. He is also enrolled in the Chang Jiang Scholars Program of China, Scientific and Technological Innovation Leading Talent of "Ten Thousand Plan" -National High Level Talents Special Support Plan, and Top-Notch Young Talents Program of China, Program for New Century Excellent Talents in University of China, and Beijing NOVA Program. He has authored or coauthored more than 90 publications. He is the Editor-in-Chief of Guidance, Navigation and Control,

deputy Editor-in-Chief of Acta Automatica Sinica, Associate Editor of the IEEE Transactions on Cybernetics, IEEE Transactions on Circuits and Systems I: Regular Papers and IEEE Transactions on Circuits and Systems II: Express Briefs. His current research interests are multi-UAV swarm autonomous control, bio-inspired intelligence, and biological computer vision.

Speaker: Jian Sun, Beijing Institute of Technology, China

Title: Data-driven control of networked systems

Abstract: With the development of information technologies, control systems are becoming more intelligent and interconnected. Accurate modeling of a control system has become increasingly difficult. For systems that are difficult to accurately model, traditional model-based control theories and methods are difficult to achieve ideal control performance. Data-driven control refers to the control method of designing controllers based solely on the offline/online data when the mathematical model and parameters of the control system are unknown. Data-driven control methods are independence of precise models and have broad applications. This talk will introduce the recent progress of data-driven control methods for networked systems, including data-driven event-triggered control and self-triggered control, data-driven resilient control under DoS attacks, data-driven self-triggered control based on trajectory prediction, data-driven robust LQG control, and data-driven output regulation of networked systems.



Jian Sun received the Bachelor's degree from the Department of Automation and Electric Engineering at Jilin Institute of Technology, Changchun, China, in 2001, the Master's degree from Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences (CAS), Changchun, China, in 2004, and the Ph.D. degree from Institute of Automation, Chinese Academy of Sciences (CAS), Beijing, China, in 2007. He was a research fellow at Faculty of Advanced Technology, University of Glamorgan, UK, from April 2008 to October 2009. He was a postdoctoral research fellow at Beijing Institute of Technology, Beijing, China, from December 2007 to May 2010. In May 2010, he joined the School of Automation, Beijing Institute of Technology, where he has been a professor since 2013. His current research interests include autonomous unmanned systems, networked control systems, and data-driven control. He is a

member of the Editorial Boards of several journals including IEEE Transactions on Systems, Man & Cybernetics: System, Science China Information Sciences, Journal of Systems Science & Complexity and ACTA AUTOMATICA SINICA.

特邀论坛4/Invited Forum 4

5月24日 14:00-16:00 明华厅
May 24, 14:00-16:00 Minghua Hall

Speakers: Hongbin Shen, Shanghai Jiao Tong University, China
Qinglei Hu, Beihang University, China
Youqing Wang, Beijing University of Chemical Technology, China
Jianbin Qiu, Harbin Institute of Technology, China
Chairs: Hongbin Shen, Shanghai Jiao Tong University, China
Jianbin Qiu, Harbin Institute of Technology, China

Speaker: Hongbin Shen, Shanghai Jiao Tong University, China
Title: Deep learning methodology development for multimodal molecular data analysis

Abstract: With the rapidly increasing protein and related molecular data, understanding the hidden knowledge behind the data, and revealing the hidden relationship between different sources of data is one of the promising interdisciplinary research directions of computer science and life sciences. Multimodal information of molecular sequence, structure and other modal data complement each other. Developing efficient multimodal pattern embedding and data-driven deep learning and pattern recognition algorithms is helpful for speeding up the understanding of molecular big data.



Hongbin Shen is a distinguished professor of Shanghai Jiao Tong University. The long-term of his interest is pattern recognition and bioinformatics, to the development of advanced machine learning, artificial intelligence-based algorithms for understanding and annotating protein structures, functions, interactions between biological molecules, and the image processing and pattern recognition techniques for understanding the bioimage big data. His lab has published over 200 papers, developed and maintained more than 30 online bioinformatics web servers, which have been used over 10 million times by the research community.

Speaker: Qinglei Hu, Beihang University, China
Title: 精密光机电定位系统关键技术与应用

摘要: 本报告从典型光机电系统出发, 围绕实际应用需求阐明精密定位系统的一般发展趋势及基本矛盾; 结合精密定位系统的构成及系统各部分与具体性能的影响分析, 探讨提高精密定位系统行程、带宽、精度等重要指标的关键技术。具体从精密机电系统的机构设计与优化、微纳尺度传感与测量、精密伺服跟踪控制三个方面展开, 结合课题组近年来开展的相关项目研究工作, 针对压电、电磁驱动快速反射镜与复合轴光机跟瞄仪的伺服机构设计与优化、纳米级电容传感器样机的研制及跨尺度传感器信息融合、压电执行器非线性动力学建模与精密伺服控制等具体问题展开分析, 探讨在实际应用中面临问题的解决方案。



胡庆雷: 北京航空航天大学自动化科学与电气工程学院教授、入选国家级领军人才。主要从事导航、制导与控制、空间智能感知与操控等研究工作, 先后承担国家自然科学基金重大科研仪器研制项目、科技部重大专项课题、装备预研重点项目、国防基础重点项目等 20 余项, 在 Automatica、IEEE 汇刊、AIAA 系列期刊上发表学术论文 100 余篇, 出版学术专著 3 部, 授权国家发明专利 60 余项, 获国家技术发明二等奖、国防技术发明一等奖等科研奖励。担任 Aerospace Science and Technology 等 SCI 期刊的编委。

Speaker: Youqing Wang, Beijing University of Chemical Technology, China
Title: From Model-Free Self-Learning Control to Multi-Agent Decision Optimization

Abstract: In the control and optimization of complex systems, model-free characteristics, uncertainties, and external disturbances are ubiquitous, posing significant challenges to traditional optimal control methods that rely on accurate system models. In recent years, researchers have explored theories and methods of self-learning and optimization from various perspectives. On the one hand, efforts focus on model-free optimal control at the control level to achieve efficient system operation; on the other hand, they extend to game-theoretic optimization at the decision level to characterize competitive and cooperative behaviors in complex environments. At the control level, we systematically investigate an adaptive dynamic programming (ADP) approach based on the internal model principle to address the output regulation problem for both linear discrete-time and continuous-time systems. By introducing an improved algorithm based on state reconstruction, we overcome the limitation of unknown exosystem parameters, significantly enhancing robustness and practical applicability. This framework is further applied to power electronic systems, enabling independent regulation of active and reactive power in virtual synchronous generators (VSGs) and ensuring safe operation of Buck converters. At the decision level, we investigate line-of-sight pursuit-evasion games, a class of adversarial optimization problems with geometric constraints. For line-of-sight pursuit-evasion games in environments with multiple obstacles, we construct state value functions based on geometric modeling and derive optimal strategies via Nash equilibrium. Furthermore, by integrating geometric modeling with differential game theory, we solve for optimal strategies in corner-obstacle scenarios with attack range, thereby enhancing the decision-making capability of agents in complex environments.



Youqing Wang is a recipient of the National Science Fund for Distinguished Young Scholars, an IET Fellow, a Fellow of the Chinese Association of Automation, a Professor and Doctoral Supervisor at Beijing University of Chemical Technology, and Dean of the College of Information Science and Technology. He serves on the editorial or guest editorial boards of nine SCI-indexed journals and is a member of three IFAC technical committees. He has won one Natural Science Award each from the Ministry of Education, Beijing Municipality, and Shandong Province. He has authored three books and published over 160 SCI-indexed papers as the first or corresponding author. He holds more than 20 authorized invention patents, and his research achievements have been applied in leading enterprises such as Sinopec and PetroChina. His papers have been cited over 6,000 times in SCI-indexed publications, with citing authors including more than 40 academicians from China and abroad. Sixteen of his papers have been recognized as ESI 0.1% Hot Papers or 1% Highly Cited Papers, and the citing institutions span over 80 countries. He has been featured multiple times in the list of the World's Top 2% Scientists.

Speaker: Jianbin Qiu, Harbin Institute of Technology, China
Title: Intelligent Perception and Autonomous Avoidance of Spacecraft Confronting Orbital Threat

Abstract: Spacecraft are high-value strategic assets, and their safe and stable in-orbit operation is the fundamental prerequisite for completing various tasks. Currently, the orbital space is becoming increasingly congested, with a sharp increase in collision risks. Space competition is intensifying, harassment is on the rise, and the number of threats continues to grow. The safe operation of spacecraft is facing severe challenges. At present, the orbital threats response measures heavily rely on ground support, featuring poor timeliness in handling threats and high operational control pressure, making it difficult to adapt to the deteriorating space situation. Therefore, it is urgent to develop the spacecraft's autonomous avoidance ability against orbital threats and develop an integrated intelligent autonomous control system for orbital threat avoidance with an on-board closed-loop of "perception-decision-control". This talk will introduce our research progress in recent years on the logical architecture analysis, modeling, and mission planning of the integrated control system for intelligent perception and autonomous avoidance of spacecraft confronting orbital threats.



Jianbin Qiu received the B.Eng. and Ph.D. degrees in Mechanical and Electrical Engineering from the University of Science and Technology of China, Hefei, China, in 2004 and 2009, respectively. He also received the Ph.D. degree in Mechatronics Engineering from the City University of Hong Kong, Kowloon, Hong Kong, in 2009. He is currently a Full Professor at the School of Astronautics, Harbin Institute of Technology, Harbin, China. He was an Alexander von Humboldt Research Fellow at the Institute for Automatic Control and Complex Systems, University of Duisburg-Essen, Duisburg, Germany. His current research interests include intelligent and hybrid control systems, signal processing, and robotics. Prof. Qiu is a Fellow of IEEE and serves as the chair of the IEEE Industrial Electronics Society Harbin Chapter, China. He is an Associate Editor of IEEE Transactions on Fuzzy Systems, IEEE Transactions on Cybernetics, and IEEE Transactions on Industrial Informatics.

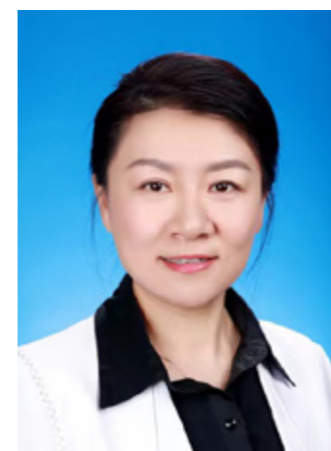
巾帼论坛/Women Scientists Forum

5月23日 15:50-17:50 一楼国际会议中心C厅
 May 23, 15:50-17:50 Qinhuang Conference Hall C, 1st Floor

Speakers: Hongli Dong, Northeast Petroleum University, China
 Yingwei Zhang, Northeastern University, China
 Hao Zhang, Tongji University, China
 Qian Ma, Nanjing University of Science and Technology, China
 Weili Ding, Yanshan University, China
Chairs: Hongli Dong, Northeast Petroleum University, China
 Hao Zhang, Tongji University, China

Speaker: Hongli Dong, Northeast Petroleum University, China
Title: Reliable, Secure, and Confidential Estimation Theory for Industrial Cyber-Physical Systems

Abstract: With the deep integration of next-generation information technology and manufacturing, industrial cyber-physical systems are evolving toward greater complexity and digitalization. This report presents a series of state estimation methods designed for industrial cyber-physical systems that are subject to external anomalies, internal faults, cyber-attacks, and data confidentiality threats, thereby enabling real-time and accurate perception. Specifically, three theories have been developed: a reliable estimation theory under external anomalies and internal faults, a secure estimation theory against cyber-attacks, and a confidential estimation theory that meets security requirements. Together, they form a comprehensive theoretical framework for state estimation in industrial cyber-physical systems.



董宏丽，教授，博士生导师，东北石油大学校长。“多资源协同陆相页岩油绿色开采”全国重点实验室副理事长。国家级高层次人才（特聘教授、科技创新领军人才）、德国洪堡学者。长期从事网络化系统与智能控制、传感器网络信息处理及油田应用领域的研究工作。出版英文专著4部，中文专著2部，授权发明专利38项。曾获全国五一劳动奖章，中国石油和化工行业人工智能技术十大科技进展，中国自动化学会自然科学一等奖、中国石油和化学工业联合会青年科技突出贡献奖、省自然科学一等奖3项等奖励。

Speaker: Yingwei Zhang, Northeastern University, China

Title: Intelligent sensing, intelligent control, intelligent scheduling, and AI security

Abstract: The new generation of artificial intelligence" achieves virtual-real twin evolution and inverse reasoning in manufacturing operations based on the industrial internet, innovating intelligent perception approaches for comprehensive integration of full-factor data in complex manufacturing systems. It provides methods to address intelligent control and scheduling challenges in open industrial internet environments, breaks through large-scale intelligent technology bottlenecks for cost reduction and efficiency improvement, and tackles group intelligent optimization decision-making technologies. From both theoretical and practical perspectives, it facilitates exchanges and discussions on the research status, progress, achievements (theoretical and experimental), and existing challenging issues of industrial internet and "new generation artificial intelligence" related technologies in intelligent perception, intelligent control, intelligent scheduling, and AI security.



Yingwei Zhang, Professor and Doctoral Supervisor at Northeastern University. Obtained double bachelor's degrees from Harbin Institute of Technology and master's and doctoral degrees in Control Theory and Control Engineering from Northeastern University. Recipient of the National Outstanding Youth Science Fund, Changjiang Scholar Distinguished Professor of the Ministry of Education, recipient of the State Council Government Special Allowance, national level candidate for the Hundred, Thousand, and Ten Thousand Talents Project, Chief of the Science and Technology Innovation 2030- "New Generation Artificial Intelligence" Major Project, member of the Provincial Science and Technology Innovation Team, and member of the Provincial Political Consultative Conference. My research focuses on industrial intelligence technologies such as complex

working condition recognition, autonomous digital twin, physical artificial intelligence, industrial big data and image science, process monitoring and quality prediction, machine learning and deep learning, multi-agent and evolutionary game theory, intelligent planning and resource scheduling, as well as engineering applications in steel manufacturing, large aircraft manufacturing, equipment chip manufacturing, energy industry, and rocketmilitary industry.

Speaker: Hao Zhang, Tongji University, China

Title: Motion Planning of Aerial Robots in Unknown Cluttered Environments

Abstract: In recent years, autonomous mobile robotics has achieved remarkable progress, particularly in the field of autonomous navigation. However, when obstacles are present in the environment, the trajectory optimization problem often changes from a convex optimization problem to a non-convex one, which significantly increases the complexity of the solution process. Moreover, for nonlinear and high-dimensional systems, achieving efficient, robust, and flexible motion planning in complex environments remains a challenging research problem. To address these issues, this report focuses on autonomous navigation for aerial robots in unknown and densely cluttered environments. Specifically, obstacle convex decomposition is first employed to construct an explicit convex polyhedral map representation. Then, a visibility-guided topological path search method is adopted to improve the path planning success rate in dense obstacle environments. Finally, a model predictive control approach is utilized to achieve safe trajectory tracking and obstacle avoidance control, thereby ensuring the safe and efficient operation of the system in complex environments.



Hao Zhang is a professor, doctoral supervisor, and vice dean of the School of Electronics and Information Engineering at Tongji University. She is a Chang Jiang Scholars Distinguished Professor, appointed by the Ministry of Education, and a recipient of the National Excellent Young Scientists Fund. She has also been selected as a Young Scientist by the China Association of Automation, a "Hong Kong Scholar" under the National Program, and a Shanghai Shuguang Scholar. Her research focuses on the cooperative control and optimization of multi-agent systems. She has led five National Natural Science Foundation projects, including one key project, and has participated in multiple national and provincial-level projects, such as the National Key R&D Program. She has authored three monographs and, in recent years, has published more than 100 papers in influential international journals, including over 70 in Automatica and IEEE Transactions, with more

than 10 selected as ESI Highly Cited Papers. She holds 30 granted and pending national invention patents. She currently serves on the editorial boards of journals such as IEEE Intelligent Transportation Systems Magazine, IEEE Transactions on Automation Science and Engineering, SCIENCE CHINA Information Science-Security and Safety, and as an executive editor of Intelligence & Robotics. She also serves as a member of the Control Theory Professional Committee of the China Association of Automation and the Endogenous Security Professional Committee of the China Institute of Communications. She has received eight provincial and ministerial-level awards, including the First Prize in the Shanghai Natural Science Award and the First Prize in the Shanghai Science and Technology Progress Award.

Speaker: Qian Ma, Nanjing University of Science and Technology, China
 Title: Privacy-Preserving Control and Decision-Making

Abstract: With the advancement of technologies such as artificial intelligence and the Internet of Things, the need for data privacy protection is widespread in control and decision-making processes across both national defense and civilian domains, including weapon guidance, attack-defense games, intelligent transportation, and brain-computer interfaces. Information leakage and theft within control systems often lead to severe consequences, even affecting national security. This report focuses on control and decision-making under privacy protection. It introduces data privacy protection and privacy-preserving methods, as well as preliminary research progress by our team in dynamic asymptotic stabilization based on homomorphic encryption and distributed decision-making based on differential privacy.



Qian Ma is a Zijin Distinguished Professor and doctoral supervisor at Nanjing University of Science and Technology. She received her Ph.D. degree in Control Science and Engineering from Nanjing University of Science and Technology in 2013. She has been selected as a Young Scholar and Distinguished Professor under the Chang Jiang Scholar Program of the Ministry of Education. She has led key projects of the National Natural Science Foundation of China and the Jiangsu Provincial Outstanding Youth Fund. Her research focuses on control and decision-making in autonomous unmanned systems, as well as privacy protection and data security. She has received the Second Prize of the National Natural Science Award, the First Prize of the Natural Science Award from the Ministry of Education, the First Prize of the Jiangsu Provincial Natural Science Award, the First Prize of the Natural Science Award from the Chinese Association of Automation, and the Young Scientist Award from the Chinese Association of Automation.

Speaker: Weili Ding, Yanshan University, China
 Title: Research on Full-Scene Intelligent Perception and All-Drive Intelligent Control Method of Crane

Abstract: Cranes are core equipment for engineering hoisting and transportation, widely deployed in complex operating scenarios such as ports, factory yards and field environments, serving as indispensable heavy-duty equipment for national infrastructure construction and industrial logistics. The operating environment of cranes is dynamically changeable with complex interference factors. Existing environmental perception technologies generally suffer from insufficient 3D positioning accuracy and weak robustness for targets and obstacles. Meanwhile, cranes are typical nonlinear underactuated systems featuring strong coupling and multiple disturbances during operation. Traditional control methods struggle to achieve effective state constraint, swing suppression and disturbance rejection, posing great challenges to the unmanned and intelligent safe operation of cranes.

Targeting the industrial characteristics of cranes including full-scenario operation, multi-interference, strong coupling and nonlinearity, this report integrates multi-sensor information, artificial intelligence technology and high-order fully actuated system theory. By constructing a semantics-guided 3D positioning framework and a full-drive predictive control method for cranes, it explores intelligent perception positioning and underactuated system stability control methods for cranes under complex working conditions. The research tackles key technical bottlenecks including high-precision target positioning, effective payload swing suppression, multi-state constraint and anti-disturbance control, and establishes an integrated technical system of perception and control. It provides theoretical support and engineering solutions for the full-scenario unmanned intelligent operation of cranes, equipment performance upgrading and intelligent transformation of the industry.



Weili Ding, female, She is a professor and doctoral supervisor of Yanshan University, and selected as a Disciplinary Leading Talent of "the Yanzhao Golden Platform Talent Gathering Program" (Hebei Province). Her primary research focuses include intelligent robot perception and control, computer vision, pattern recognition, spatial intelligence, and intelligent construction machinery. She has led one project under the National Key R&D Program of the Ministry of Science and Technology ("Intelligent Robot Special Project"), one key project supported by the National Natural Science Foundation of China's Joint Fund, and over 20 other national, provincial, and ministerial-level research projects as well as enterprise-commissioned technological innovation projects in the field of artificial intelligence. She has published more than 100 academic papers in renowned domestic

and international journals, filed 106 national invention patents (81 granted), registered 10 software copyrights, and received one First Prize for Invention Patent from Hebei Province, one Second Prize for Scientific and Technological Progress from the China Society of Power Engineering, and one Special Prize for Teaching Achievement from Hebei Province.

总师论坛/Chief Engineer Forum

5月24日 14:00-16:00 一楼贵宾厅
May 24, 14:00-16:00 VIP Hall, 1st Floor

Speakers: Sheng Quan, Beijing Research Institute of Mechanical and Electrical Technology, China
Qinghua Zhu, Shanghai Institute of Spaceflight Control Technology (803 Institute), China
Jianzhao Ding, Beijing Institute of Control Engineering (502 Institute), China
Yinghui Zhang, Remote Sensing Satellite System Division, China Academy of Space Technology, China
Chair: Fei Han, Shanghai Aerospace Control Technology Research Institute, China
Assistant: Bo Cai, Harbin Institute of Technology, China

Speaker: Sheng Quan, Beijing Research Institute of Mechanical and Electrical Technology, China
Title: Requirements and Suggestions on Fully Actuated System Theory for Atmospheric Vehicle Control and Cooperative Guidance

Abstract: The Russia-Ukraine conflict and the Israel-US-Iran confrontation have highlighted the urgent demand for rapid response, high-precision control and cooperative guidance technologies for atmospheric vehicles. Nevertheless, the control of atmospheric vehicles, especially centroid control, is essentially a underactuated system. The control performance achieved by existing engineering control theories and methods is insufficient to meet the operational demands reflected in the two aforementioned regional conflicts. Based on the fully actuated system theory, the underactuated centroid control system of atmospheric vehicles can be reconstructed into a fully actuated system. Combined with nonlinear control and iterative optimal control methods, its control performance can be significantly improved compared with current engineering solutions, which is capable of satisfying modern combat requirements. Aiming at the issues including the stability evaluation of the constructed fully actuated system for atmospheric vehicle centroid control, as well as the design of state observers and control algorithms under the fully actuated theoretical framework, this paper puts forward corresponding technical requirements and preliminary suggestions. Combined with typical application scenarios, this paper also proposes the requirements and recommendations of high-dimensional nonlinear modeling for cooperative guidance based on fully actuated system theory.



Sheng Quan, Research Fellow, Deputy Chief designer, Recipient of the First Prize of National Defense Science and Technology Progress Award
Research Interests: analysis and modeling of complex flight mechanics, engineering application of nonlinear control, and engineering application of model predictive control.

Speaker: Qinghua Zhu, Shanghai Institute of Spaceflight Control Technology, China
Title: Guidance, Navigation, and Control Technology for On-orbit Servicing and Manipulation

Abstract: Driven by the collision risks arising from the exponential growth of space debris in Earth orbit and the urgent demands for life extension and emergency maintenance of high-value spacecraft, space manipulation technology has emerged as a pivotal means to overcome the current bottlenecks in space asset protection. This paper first defines the conceptual scope of space manipulators and systematically reviews the core requirements for Guidance, Navigation, and Control (GNC) systems across typical mission phases, along with the potential of artificial intelligence to empower this field. Subsequently, the preliminary research progress of our team is introduced, covering key areas such as target observation and autonomous navigation, rendezvous and proximity tracking, target capture, on-orbit fine manipulation, and surface crawling and manipulation. Finally, a technical conception for applying fully actuated system theory to space manipulation is proposed, highlighting its promising applications in integrated attitude-orbit coupling control and precision joint motion control of robotic arms.



Qinghua Zhu, Professor, Doctoral Supervisor, Deputy Director of the Shanghai Aerospace Control Technology Institute, Deputy Director of the State Key Laboratory of Space Target Awareness, and Executive Deputy Director of the Shanghai Key Laboratory of Space Intelligent Control, National Leading Talent, Member of the Professional Committee on the Theory and Application of Fully Actuated Systems. His research focuses on navigation, guidance, and control (GNC) technologies for spacecraft. He has received one Second Prize of the National Science and Technology Progress Award and five provincial/ministerial-level science and technology awards.

Speaker: Jianzhao Ding, Beijing Institute of Control Engineering (502 Institute), China
Title: Design of High Quality Attitude Control System for Large-Scale Stereo Mapping Satellite



Abstract: The report provides a detailed introduction to the design of high-quality attitude control system for large-scale stereo mapping satellite, encompassing high-precision attitude determination technology, ultra-high stability attitude control technology under multi-source variable frequency interference, satellite autonomous survival technology, and highly reliable fault detection and reconstruction technology. The report concludes with a brief summary and analysis of the challenge and development direction of future spacecraft control technology.

Jianzhao Ding, the On-Orbit Executive Director of Low Earth Orbit Satellites

at the Beijing Institute of Control Engineering (502 Institute), is a researcher whose primary research focuses on spacecraft attitude and orbit control. He has successively participated in the research and development of control and propulsion subsystems for over ten spacecraft, including ZY-3, GF-7, and others. He has been awarded two second prizes for National Defense Science and Technology Progress and two first prizes for Science and Technology Progress by the China Aerospace Science and Technology Corporation.

Speaker: Yinghui Zhang, Remote Sensing Satellite System Division, China Academy of Space Technology, China
 Title: Research on the Development of Intelligent Application of Remote Sensing Satellites

Abstract: With the in-depth integration of artificial intelligence and big data technologies, the applications of remote sensing satellites are rapidly evolving toward automatic interpretation, intelligent analysis and precise assessment. This report conducts an in-depth study on the development of intelligent remote sensing satellite applications. It systematically sorts out the technological evolution and typical application scenarios, analyzes the existing technical bottlenecks and practical pain points, and explores the future development trends and optimization paths for intelligent remote sensing. The aim is to advance the upgrade of the Earth observation capability of remote sensing satellites, and further expand the application scope and service value of aerospace remote sensing.



Yinghui Zhang graduated from the Institute of Electronics, Chinese Academy of Sciences, and started his career in 2010. He has served as the professional lead for remote sensing payloads at the Test Center of the System Design Department, the test commander and chief integrated test engineer for multiple satellites including HY-2 and GF-2, and the person-in-charge of certain satellite ground systems. Currently affiliated with the Remote Sensing Satellite System Division, he undertakes the responsibilities of the person-in-charge for specific satellite ground systems and major national projects.

成长论坛A/Growth Forum A

5月23日 15:50-17:50 一楼贵宾厅
 May 23, 15:50-17:50 VIP Hall, 1st Floor

Advisors : Xin Zhao, Nankai University, China
 Jing Xu, Tsinghua University, China
 Wei Zhang, Shandong University, China
 Zhengguang Wu, Zhejiang University, China
 Guanghui Wen, Southeast University, China
 Chair: Lixian Zhang, Harbin Institute of Technology, China
 Assistant: Jianan Yang, Harbin Institute of Technology, China

Advisor: Xin Zhao, Nankai University, China



赵新：南开大学杰出教授，人工智能学院院长，国家级高层次人才，传染病溯源预警与智能决策全国重点实验室副主任，中国微米纳米技术学会会士、常务理事。2017年在世界上首次利用机器人完成克隆流程获得首批克隆动物，成果“面向生命科学的显微分析与操作仪”入选2018中国智能制造十大科技进展（第1完成人）；成果“活体细胞精准操作机器人技术及系统”荣获2022年天津市技术发明特等奖（第1完成人）；入选2023中国智能制造十大科技进展（第1完成人）。近年来先后荣获“天津市有突出贡献专家”、天津市优秀科技工作者标兵（全市10人）、天津市“五一劳动奖章”等荣誉。

Advisor: Jing Xu, Tsinghua University, China



徐静：清华大学长聘教授，博士生导师，国家杰出青年科学基金项目获得者，曾入选国家级青年人才。主要从事智能机器人和智能制造方向研究，承担了国家自然科学基金委项目、北京市自然科学基金项目等项目数十项；在IEEE TRO、IEEE TPAMI、Science Advances等期刊上发表SCI论文100余篇，多篇论文入选高被引论文或国际会议最佳会议论文奖，出版英文专著1部；以第一发明人授权发明专利40余项；以第一完成人获北京市技术发明一等奖、中国智能制造十大科技进展、中国仪器仪表学会技术发明一等奖、北京发明创新大赛特等奖、中国发明协会发明创业项目奖一等奖等多个奖项；入选斯坦福大学全球前2%顶尖科学家；获高等教育国家级教学成果一等奖、北京市高等教育教学成果一等奖；担任信息技术新工科产学研联盟具身智能工作委员会主任、Robotica期刊编委等职务。

Advisor: Wei Zhang, Shandong University, China



张伟：山东大学教授、博士生导师，主要从事人工智能、机器人领域研究。入选国家级领军人才计划，近年来承担国家自然科学基金重大 / 重点项目、国家重点研发计划、山东省重大专项等。代表论文以第一 / 通讯作者发表在 TPAMI、TRO、NeurIPS、CVPR、CoRL 等人工智能与机器人领域顶级期刊和会议，获中国、美国、日本等发明专利授权 60 余项，获吴文俊人工智能技术发明一等奖、吴文俊人工智能科技进步一等奖、山东省自然科学二等奖、山东省教学成果特等奖等 10 余项。

Advisor: Zhengguang Wu, Zhejiang University, China



吴争光：浙江大学的特聘教授 / 求是特聘教授，博士生导师，在 2019 年和 2022 年分别入选国家“万人计划”青年拔尖人才和科技创新领军人才。主要开展 Markov 跳变系统、网络化系统与智能电网的研究。主持国家自然科学基金重点项目两项。自 2014 年起连续入选 Elsevier 中国高被引学者，自 2017 年起连续入选 Clarivate Analytics 全球高被引科学家。在 IEEE 系列汇刊和 Automatica 上发表（含录用）论文 200 余篇，论文引用 2 万多次，2 篇论文入选中国百篇最具影响国际学术论文（2013 年和 2014 年）。曾获得 IEEE SMC 学会 2022 年 Andrew P. Sage Best Transactions Paper Award、多项省部级和中国自动化学会科学技术一等奖，担任多个学术期刊编委。指导的学生两次获得中国自动化学会优秀博士学位论文奖（2021 年和 2022 年），三名学生入选国家级青年人才计划。

Advisor: Guanghui Wen, Southeast University, China



温广辉：东南大学首席教授（二级教授），博士生导师，硕士生导师，IET Fellow，中国青年科技奖获得者，国家杰出青年科学基金获得者，教育部国家级青年人才入选者，国家优秀青年科学基金获得者，江苏国家应用数学中心副主任。长期从事分布式控制理论与控制工程、网络群体智能理论与技术等领域的研究工作。在 Nature 子刊、Research、The Innovation、IEEE 汇刊等领域顶刊和 CCF-A 类顶级会议（AAAI、IJCAI 等）发表学术论文 300 余篇，出版学术专著 5 部，SCI 他人引用过万次，获国际学术期刊最佳论文奖 2 次、国内外学术会议最佳论文奖 6 次。担任国际期刊 IEEE/ASME Trans. Mechatronics, IEEE Trans. Control of Network Systems, IEEE Trans. Neural Networks and Learning Systems, IEEE Trans. Industrial Informatics, IEEE Trans. Fuzzy Systems, IEEE J. Emerging and Selected Topics in Industrial Electronics, IEEE Trans. Intelligent Vehicles 和 Asian J. Control 编委，获 Asian J. Control、IEEE Trans. Industrial Informatics 杰出编委奖。担任国内中文核心期刊《自动化学报》、《控制理论与应用》、《系统工程与电子技术》编委。任中国指挥与控制学会副秘书长、中国指挥与控制学会教育培训工作委员会主任委员、中国指挥与控制学会具身智能专委会副主任委员；主持国家杰青项目、优秀青年项目、国家自然科学基金重点项目、“叶企孙”科学基金重点项目，科技部重点研发计划项目课题等 30 余项科研项目；申请国家发明专利 90 余项，授权 72 项；授权国际 PCT 专利 1 项（美国发明专利）。获国家一级学会技术发明一等奖 1 项（排名第 1）、科学技术奖一等奖 1 项（排名第 1），省部级奖项 4 项，日内瓦国际发明展金奖 1 项（排名第 1），ARC DECRA Fellow，亚太神经网络学会青年杰出研究奖等学术荣誉。

成长论坛B/Growth Forum B

5月24日 14:00-16:00 明光厅
May 24, 14:00-16:00 Mingguang Hall

Advisors: Hao Liu, Shenyang Institute of Automation Chinese Academy of Sciences, China
Dong Wang, Dalian University of Technology, China
Tengfei Liu, Northeastern University, China
Fangmeng Liu, Jilin University, China
Chair: Bin Li, Sichuan University, China
Assistant: Jianan Yang, Harbin Institute of Technology, China

Advisor: Hao Liu, Shenyang Institute of Automation Chinese Academy of Sciences, China



刘浩：于哈尔滨工业大学取得本硕博学位，2014 年访学美国约翰霍普金斯大学，担任辽宁省微创手术机器人重点实验室主任。长期从事医疗手术机器人与应急救援研究，多项成果取得临床应用。主持国家自然科学基金青年 A 类项目、联合重点项目、国家重点研发计划项目等。发表 IJRR、IEEE 汇刊等高水平论文 110 篇。获得第二届全国创新争先奖、国家科技进步二等奖、中国自动化学会技术发明一等奖等。成果入选 2021 年中国智能制造十大科技进展，获评辽宁省五一劳动奖章等。

Advisor: Dong Wang, Dalian University of Technology, China



王东：大连理工大学控制科学与工程学院教授，博士生导师，国家级高层次人才，国家重点研发计划项目首席科学家，智能控制研究所所长，控制科学与工程学位授权点和电子信息类学位授权点负责人。主要从事多智能体分布式控制与优化、强化学习与博弈对抗和多机器人协同方面研究工作。在世界知名学术出版社 Springer 出版英文专著 1 部，在国内外核心期刊、会议发表和录用论文 130 余篇。主持国家重点研发计划项目、国家自然科学基金重点项目、ZF 预研教育部联合基金项目等项目。获得辽宁省科学技术奖自然科学二等奖 2 次、第七届吴文俊人工智能科学技术自然科学二等奖。获得多个学术会议最佳会议论文奖，包括机器人领域顶会 IROS 的最佳论文提名奖等。担任第 36 届中国控制会议秘书长和第 25 届中国过程控制会议秘书长、中国指挥与控制学会青年工作委员会副主任。担任《IEEE Trans. Industrial Informatics》和《Information Sciences》等副主编，《控制理论与应用》等编委。

Advisor: Tengfei Liu, Northeastern University, China



刘腾飞: 东北大学教授, 博士生导师。华南理工大学本科、硕士, 澳大利亚国立大学博士, 纽约大学工学院博士后 / 访问助理教授。目前是东北大学流程工业综合自动化国家重点实验室教授。主要研究领域为关联非线性系统的稳定性与控制。在 IEEE 汇刊和 Automatica 发表论文 30 余篇, 出版中英文专著 3 部, 曾获得“关肇直”奖等, 承担国家自然科学基金杰青、优青、重点等项目多项, 作为第三完成人获得国家自然科学二等奖。目前担任 IEEE 自动控制汇刊编委。

Advisor: Fangmeng Liu, Jilin University, China



刘方猛: 吉林大学唐敖庆学者卓越教授 A 岗, 博士生导师, 电子科学与工程学院副院长, 主要研究方向为新型嗅觉和触觉传感器件及集成、智能仿生多模态感知系统。发表中科院 1 区 SCI 论文 120 余篇, 授权国家发明专利 63 项。主编“十四五”国家重点出版基金学术专著 1 部。作为项目负责人主持或完成国家自然科学基金青年科学基金 A 类和 B 类(原杰青和优青)项目、重点项目、国家科技重大专项等项目。获得吉林省技术发明奖一等奖、中国仪器仪表学会青年科技人才奖等。

Oral Sessions

Saturday, May 23, 2026 下午第一场

SaA01 **长春厅/Changchun Hall** **13:30-15:30**
 Regular Session (English Reports): FAS Approaches Based Intelligent Control of Nonlinear Systems and Applications

Chair:	Xiubo Wang	Northeastern University at Qinhuangdao
Co-Chair:	Dawei Zhang	Southern University of Science and Technology
■ SaA01-1		13:30-13:45
0311 Fault-Tolerant Control for Nonlinear Fully Actuated Systems with Actuator and Communication-Link Failures		
Dawei Zhang		Southern University of Science and Technology
Guoping Liu		Southern University of Science and Technology
■ SaA01-2		13:45-14:00
0647 Fully Actuated Game Control for Spacecraft Orbital Pursuit-Evasion Missions		
Zihao Ye		Northeastern University at Qinhuangdao
Xinyi He		Northeastern University
Lixue Xu		Harbin Institute of Technology
Zhenyu Gao		Northeastern University at Qinhuangdao
Xiubo Wang		Northeastern University at Qinhuangdao
■ SaA01-3		14:00-14:15
0141 Fixed-time interval estimation for descriptor systems with application to fully actuated systems		
Yang Zhou		Xiangtan University
Longwen Liu		Xiangtan University
Jinyang Huang		Xiangtan University
Wei Zhou		Xiangtan University
Wenrui Shi		Sichuan Agricultural University
Yunyang Xia		49th Research Institute of China Electronics Technology Group Corporation
■ SaA01-4		14:15-14:30
0222 Composite Adaptive Control of Nonlinear Systems Using Dynamic Regressor Extension and Mixing: A FAS Approach		
Zhijun Chen		Harbin Institute of Technology
Guangren Duan		Harbin Institute of Technology
■ SaA01-5		14:30-14:45
0241 Global Prescribed Performance Control for Uncertain Nonlinear Systems: A Fully Actuated System Approach		
Yi Ding		Harbin Institute of Technology
Guangren Duan		Harbin Institute of Technology
■ SaA01-6		14:45-15:00
0248 Nonlinear Control for Boost Converter: A Fully Actuated System Approach		
Lin Liu		Harbin Institute of Technology
Guangren Duan		Harbin Institute of Technology
■ SaA01-7		15:00-15:15
0286 Adaptive Event-Triggered Fully Actuated Control for Combined Spacecraft Simulator with Unknown Inertial Parameters		
Guangquan Duan		Harbin Institute of Technology
Xiaoguang Wang		NORINCO GROUP Aviation Ammunition Research Institute Co., Ltd.
Dawei Zhang		Southern University of Science and Technology
Yuxin Liang		Harbin Institute of Technology

Xianglei Meng China North Industries Group Aviation Ammunition Research Institute Co., Ltd.
 Tong Yue China North Industries Group Corporation Limited Aerial Ammunition Research Institute
 Yantao Wang China North Industries Group Aviation Ammunition Research Institute Co., Ltd.

■ SaA01-8 15:15-15:30
 0498 Characterization of region of exponential attraction for substabilization of FASs
 Guangren Duan Harbin Institute of Technology
 Xiubo Wang Northeastern University at Qinhuangdao

SaA02 **河北厅/Hebei Hall** **13:30-15:30**
 Regular Session (English Reports): Distributed Control, Optimization, and Learning

Chair: Tao Liu Southern University of Science and Technology
 Co-Chair: Xiang Xu Southern University of Science and Technology

■ SaA02-1 13:30-13:45
 0321 Leader-following Consensus over Jointly Connected Switching Networks is Achievable for Exponentially Unstable Linear Systems
 Yuhan Chen Southern University of Science and Technology
 Tao Liu Southern University of Science and Technology

■ SaA02-2 13:45-14:00
 0334 Uniform Partial Observability of Discrete-time LTV Systems with an Application to a Leaderless Consensus Problem
 Chen Chen Southern University of Science and Technology
 Lili Wang Zhejiang University
 Tao Liu Southern University of Science and Technology

■ SaA02-3 14:00-14:15
 0402 Output Regulation of Heterogeneous Multi-Agent Systems Under Communication Delays and Actuator Faults
 Tao Wu Southern University of Science and Technology
 Hailong Cui Yanshan University
 Xiang Xu Southern University of Science and Technology

■ SaA02-4 14:15-14:30
 0423 Historical Information Accelerates Decentralized Optimization: A Proximal Bundle Method
 Zhao Zhu Southern University of Science and Technology
 Yuping Tian Hangzhou Dianzi University
 Xuyang Wu Southern University of Science and Technology

■ SaA02-5 14:30-14:45
 0436 On Distributed Adaptive Event-Triggered Consensus Control with Positive Minimum Inter-Event Times
 Yangyang Qian Lingnan University
 Yan Wan University of Texas at Arlington (UTA)

■ SaA02-6 14:45-15:00
 0462 Finite-Time Stabilizer Design for Large-Scale Stochastic Boolean Network
 Lin Lin Southern University of Science and Technology
 Bo Min The University of Hong Kong

■ SaA02-7 15:00-15:15
 0516 Contraction Method for Containment Control with Time-varying Topology and Communication Delays
 Xiang Xu Southern University of Science and Technology

■ SaA02-8 15:15-15:30
 0460 Data-driven Event-triggered Robust Tracking Control for Heterogeneous Multi-agent Systems Subject to DoS attacks
 Mengyang Zhao Beihang University
 Deyuan Liu Beihang University
 Haibo Gu Beihang University

SaA03 **天津厅/Tianjin Hall** **13:30-15:30**
 Regular Session: 全驱系统理论及其在航空航天领域的应用

Chair: 侯明哲 哈尔滨工业大学
 Co-Chair: 蔡光斌 火箭军工程大学

■ SaA03-1 13:30-13:45
 0284 High-Order Finite-Time Adaptive Command Filtered Backstepping for Strict-Feedback Systems: A FAS Approach
 Xuedong Li Harbin Institute of Technology
 Weizhen Liu Harbin Institute of Technology & Óbuda University
 Jindou Xu Harbin Institute of Technology
 Guangren Duan Harbin Institute of Technology

■ SaA03-2 13:45-14:00
 0581 Graph Neural Koopman Operator: A Structure-Aware Lifting Framework for Free-Floating Space Robot Control
 Siming Zhang Northeastern University
 Ning Li China Satellite Network System Co.,Ltd
 Bicheng Cai Northeastern University at Qinhuangdao
 Xueqin Chen Harbin Institute of Technology
 Yong Zhao Northeastern University

■ SaA03-3 14:00-14:15
 0295 Practical Fixed-time Tracking Control for Nonlinear High-Order Fully Actuated System with Unknown Control Coefficients
 Ping Wang Beijing Information Science and Technology University
 Liang Feng Southern University of Science and Technology
 Weizhen Liu Harbin Institute of Technology & Óbuda University

■ SaA03-4 14:15-14:30
 0360 基于气动力的超低轨卫星姿态耦合控制方法研究
 张轩赫 哈尔滨工业大学卫星技术研究所
 俞阳 自动目标识别全国重点实验室
 陈雪芹 哈尔滨工业大学
 侯明哲 哈尔滨工业大学

■ SaA03-5 14:30-14:45
 0397 Fully-Actuated-System-Based Fault-Tolerant Spacecraft Attitude Control with ESO
 Tao Huo Harbin Institute of Technology
 Yang Yu National Key laboratory of Automatic Target Recognition
 Chengfei Yue Harbin Institute of Technology, Shenzhen
 Xueqin Chen Harbin Institute of Technology

■ SaA03-6 14:45-15:00
 0411 Stabilization of Rotary Inverted Pendulum via an Improved Fully Actuated System Approach with Velocity Damping Injection
 Xujie Zhang Southern University of Science and Technology
 Guangren Duan Harbin Institute of Technology

■ SaA03-7 15:00-15:15
0454 State-Constrained Prescribed Performance Optimal Control for Hypersonic Morphing Vehicles
Yiming Shang Rocket Force University of Engineering
Guangbin Cai Xi'an Research Institute of High-Tech
Zihao Cheng Rocket Force University of Engineering
Tong Wu Rocket Force University of Engineering
Xuen Fan Rocket Force University of Engineering
Ziqi Ye Rocket Force University of Engineering

■ SaA03-8 15:15-15:30
0455 Tube based Incremental Model Predictive Attitude Control for Morphing Aircraft: An Approach to Enhancing Robustness with Weak
Hui Zheng Rocket Force University of Engineering
Guangbin Cai Xi'an Research Institute of High-Tech
Yongchao Wang High-Tech Institute of Xi'an

SaA04 **北京厅/Beijing Hall** **13:30-15:30**
Regular Session: Adaptive distributed control of nonlinear systems based on fully actuated system theory

Chair: Zhijie Li Hebei University of Science and Technology
Co-Chair: Yafeng Li Yanshan University

■ SaA04-1 13:30-13:45
0116 Attitude performance guaranteed control for gravitational wave detection spacecraft formation based on fully actuated system theory
Yezhen Yu Central South University
Youpeng Xing Central South University
Zeyang Yin Central South University
Kenan Yong Nanjing University of Aeronautics and Astronautics (NUAA)

■ SaA04-2 13:45-14:00
0383 Prescribed-Time Control of the Inverted Pendulum Based on a Fully Actuated System Approach
Ziyi Liu Hebei University of Science and Technology
Zhijie Li Hebei University of Science and Technology
Zelong Zhang Hebei University of Science and Technology
Jian Zhang Hebei University of Science and Technology
Jiaqiang Chen Hebei University of Science and Technology

■ SaA04-3 14:00-14:15
0253 HOFA-Based Switched Safe Flight Tracking Control for Helicopter Systems
Yanhua Yang Xi'an University of Technology
Yankai Li Xi'an University of Technology
Zhuoyang Li Xi'an University of Technology
Yingmin Yi Xi'an University of Technology
Xinyu Zhang Xi'an university of Technology
Shuyi Shao Nanjing University of Aeronautics and Astronautics

■ SaA04-4 14:15-14:30
0410 Affordance Guided Push-Grasp Coordination for Robotic Manipulation Based on Spatial Relationship Perception
Fangyuan Li Beijing Information Science and Technology University
Ziyang Li Handan Polytechnic College,
Wenbai Chen Beijing Information Science and Technology University
Yafeng Li Yanshan University
Shuangshuang Wu Beijing Information Science and Technology University

■ SaA04-5 14:30-14:45
0474 An Integrated Perception and Control Navigation Strategy for USV in Complex Nearshore Environments
Le Shi Yanshan University
Xi Luo Yanshan University
Junpeng Li Yanshan University
Hongrui Sun Yanshan University

■ SaA04-6 14:45-15:00
0640 Connectivity-Preserving And Collision-Free Prescribed-Time Consensus Tracking For Second-Order Multi-agent Systems
Zhenyu Liu Yanshan University
Yafeng Li Yanshan University
Hao Li Yanshan University
Shuaigang Feng Yanshan University

■ SaA04-7 15:00-15:15
0645 FS-Head: Text-Image Prototype Fusion with Gated Temperature Scaling for Few-Shot and Cross-Domain Recognition
Bei Ren Beijing Information Science and Technology University
Tai Zhou Beijing Information Science and Technology University
Yingzu Liang Beijing Information Science and Technology University
Da Wang Beijing Information Science and Technology University
Yafeng Li Yanshan University
Shuangshuang Wu Beijing Information Science and Technology University

■ SaA04-8 15:15-15:30
0111 Anti-Disturbance Control for 6-DOF Quadrotor: A UC-FAS Approach
Mingjun Li Southern University of Science and Technology
Weijie Ren Southern University of Science and Technology
Guangren Duan Harbin Institute of Technology

SaA05 **江苏厅/Jiangsu Hall** **13:30-15:30**
Regular Session: High-Performance Control of Uncertain Nonlinear Systems

Chair: Huifang Min Nanjing University of Science and Technology
Co-Chair: Cuihua Zhang Yanshan University

■ SaA05-1 13:30-13:45
0255 Command-Filter-Based Fixed-Time Prescribed Tracking Switching Control for Time Delay Nonlinear Systems With External Disturbances
Ningsen Sun Yanshan University
Changchun Hua Yanshan University
Cuihua Zhang Yanshan University

■ SaA05-2 13:45-14:00
0281 Event-Triggered PI-Funnel Distributed Control with Neural Networks for Multi-Agent Systems
Yutong Hu Yanshan University
Zeyun Hu Yanshan University
Cuihua Zhang Yanshan University

■ SaA05-3 14:00-14:15
0367 Prescribed-Time Consensus Control for Nonlinear Second-Order MASs With Quantization and Actuator Attacks
Shixin Xia Nanjing University of Science and Technology
Jiewen Yin Nanjing University of Science and Technology

Huifang Min Nanjing University of Science and Technology

■ SaA05-4 14:15-14:30

0385 Practical Prescribed-time Stability of Stochastic Nonlinear Systems

Huifang Min Nanjing University of Science and Technology
Mengxi Zhang Nanjing University of Science and Technology

■ SaA05-5 14:30-14:45

0388 Adaptive Neural Tracking Control for Second-Order Nonlinear Multi-Agent Systems with Input Quantization and State Constraints

Jiewen Yin Nanjing University of Science and Technology
Shixin Xia Nanjing University of Science and Technology
Yihui Shen Nanjing University of Science and Technology
Huifang Min Nanjing University of Science and Technology

■ SaA05-6 14:45-15:00

0391 Memoryless Output Feedback Stabilization for Stochastic Time-Delay Nonlinear Systems With Applications

Mengxi Zhang Nanjing University of Science & Technology
Huifang Min Nanjing University of Science and Technology

■ SaA05-7 15:00-15:15

0439 Finite-Time Estimation for Autonomous Nonlinear Systems Against Sensor Attacks Based on Nonlinear Multi-Observer

Cuihua Zhang Yanshan University
Xinrui Kong Yanshan University
Ying Zhang Yanshan University
Changchun Hua Yanshan University

■ SaA05-8 15:15-15:30

0657 Nonsingular Finite-time Preassigned Performance Control of Nonlinear Systems with Asymmetric State Constraints

Yunchen Xu Huaiyin Institute of Technology
Wei Liu Huaiyin Institute of Technology
Shiyu Jiao Huaiyin Institute of Technology
Pengcheng Zhang Huaiyin Institute of Technology
Huanyu Zhao Huaiyin Institute of Technology

0091 Improved A*-DWA Fusion Path Planning for Mobile Robots

Jingjie Liu Hebei University of Technology
Chenlu Liu Hebei University of Technology
Yapeng Zhang Hebei University of Technology
Hongchao Li Hebei University of Technology

■ SaA06-3 14:00-14:15

0312 Inertia-Matching FAS Conversion and Stability Analysis for Underactuated Lagrangian Systems

Xiaoshuang Zhou Yanshan University
Yana Yang Yanshan University
Tengfei Zhang Yanshan University
Changchun Hua Yanshan University
Junpeng Li Yanshan University

■ SaA06-4 14:15-14:30

0362 Safe Reinforcement Learning Control for Unmanned Surface Vessel

Yana Yang Yanshan University
Chunyu Liu Yanshan University
Tengfei Zhang Yanshan University
Changchun Hua Yanshan University
Jianxiong Li Yanshan University

■ SaA06-5 14:30-14:45

0493 Edge-Based Event-Triggered Finite-time Bearing-Only Formation Tracking of Nonholonomic Multi-Agent Systems

Wenyu Zhou Northwestern Polytechnic University
Yingjie Wang Northwestern Polytechnical University
Zixuan Zheng Northwestern Polytechnical University
Junhua Zhang XIHANG University
Shuyao Feng Xi'an University of Posts and Telecommunications

■ SaA06-6 14:45-15:00

0617 Semi-global Output-feedback Control for Underactuated Nonlinear Systems under Sensor Faults

Yana Yang Yanshan University
Wenqi Wang Yanshan University
Xiaoshuang Zhou Yanshan University
Changlong Liu Yanshan University
Junpeng Li Yanshan University

■ SaA06-7 15:00-15:15

0304 Fault-Tolerant Control of Nonlinear Robotic Manipulators Based on Fully Actuated System Approach

Enpu Li Hebei University of Technology
Heting Zhang Tianjin University of Traditional Chinese Medicine
Wenqiang Ji Hebei University of Technology

■ SaA06-8 15:15-15:30

0453 DeepONet-Enabled Backstepping Output-Feedback Control for 1-D Reaction-Diffusion PDEs with Neumann Boundaries

Chenyang Yu Jiangnan University
Runsheng Guo Jiangnan University

SaA06	沈阳厅/Shenyang Hall	13:30-15:30
Regular Session: Control and Application of Nonlinear Underactuated Systems		

Chair: Yana Yang Yanshan University
Co-Chair: Junpeng Li Yanshan University

■ SaA06-1 13:30-13:45

0053 Curvature-Adaptive RRT*-smart: An Intelligent Sampling and Optimization Framework for Narrow Passage Navigation

Yueling Wang Yanshan University
Yinan Liu Yanshan University
Wei Zheng Yanshan University
Yingxu Li Yanshan University
Hongbin Wang Yanshan University

■ SaA06-2 13:45-14:00

SaA07	闻涛厅/Wentao Hall	13:30-15:30
Regular Session: Perception, Learning, and Control of Intelligent Robotic Systems		

Chair: Ying Zhang Yanshan University
Co-Chair: Liangming Chen Southern University of Science and Technology

<p>■ SaA07-1 0067 Research on Hierarchical Fault-Tolerant Control Strategy Based on Fault Factors Qian Xu Yuena Liu Haitao Liu Zengbin Wu Yang Lu Tongzhou Zhang</p>	<p>13:30-13:45 China North Vehicle Research Institute NOVERI China North Vehicle Research Institute China North Vehicle Research Institute China North Vehicle Research Institute China North Vehicle Research Institute Changchun University of Science and Technology</p>
<p>■ SaA07-2 0142 A Panoramic Convolution and Cross Transformer Framework for LiDAR-Based Place Recognition Chaoran Zhu Bin Liu Hangzhe Wu Yang Liu Tongzhou Zhang</p>	<p>13:45-14:00 China FAW Group Co., Ltd. China FAW Group Co., Ltd. China FAW Group Co., Ltd. China FAW Group Co., Ltd. Changchun University of Science and Technology</p>
<p>■ SaA07-3 0147 Adaptive Multi-Plan Semantic Graph Task Planning for Embodied Robots Rui Sun Lei Lyu Yifan Meng Yubo Wu Mengyang Zhang</p>	<p>14:00-14:15 Shandong Normal University Shandong Normal University Shandong Normal University Shandong Normal University Shandong Normal University</p>
<p>■ SaA07-4 0148 A Memory-Augmented Reinforcement Learning Framework for Visual Navigation Based on Short- and Long-Term Memory Fusion Haizheng Pei Lei Lyu Tianyue Wang Yubo Wu Mengyang Zhang</p>	<p>14:15-14:30 Shandong Normal University Shandong Normal University Shandong Normal University Shandong Normal University Shandong Normal University</p>
<p>■ SaA07-5 0163 Lightweight Neural Dynamics with Adaptive Grid Scaling for Real-Time AUV Path Planning Ning Zhao Song Han Jiaao Zhao</p>	<p>14:30-14:45 Yanshan University Yanshan University Yanshan University</p>
<p>■ SaA07-6 0164 Energy-Information Coupled Hierarchical Path Planning for Multi-AUV Fixed Nodes Access and Maximum Seek Senjie Qiao Song Han Jiaao Zhao</p>	<p>14:45-15:00 Yanshan University Yanshan University Yanshan University</p>
<p>■ SaA07-7 0213 A Knowledge Expansion Method Driven by Service Task Scenarios Based on Large Models Zhihan Ma Yu Gu Yongcheng Cui Ying Zhang</p>	<p>15:00-15:15 Shandong Normal University Hangzhou Applied Acoustics Research Institute School of Mathematics and Statistics, Shandong Normal University Yanshan University</p>
<p>■ SaA07-8 0509 Demand-Driven Robotic Grasping With Large Language Models and Open-Vocabulary Detection Xuekai Wu Boyang Zhao Yibo Hao Cuihua Zhang</p>	<p>15:15-15:30 Yanshan University Yanshan University Yanshan University Yanshan University</p>

Ying Zhang
Changchun Hua

Yanshan University
Yanshan University

<p>SaA08</p> <p>Regular Session: New Developments of Intelligent Control for Complex Nonlinear Systems</p>	<p>明华厅/Minghua Hall</p>	<p>13:30-15:30</p>
---	--------------------------------	---------------------------

<p>Chair: Jianbin Qiu Co-Chair: Wenqiang Ji</p>	<p>Harbin Institute of Technology Hebei University of Technology</p>
<p>■ SaA08-1 0050 带乘性测量误差的单向移动传感器网络边界覆盖控制 孙静扬 贺勇钦 宋程</p>	<p>13:30-13:45 南京理工大学 南京理工大学 南京理工大学</p>
<p>■ SaA08-2 0513 Based on Particle Swarm Optimization for Load Mutation Suppression Strategy in Rectifier-Motor Systems of Islanded Power Grids Depeng Zeng Junfeng Ou Xiaoqian Feng Qingwei Zheng Junjie Hong Bowen Wei</p>	<p>13:45-14:00 Harbin Engineering University Harbin Engineering University Harbin Engineering University Harbin Engineering University Harbin Engineering University Harbin Engineering University</p>
<p>■ SaA08-3 0574 Sparse Broad Learning System via Sequential Threshold Least-Squares for Nonlinear System Identification under Noise Zijing Li Tianhao Zhang Deke Sun Yichuan Fu Chaoyi Zhang Jianbin Qiu</p>	<p>14:00-14:15 Harbin Institute of Technology Harbin Institute of Technology Harbin Institute of Technology Harbin Institute of Technology Harbin Institute of Technology Harbin Institute of Technology</p>
<p>■ SaA08-4 0059 The Real-Time Reachable Set Control of Continuous Time-Varying Delayed Markov Jump Systems Jiayi Zhang Qingzheng Guo Guowei Zhao Liheng Chen</p>	<p>14:15-14:30 Harbin Engineering University Harbin Engineering University Harbin Engineering University Harbin Engineering University</p>
<p>■ SaA08-5 0113 Robust Longitudinal Control for Vehicle Platoons Under FDI Attacks Fan He Yiqun Liu Lifei Dai Haoran Chen Jiazheng Han Rui Fu Changzhu Zhang</p>	<p>14:30-14:45 Tongji University Tongji University Tongji University Tongji University Tongji University Tongji University Tongji University</p>
<p>■ SaA08-6 0179 Output-Feedback Control for Spacecraft: A Fully Actuated System Approach Qi Zheng Mingwei Jin</p>	<p>14:45-15:00 Harbin Institute of Technology Harbin Institute of Technology</p>

Yue Fang Harbin Institute of Technology
Kangkang Sun Harbin Institute of Technology
Jianbin Qiu Harbin Institute of Technology

■ SaA08-7 15:00-15:15
0261 Prescribed Performance Group Consensus of Heterogeneous Multi-Spacecraft Systems via Adaptive Fuzzy

Pinning Control
Zimo Sun Soochow University
Min Ma Soochow University
Yuyang Gao Soochow University

SaA09 **明光厅/Mingguang Hall** **13:30-15:30**
Regular Session: Design of Control Systems: Integrating FAS Approach and AI Methods for State Estimation, Control

Chair: Haifang Li Yanshan University
Co-Chair: Xinyu Wang Yanshan University

■ SaA09-1 13:30-13:45
0205 Motion Planning For Loaders Based On Motion Primitives
Xiangda He Yanshan University
Mao Liu Yanshan University
Jiannan Chen Yanshan University

■ SaA09-2 13:45-14:00
0207 Imitation Learning for Continuous Layered Ditch Excavation Trajectory Planning Based on DMP
Mao Liu Yanshan University
Xiangda He Yanshan University
Jiannan Chen Yanshan University

■ SaA09-3 14:00-14:15
0247 Path Planning and Tracking Control of Mining Articulated Loader Based on Map Skeleton Extraction and Dynamic Preview MPC
Tong Yuan Yanshan University
Chang Liu Yanshan University
Jiannan Chen Yanshan University

■ SaA09-4 14:15-14:30
0429 DUAL-Calib: Joint LiDAR-Dual-Camera Extrinsic Calibration with Automatic Target Corner Detection
Jianyu Zhang Yanshan University
Chong Wang Yanshan University
Jiannan Chen Yanshan University

■ SaA09-5 14:30-14:45
0517 Data-Driven-Based Detection and Localization Framework Against False Data Injection Attacks in Power System
Xiaotao Chen Qinghai University
Xinyu Wang Yanshan University

■ SaA09-6 14:45-15:00
0553 Robust 3D Object Detection via Transfer-Learning Driven 2D-to-3D Fusion in Autonomous Loader Environments
Dalong Jiang Yanshan University

Jiannan Chen Yanshan University
Xi Luo Yanshan University

■ SaA09-7 15:00-15:15
0598 Event-triggered fixed-time sliding mode control for vehicle platoons
Youmei Zhou Hubei University of Automotive Technology
Shuyuan Zhang Hubei University of Automotive Technology
Dongsheng Ye Hubei University of Automotive Technology
Xinghong Wu Hubei University of Automotive Technology
Xin Huang Hubei University of Medicine

■ SaA09-8 15:15-15:30
0120 Prescribed-Time Fault Estimation for Linear Systems with Unknown Inputs
Haifang Li Yanshan University
Changchun Hua Yanshan University

SaA10 **福心厅/Fuxin Hall** **13:30-15:30**
Regular Session: Advances in Fully Actuated System Approach Design for Aerospace Vehicles

Chair: Bin Li Sichuan University
Co-Chair: Guangtai Tian Sichuan University

■ SaA10-1 13:30-13:45
0211 Adaptive Control Strategy for UAV Swarms Based on Fused Connectivity Metrics
Xingrui Chen Sichuan University
Bin Li Sichuan University

■ SaA10-2 13:45-14:00
0238 Trajectory Planning of Fixed-Wing UAV Swarms Using Exact Penalty Function
Yangzhou Cao Sichuan University
Bin Li Sichuan University

■ SaA10-3 14:00-14:15
0441 Discrete-time robust control of robotic manipulators via high-order fully actuated systems approach
Xiaojuan Wang Sichuan University
Guangtai Tian Sichuan University
Bin Li Sichuan University

■ SaA10-4 14:15-14:30
0512 Event-triggered Predefined-Time Performance Attitude Tracking via Fully Actuated System Approach
Tao Guan Sichuan University
Bin Li Sichuan University

■ SaA10-5 14:30-14:45
0573 Angle-Based Target Tracking Using Kalman Filter and Fully Actuated Control
Chi Zhang Southern University of Science and Technology
Weijie Ren Southern University of Science and Technology
Liangming Chen Southern University of Science and Technology
Guangren Duan Harbin Institute of Technology
He Kong Southern University of Science and Technology

■ SaA10-6 14:45-15:00
0393 Adaptive Disturbance Estimation for Discrete-Time Nonlinear HOFA Systems Based on RBF Neural Network
Shan Qiao Taiyuan University of Technology
Kaixin Cui Taiyuan University of Technology

■ SaA10-7 15:00-15:15
 0215 An FAS-ARMAX Approach to Minimum Variance Control for Nonlinear MIMO Manipulators
 Junxiang Zhang Southern University of Science and Technology
 Zhong Chu Southern University of Science and Technology
 Guangren Duan Harbin Institute of Technology

SaA11 **福弘厅/Fuhong Hall** **13:30-15:30**
 Regular Session: Adaptive Control on Nonlinear Systems and Its Applications

Chair: Yuzhong Wang Northeastern University
 Co-Chair: Dan Ma Northeastern University

■ SaA11-1 13:30-13:45
 0257 Inverse Optimal Control for High-Order Strict-Feedback Systems Based on Fully Actuated Systems
 Xinqi Li Liaoning Petrochemical University
 Jinna Li Liaoning Petrochemical University
 Tong Wang Harbin Institute of Technology

■ SaA11-2 13:45-14:00
 0412 Sliding Mode Fault-Tolerant Control for Nonlinear Fully Actuated Systems with Mismatched Disturbances
 Yuzhong Wang Northeastern University
 Zhixin Yang University of Macau
 Dan Ma Northeastern University

■ SaA11-3 14:00-14:15
 0416 Data-driven asynchronous event-triggered control for discrete-time switched linear systems subject to disturbances
 Mengqian Liang Northeastern University
 Dan Ma Northeastern University
 Jiaming Lu Northeastern University

■ SaA11-4 14:15-14:30
 0422 Event-triggered and Self-triggered Control Strategy Design for Discrete-time Switched Affine Systems
 Zhuoyu Li Nanjing University of Posts and Telecommunications
 Hong Sang Dalian Maritime University
 Dan Ma Northeastern University

■ SaA11-5 14:30-14:45
 0555 Output Feedback Stabilization of Uncertain Sub-Fully Actuated Systems Using Control Barrier Functions
 Jinpeng Fan Southern University of Science and Technology
 Lin Lin Southern University of Science and Technology
 Guangren Duan Harbin Institute of Technology

■ SaA11-6 14:45-15:00
 0572 A fully actuated system approach to adaptive control of underactuated cranes with unknown parameters
 Fuxing Yao Southern University of Science and Technology
 He Kong Southern University of Science and Technology

■ SaA11-7 15:00-15:15
 0582 A Fully Actuated System Approach to Dynamic Event-Triggered Control for Interconnected Nonlinear Systems with Disturbances
 Tan Wang Southern University of Science and Technology
 Jinpeng Fan Southern University of Science and Technology
 Guangren Duan Harbin Institute of Technology

■ SaA11-8 15:15-15:30
 0638 Fixed-Time Distributed Nonconvex Optimization For Second-Order Nonlinear Multi-Agent Systems
 Ben Niu Shandong Normal University
 Ang Liu Dalian University of Technology

SaA12 **福满厅/Fuman Hall** **13:30-15:30**
 Regular Session: Control of Nonlinear and Underactuated Systems via Fully Actuated System Approach

Chair: Zhongcai Zhang Qufu Normal University
 Co-Chair: Dong Yang Qufu Normal University

■ SaA12-1 13:30-13:45
 0300 Dynamic Event-based Adaptive Set-point Tracking Control for Overhead Crane with Unknown Load Mass
 Xinlei Gao Shandong Jianzhu University
 Jiangbo Yu Shandong Jianzhu University
 Zhongcai Zhang Qufu Normal University
 Lulu Wu Shandong Jianzhu University
 Qiqi Yang Shandong University

■ SaA12-2 13:45-14:00
 0473 Disturbance-observer-based tracking controller for flexible-joint manipulator systems subjected to input saturation
 Nan Jiang Qufu Normal University
 Zhongcai Zhang Qufu Normal University

■ SaA12-3 14:00-14:15
 0480 Further Results on Trajectory Tracking Control of Vertical Take-off and Landing Aircraft
 Tingting Qiao Qufu Normal University
 Junchao Wei Qufu Normal University
 Zhongcai Zhang Qufu Normal University

■ SaA12-4 14:15-14:30
 0520 Tracking Control of Fully-Constrained Hovercraft via Asymmetric Integral Barrier Lyapunov Function
 Haiyan Gao Qufu Normal University
 Yuqiang Wu Qufu Normal University

■ SaA12-5 14:30-14:45
 0419 Safe Formation Control of Multi-Agent Systems via Control Barrier Function and Hybrid Disturbance Rejection
 Yehui Liu Beihang University
 Yuxiao Liu Beihang University
 Jiajun Shen Beihang University
 Wei Wang Beihang University
 Jinhu Lu Beihang University

■ SaA12-6 14:45-15:00
 0425 A Robust Defense Model with Graph Purification and Noise Injection
 Yiwei Gao Beihang University
 Chenguang Liu Beihang University
 Qing Gao Beihang University
 Fang Zhou Beihang University
 Jingyi Su Beihang University

■ SaA12-7 15:00-15:15
 0426 Federated Incremental Learning for Intrusion Detection in IIoT: An Interpretable TSK Fuzzy Weight Adjustment Approach
 Jiayi Fan Beihang University
 Haibo Gu Beihang University

Kexin Liu Beihang University
 Shaolin Tan Hunan University

■ SaA12-8 15:15-15:30
 0427 Optimal Stealthy Attacks on Remote State Estimation under Privacy-Preserving Constraints
 Hongyuan Xu Beihang University
 Wei Wang Beihang University
 Zifei Li Beihang University
 Shaolin Tan Hunan University
 Jiaqi Yan Beihang University

SaA13 **福瑞厅/Furui Hall** **13:30-15:30**

Regular Session: Intelligent Control Based on the FAS Approach: Integrating Computer Vision and Artificial Intelligence

Chair: Kaixin Cui Taiyuan University of Technology
 Co-Chair: Gang Li Shandong University

■ SaA13-1 13:30-13:45
 0047 Adaptive Knowledge Transfer-Based Particle Swarm Optimization for Cascade Pumping Stations Operation
 Chao Liu Taiyuan University of Technology
 Xinying Xu Taiyuan University of Technology
 Xing Bai Taiyuan University of Technology
 Rong Li Taiyuan University of Technology

■ SaA13-2 13:45-14:00
 0440 Multi-source Image Matching Based on Federated Learning
 Shuting Xu Taiyuan University of Technology
 Yile Xue Taiyuan University of Technology
 Yan Cheng Midea Group co., Ltd
 Lingguang Hao Taiyuan University of Technology
 Kuangrong Hao Donghua University

■ SaA13-3 14:00-14:15
 0057 A Robust Stochastic Configuration Network with Huber-Based Sample Reweighting for Short-Term Load Forecasting
 Zhiwei Du Shenyang Institute of Technology
 Gang Dang Taiyuan University of Technology
 Lan Cheng Taiyuan University of Technology

■ SaA13-4 14:15-14:30
 0083 Takeover Response Time Prediction Model Based on Observable Behavior
 Tianyi Qian Liaoning University of Technology
 Hao Dong Tsinghua University
 Yanji Jiang Liaoning Technical University
 Hongyu Jiao Suzhou University of Technology
 Gang Li Liaoning University of Technology

■ SaA13-5 14:30-14:45
 0119 Trajectory tracking of Wind Turbine Blade Mountain Transporter based on High-order Fully Actuated MPC
 Yuhao Jiang Yanshan University
 Yahui Zhang Yanshan University
 Tenglong Huang Northwest A&F University

Boqiang Zhang Henan University of Technology
 Yinshu Wang Shandong Lingong Heavy Machinery
 Xin Jin Yutong Heavy Industries
 Xiaohong Jiao Yanshan University
 Guilin Wen Yanshan University

■ SaA13-6 14:45-15:00
 0149 Homogeneity-based optimal trajectory planning for overhead crane with double-pendulum effect
 Jingyu Cui Taiyuan University of Technology
 Gang Li Shandong University
 Haixing Qin Taiyuan University of Technology
 Jianyan Tian Taiyuan University of Technology

■ SaA13-7 15:00-15:15
 0158 Quantized Innovation-Based State Estimation in CPSs under Ideal Communication Channels
 Pengyu Li Taiyuan University of Technology
 Kaixin Cui Taiyuan University of Technology
 Kaijing Jin Northeastern University

SaA14 **福祥厅/Fuxiang Hall** **13:30-15:30**

Regular Session: Modeling, optimization and control of robotic and unmanned systems based on reinforcement learning

Chair: Tianjiao An Changchun University of Technology
 Co-Chair: Bo Dong Changchun University of Technology

■ SaA14-1 13:30-13:45
 0245 Approximate dynamic programming cooperative game-based modular robot tracking control via error cost function
 Zebin Ji Changchun University of Technology
 Yi Qin Aviation University of Air Force
 Bing Ma Changchun University of Technology
 Hucheng Jiang Changchun University of Technology
 Tianjiao An Changchun University of Technology

■ SaA14-2 13:45-14:00
 0246 Nonzero-Sum Differential Game-Based Approximate Optimal Control for Modular Robot Manipulator Systems Using Adaptive Dynamic Programming
 Xinye Zhu Changchun University of Technology
 Zebin Ji Changchun University of Technology
 Yi Qin Aviation University of Air Force
 Bing Ma Changchun University of Technology
 Bo Dong Changchun University of Technology
 Tianjiao An Changchun University of Technology

■ SaA14-3 14:00-14:15
 0339 Assessment of transmission line icing level based on IEEEFO-XGBoost
 Peiguang Chen State Grid Jilin Electric Power Company Economic and Technological Research Institute
 Ruihan Yuan Changchun University of Technology
 Yuwei Wang State Grid Jilin Electric Power Company Economic and Technological Research Institute
 Wei Wang Changchun University of Technology

■ SaA14-4 14:15-14:30
 0398 LIOG-SLAM: AN Accurate Robust Laser-Inertial SLAM in Complex Environments
 Xueyu Luo State Grid Jilin Electric Power Company Limited Construction Branch

Longfei Wu State Grid Jilin Electric Power Company Limited Construction Branch
 Xiaogang Liu State Grid Jilin Electric Power Company Limited Construction Branch
 Shouqiao Xin Changchun University of Technology
 Ruihan Yuan Changchun University of Technology

■ SaA14-5 14:30-14:45
 0403 The DaSiamRPN Object Tracking Method Optimized by PCA- EWMA and Shallow Neural Networks
 Qi Xu State Grid Jilin Electric Power Co., Ltd.
 Yue Zhang Changchun University of Technology
 Xin Zhao State Grid Jilin Electric Power Co., Ltd
 Mengjiao Wang State Grid Jilin Electric Power Co., Ltd
 Huanbo Sun State Grid Jilin Electric Power Co., Ltd
 Haichao Peng State Grid Jilin Electric Power Co., Ltd
 Yuhang Liu State Grid Jilin Electric Power Co., Ltd

■ SaA14-6 14:45-15:00
 0404 UAV Electro-Optical Pod Stabilization Control with ADRC and Elastoplastic Friction Compensation
 Qi Xu State Grid Jilin Electric Power Co., Ltd.
 Yue Zhang Changchun University of Technology
 Haichao Peng State Grid Jilin Electric Power Co., Ltd.
 He Wang State Grid Jilin Electric Power Co., Ltd.
 Yuhang Liu State Grid Jilin Electric Power Co., Ltd.
 Benfa Zhang State Grid Jilin Electric Power Co., Ltd.
 Chenyu Dong State Grid Jilin Electric Power Co., Ltd.

■ SaA14-7 15:00-15:15
 0408 A Method for Detecting Typical Transmission Line Accessories Based on MGD-YOLO
 Xiaohong Zhu State Grid Jilin Electric Power Co., Ltd.
 Yankang Liu Changchun University of Technology
 Hongbo Sun State Grid Jilin Electric Power Co., Ltd.
 Meng Wang State Grid Jilin Electric Power Co., Ltd.
 Qingzhuo Meng State Grid Jilin Electric Power Co., Ltd.
 Haolin Li State Grid Jilin Electric Power Co., Ltd.
 Song Liu State Grid Jilin Electric Power Co., Ltd.

■ SaA14-8 15:15-15:30
 0409 DARCade-YOLOv8:An Insulator Defect Detection Algorithm Based on Dilated Adaptive Cascading Bottleneck
 Qiyu Zheng State Grid Jilin Electric Power Co., Ltd.
 Yankang Liu Changchun University of Technology
 Long Li State Grid Jilin Electric Power Co., Ltd.
 Chengkai Yang State Grid Jilin Electric Power Co., Ltd.
 Jian Sun State Grid Jilin Electric Power Co., Ltd.
 Zhao Wang State Grid Jilin Electric Power Co., Ltd.
 Yuxuan Song State Grid Jilin Electric Power Co., Ltd.
 Qihang Zhang Changchun University of Technology

Saturday, May 23, 2026 下午第二场

SaB01	北京厅/Beijing Hall	15: 50-17: 50
FASTA Outstanding Youth Paper Award		

■ SaB01-1 15:50-16:14
 0126 Global prescribed-time prescribed performance control for nonlinear interconnected systems: A high-order fully actuated system approach
 Zhijie Li Hebei University of Science and Technology

Zelong Zhang Hebei University of Science and Technology
 Jian Zhang Hebei University of Science and Technology
 Jiaqiang Chen Hebei University of Science and Technology

■ SaB01-2 16:14-16:38
 0314 Fault-Tolerant Control for Stochastic Fully Actuated Systems With Probability-Prescribed Performance
 Xueqing Liu Southeast University
 Li Sheng China University of Petroleum (East China)
 Donghua Zhou Tsinghua University

■ SaB01-3 16:38-17:02
 0347 Neuroadaptive fully actuated attitude tracking for robot manipulators with asymmetric full-state constraints
 Guangtai Tian Sichuan University
 Xiaoyi Guan The Hong Kong Polytechnic University
 Bin Li Sichuan University
 Guangren Duan Harbin Institute of Technology

■ SaB01-4 17:02-17:26
 0392 Fully Actuated Manifold Constraint Based Output Feedback Control for Input-Constrained Uncertain Nonlinear Systems
 Dianrui Mu Yanshan University
 Rao Wei Yanshan University
 Jiannan Chen Yanshan University
 Yafeng Li Yanshan University
 Changchun Hua Yanshan University

■ SaB01-5 17:26-17:50
 0590 Fully Actuated Control for Synchronous Generator Excitation Systems
 Yi Yu The Hong Kong Polytechnic University
 Yi Huang Wuhan University
 Kovacs Levente Obuda University
 Guangren Duan Harbin Institute of Technology

SaB02	江苏厅/Jiangsu Hall	15:50 - 17:50
Regular Session: FASTA Best Student Paper Award		

■ SaB02-1 15:50-16:10
 0061 Active Fault-Tolerant Control of High-Order Sub-Fully Actuated Systems With Sensor Faults
 Mengtong Gong Tsinghua University
 Li Sheng China University of Petroleum (East China)
 Donghua Zhou Tsinghua University

■ SaB02-2 16:10-16:30
 0086 Output Feedback Fuzzy Fault-Tolerant Control for Nonlinear Systems with Nonaffine Nonlinear Faults via Fully Actuated System Approach
 Yonghao Ma Nanjing University of Aeronautics and Astronautics
 Bin Jiang Nanjing University of Aeronautics and Astronautics
 Ke Zhang Nanjing University of Aeronautics and Astronautics

■ SaB02-3 16:30-16:50
 0152 Momentum-based Fully Actuated System Dynamics for Distributed Optimization
 Guanghui Li Southern University of Science and Technology
 Guangren Duan Harbin Institute of Technology
 Weijie Ren Southern University of Science and Technology

■ SaB02-4 16:50-17:10

0204 Spacecraft Pursuit-evasion-defense Game Control based on FAS Approaches
 Xinyi He Northeastern University
 Xiubo Wang Northeastern University at Qinhuangdao
 Ge Guo Northeastern University

■ SaB02-5 17:10-17:30
 0235 Predefined-Time Trajectory Tracking for Robot Manipulators via FASA-Based Sliding Mode Control
 Yu Zhang Sichuan University
 Bin Li Sichuan University

■ SaB02-6 17:30-17:50
 0621 Dual-channel Event-based Adaptive Control for Uncertain High-Order Fully Actuated Systems
 Wei Tian Yanshan University
 Changchun Hua Yanshan University

SaB03 **福瑞厅/Furui Hall** **15:50 - 17:50**
 Regular Session: Fault Diagnosis and Safety-Enhanced Control for Complex Industrial and Dynamic Systems

Chair: Lei Zou Donghua University
 Co-Chair: Chen Gao Nanjing University of Science and Technology

■ SaB03-1 15:50-16:05
 0203 Machinery Fault Diagnosis Based on Fusion of Event-Based Camera and Traditional Optical Camera
 Deming Kong Nanjing University of Science and Technology
 Ning Jiang Nanjing University of Science and Technology
 Qingqing Zhao Nanjing University of Science and Technology
 Chen Gao Nanjing University of Science and Technology
 Lifeng Ma Nanjing University of Science and Technology

■ SaB03-2 16:05-16:20
 0214 Reachable Set-Based Distributed Fault Detection via $\$L_2$ - $\$$ Filtering for Switched Systems over Sensor Networks
 Fang Li Northeast Petroleum University
 Jiahui Li Northeast Petroleum University

■ SaB03-3 16:20-16:35
 0221 Fault Detection Based on AET-WTOD Protocol for Singularly Perturbed Systems Over Gilbert-Elliott Channels
 Caihua Li Harbin University of Science and Technology
 Tiantian Wu Harbin University of Science and Technology
 Wenxin Zhang Harbin University of Science and Technology
 Zhihui Wu Harbin University of Science and Technology
 Yan Gao Harbin University of Science and Technology

■ SaB03-4 16:35-16:50
 0263 Data-Driven Guaranteed-Robust Output Regulation for Discrete-Time Systems: A Dynamic Privacy-Preserving Scheme
 Chenxi Wang Donghua University
 Lei Zou Donghua University

■ SaB03-5 16:50-17:05
 0269 DPC-RCD: A Dual-Path Spatio-Temporal Collaborative Framework for Root Cause Diagnosis with Irregular Industrial Process Data
 Baokang Gao Central South University
 Dehao Wu Central South University
 Siqing Wu Central South University
 Jing Zhou Central South University

Keke Huang Central South University

■ SaB03-6 17:05-17:20
 0280 Fault Diagnosis of Smart Grid Based on TCN-GAT Spatio-Temporal Graph Attention Networks
 Kailan Zha Nanjing University of Science and Technology
 Shiqi Liu Nanjing University of Science and Technology
 Xingwang Liu Nanjing University of Science and Technology
 Chen Gao Nanjing University of Science and Technology
 Lifeng Ma Nanjing University of Science and Technology

■ SaB03-7 17:20-17:35
 0500 Intermediate Variable Estimator based Fault-tolerant Formation Control of Multi-agent HOFA Systems
 Shiyu Han Harbin Institute of Technology
 Guangren Duan Harbin Institute of Technology

■ SaB03-8 17:35-17:50
 0507 A Multi-level Fusion Transformer for FeO Soft Sensing in Sintering Process
 Hanwen Zhang University of Science and Technology Beijing
 Haojie Bai University of Science and Technology Beijing
 Chong Yang Zhejiang University
 Linlin Li University of Science and Technology Beijing

SaB04 **福心厅/Fuxin Hall** **15:50 - 17:50**
 Regular Session: Distributed Intelligence: Games and Control over Networks

Chair: Xiaoqun Wu Shenzhen University
 Co-Chair: Jingyi Wang Shenzhen University

■ SaB04-1 15:50-16:05
 0421 Finite Strategy Switches of Coordinating and Anti-Coordinating Games on Weighted Networks
 Chengyi Xia Tiangong University

■ SaB04-2 16:05-16:20
 0428 Evolutionary Dynamics of Group Cooperation on Heterogeneous Higher-Order Networks
 Bingxin Lin Beijing Institute of Technology
 Lei Zhou Beijing Institute of Technology

■ SaB04-3 16:20-16:35
 0445 Privacy-Aware Distributed Optimization with Efficient Event-Triggered Communication
 Shujun Li Jiangsu University
 Qiang Jia Jiangsu University

■ SaB04-4 16:35-16:50
 0483 Consensus of Fractional-Order Matrix-Weighted Systems With Sampled Position Data
 Weiling Wang Guangdong University of Technology
 Xiaoqiang He Guangdong University of Technology
 Wenfeng Jin Guangdong University of Technology
 Yanyan Ye Guangdong University of Technology

■ SaB04-5 16:50-17:05
 0549 Dynamic Event-Triggered DMPC With Variable Prediction Horizon for Disturbed Nonlinear Multiagent Systems
 Guo Rui Shenzhen University
 Jingyi Wang Shenzhen University

■ SaB04-6 17:05-17:20
 0234 FAS-Based Composite Fault-Tolerant Control for Robotic Manipulators with a Fifth-Order Disturbance Observer
 Mingyu Dai Nanjing University of Aeronautics and Astronautics
 Changhui Jiang Nanjing University of Aeronautics and Astronautics
 Miao Cai Southeast University

■ SaB04-7	17:20-17:35
0518 Fault Tolerance and Noise Suppression Design for High-Order Fully Actuated Systems	
Miao Cai	Southeast University
Donghua Zhou	Tsinghua University
■ SaB04-8	17:35-17:50
0539 Robust Trajectory Tracking Control of Underwater Robots Using LSTM-enhanced EKF and Sliding Mode Disturbance Observer	
Hupeng Fang	Nanjing Tech University
Dan Bao	Nanjing Tech University
Jiantao Shi	Nanjing Tech University
Xiaoling Liang	National University of Singapore
Chuang Chen	Nanjing Tech University
Dongdong Yue	Nanjing Tech University

SaB05	福弘厅/Fuhong Hall	15:50 - 17:50
Regular Session: 面向复杂工业场景的全驱系统理论: 从智能感知到确信可靠性控制		

Chair: Yi Yang Beihang University
 Co-Chair: Minghao Wang Beihang University

■ SaB05-1	15:50-16:05
0366 Topology-Buffer Crossover of Critical Demand in Buffered Stochastic Supply DAGs	
Xin Chen	Beihang University
Kexin Liu	Beihang University
Haotian Zhang	Beihang University
■ SaB05-2	16:05-16:20
0496 A Mineral Sinter Crack Defect Image Generation Method Based on WGAN and StyleGAN	
Yi Yang	Beihang University
Liwei Li	Beihang University
Minghao Wang	Beihang University
Hanyu Cen	Beihang University
■ SaB05-3	16:20-16:35
0499 Toward Fully Driven Tactile Exploration: HDT-Net for Efficient Textile Material Recognition from Cyclic Sliding Sequences	
Yangqianhui Zhang	Zhejiang University
Dong Han	Zhejiang University
Minghao Wang	Beihang University
■ SaB05-4	16:35-16:50
0501 Privacy-Preserving Practical Average Consensus Based on Eliminable Mask	
Congyu Wen	Beihang University
Pinlin Wang	Beihang University
Zhenqian Wang	Beihang University
■ SaB05-5	16:50-17:05
0514 Long-tailed Semantic Segmentation via Uninformative Probing and Maximum Entropy Calibration	
Huayang Zhuge	Beihang University
■ SaB05-6	17:05-17:20
0384 Observer-based Reinforcement Learning Secure Control for Discrete-time Nonstrict-Feedback Systems Under Deception Attacks	
Zhengwen Xie	Beihang university
Haibo Gu	Beihang university

Deyuan Liu	Beihang university
■ SaB05-7	17:20-17:35
0406 Trajectory Tracking of Glide-Phase Hypersonic Vehicles via Nonsingular Fast Terminal Sliding Mode Control with HSMO-DO under Multi-Source Disturbances	
Yinsheng Wang	Beihang University
■ SaB05-8	17:35-17:50
0413 Learning domain-invariant features through channel-level sparsification for Out-Of Distribution Generalization	
Haoran Pei	Beihang University
Yuguang Yang	Beihang University
Kexin Liu	Beihang University
Juan Zhang	Beihang University
Baochang Zhang	Beihang University

SaB06	明光厅/Mingguang Hall	15:50 - 17:50
Regular Session: Task-Oriented Cooperative Planning, Decision-Making, and Control for Space Clusters in Complex Environments via Intelligent Game-Theoretic Methods		

Chair: Fangzhou Fu Sun Yat-sen University
 Co-Chair: Fei Han Shanghai Aerospace Control Technology Research Institute
 Huijie Sun Central South University

■ SaB06-1	15:50-16:05
0062 Signal-to-Noise Ratio Enhancement of Space Dim Star Images Based on Multi-Temporal Collaborative Strategy	
He Zhang	Shanghai Aerospace Control Technology Institute
Jinzen Mu	Shanghai Aerospace Control Technology Institute
Yushen Guo	Shanghai Jiao Tong University
Fei Han	Shanghai Aerospace Control Technology Institute
■ SaB06-2	16:05-16:20
0505 High-Precision Point Cloud Segmentation Method for Space Non-Cooperative Target Components Based on Multi-Modal Fusion	
Wenbo Zhou	Shanghai Aerospace Control Technology Research Institute
Shuqing Cao	Shanghai Aerospace Control Technology Research Institute
Jiaxin Liang	Hohai University
Fei Han	Shanghai Aerospace Control Technology Research Institute
Yutao Sun	Shanghai Aerospace Control Technology Research Institute
■ SaB06-3	16:20-16:35
0583 Dynamics Trajectory-Driven High-Precision Pose Estimation Method for Space High-Dynamic Targets	
Shuqing Cao	Shanghai Aerospace Control Technology Research Institute
Fei Han	Shanghai Aerospace Control Technology Research Institute
Wenbo Zhou	Shanghai Aerospace Control Technology Research Institute
Yutao Sun	Shanghai Aerospace Control Technology Research Institute
Jianjun Luo	Northwestern Polytechnical University
■ SaB06-4	16:35-16:50
0639 High-precision Simultaneous Measurement of Inter-satellite Six Degree-of-freedom Position and Attitude Based on Multi-laser	
Guicun Li	Shanghai Aerospace Control Technology Research Institute

Fei Huang Shanghai Aerospace Control Technology Research Institute
 Haobiao Yu Shanghai Aerospace Control Technology Research Institute
 He Zhang Shanghai Aerospace Control Technology Research Institute
 Fei Han Shanghai Aerospace Control Technology Research Institute

■ SaB06-5 16:50-17:05
 0077 Resilient Prescribed-Performance Fault-Tolerant Control for Deep-Space Probes based on Fully-Actuated

System Approach
 Haobin Wu Sun Yat-sen University
 Jihe Wang Sun Yat-sen University
 Huijie Sun Central South University
 Yu Xiao Beijing Normal University

■ SaB06-6 17:05-17:20
 0080 Attitude-Orbit Coupled Fault-Tolerant Control for Spacecraft Formation Based on Fault Estimation

Annan Wang Sun Yat-Sen University
 Jihe Wang Sun Yat-Sen University
 Yuyao Wu National University of Defense Technology
 Xin Long National University of Defense Technology
 Huijie Sun Central South University

■ SaB06-7 17:20-17:35
 0630 Event-Triggered Rigid Spacecraft Attitude Tracking Control With Dynamic Threshold
 Haowei Xu Harbin Institute of Technology, Shenzhen
 Xinuo Li Harbin Institute of Technology, Shenzhen
 Ying Zhang Harbin Institute of Technology, Shenzhen

■ SaB06-8 17:35-17:50
 0508 Fault Diagnosis of Spacecraft Attitude Control System using STFT-Based RGB Representation and Vision

Mamba
 Jun Sun Sun Yat-sen University
 Zhen Qian Sun Yat-sen University
 Xin Yuan Sun Yat-sen University
 Muye Yu Sun Yat-sen University
 Wenqing Xu Sun Yat-sen University
 Fangzhou Fu Sun Yat-sen University

Yutang Wang Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences
 Dapeng Tian Chinese Academy of Sciences

■ SaB07-3 16:20-16:35
 0350 Fixed-time Anti-windup Sliding-Mode-Tracking Controller for Piezoelectric Motion Stages
 Jinsong Zhou University of Chinese Academy of Sciences
 Rui Xu Changchun Institute of Optics, Mechanics and Physics, Chinese Academy of Sciences
 Zhongshi Wang Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences
 Dapeng Tian Chinese Academy of Sciences

■ SaB07-4 16:35-16:50
 0373 Distributed Event-Triggered Control for Piezoelectric Deformable Mirrors Based on Nonlinear Disturbance Observer
 Bo Li Chinese Academy of Sciences
 Dapeng Tian Chinese Academy of Sciences
 Yutang Wang Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences

■ SaB07-5 16:50-17:05
 0374 Multi-frame superposition method with adaptive weights based on disturbance estimation residuals
 Zhishu Wang Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences
 Yutang Wang Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences

■ SaB07-6 17:05-17:20
 0342 Reinforcement Learning based Intermittent Event/Self-Triggered Optimal Consensus Control for Euler-Lagrange Systems with
 Input Constraints
 Guanglei Zhao Yanshan University
 Jiale Chu Yanshan University

■ SaB07-7 17:20-17:35
 0399 Networked Control of High-Order Fully Actuated Nonlinear Systems Subject to Packet Dropouts and
 Measurement Noises
 Hailong Cui Yanshan University
 Xiang Xu Southern University of Science and Technology
 Guanglei Zhao Yanshan University

■ SaB07-8 17:35-17:50
 0658 Aerial Physical Interaction Control for CTR-UAVs: Sensorless Estimation and Super-Twisting Attitude Tracking
 Wenqi Shan Dalian University of Technology
 Zheng Hou Dalian University of Technology
 Yuhu Wu Dalian University of Technology

SaB07	明华厅/Minghua Hall	15:50 - 17:50
Regular Session: High-performance motion control in airborne electro-optical imaging systems		

Chair: Dapeng Tian Chinese Academy of Sciences
 Co-Chair: Yutang Wang Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences

■ SaB07-1 15:50-16:05
 0332 Multi-Agent Prescribed-Time Adaptive Sliding Mode Control for Piezoelectric Deformable Mirror in Wavefront

Correction
 Dongjing Zhao Chinese Academy of Science
 Dapeng Tian Chinese Academy of Science
 Rui Xu Chinese Academy of Science

■ SaB07-2 16:05-16:20
 0348 Cooperative Preview Feedforward and DOB-Based Hybrid Control for Dual-Frame Gimbals
 Wenhao Li Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences

SaB08	福满厅/Fuman Hall	15:50 - 17:50
Regular Session: Advanced Nonlinear Control System and Its Applications to Forestry/Agricultural Tasks		

Chair: Ye Liang Northeast Forestry University
 Co-Chair: Liu Yang Northeast Forestry University

■ SaB08-1 15:50-16:05
 0490 Multi-Agent Prescribed-Time Adaptive Sliding Mode Control for Piezoelectric Deformable Mirror in Wavefront

Correction
 Jiawei Zhang Northeast Forestry University
 Ye Liang Northeast Forestry University

■ SaB08-2 16:05-16:20
 0519高超声速飞行器的抗饱和切换控制
 刘田禾 大连海事大学

<p>■ SaB08-3 0579 Smooth Control for Continuous-time Switched System with Multiple Equilibrium State/Input Xinyu Liu Ye Liang</p>	<p>16:20-16:35 Northeast Forestry University Northeast Forestry University</p>
<p>■ SaB08-4 0580 A Multi-dictionary Fusion Method based on Improved Dynamic Time Warping for Moveable Rail Damage Localization Shuzhi Song</p>	<p>16:35-16:50 Northeast Forestry University</p>
<p>■ SaB08-5 0652 Global Connectivity Maintenance-based Formation Optimization Control for Multi-agent Systems with Input Saturation Liu Yang Zhixin Yan Xinchen Ma</p>	<p>16:50-17:05 Northeast Forestry University Northeast Forestry University Northeast Forestry University</p>
<p>■ SaB08-6 0650 Time-Optimal Trajectory Planning for Manipulators Based on RRT Algorithm Liang Yang Hui Zhang Shijie Zhang Mengkun Zhang Zhanyuan Cao Xiang Wu Jilong Wang</p>	<p>17:05-17:20 Henan University of Technology Henan University of Technology Henan University of Technology Henan University of Technology Henan University of Technology Henan University of Technology Henan University of Technology</p>
<p>■ SaB08-7 0349 Fixed-Time RBF Observer-Based Dynamic Event-Triggered MPC for UAV Formation Mengqi Sun Ran Zhen Jiangbo Jia Zhizhe Zhao Kuo Zhang</p>	<p>17:20-17:35 Hebei University of Science and Technology Hebei University of Science and Technology Hebei University of Science and Technology Hebei University of Science and Technology Hebei University of Science and Technology</p>
<p>■ SaB08-8 0544 Model Predictive Control for Singular Semi-Markov Jump Systems with Application to Hybrid Terrestrial/Aerial Bicopters Jianan Yang Shunzhi Zhang Lixian Zhang Zhangyu Wei</p>	<p>17:35-17:50 Harbin Institute of Technology Harbin Institute of Technology Harbin Institute of Technology Harbin Institute of Technology</p>

Sunday, May 24, 2026 上午

SuA01	福满厅/Fuman Hall	10:50-12:20
Regular Session (English Reports): Advances in Constrained Estimation and Control of Complex Time-Varying Systems		

Chair: Xiaochen Xie Harbin Institute of Technology (Shenzhen)
Co-Chair: Chenchen Fan The Hong Kong Polytechnic University

■ SuA01-1 10:50-11:05
0058 Delay-Scheduled Control for Active Suspension Systems With Uncertain Input Delays
Hanzhe Shi Liaocheng University
Guoliang Chen Beijing Institute of Technology
Te Yang Liaocheng University
Jianwei Xia Liaocheng University

■ SuA01-2 11:05-11:20
0060 A Periodic Control Barrier Function-based Approach for Safe Bipedal Walkings
Kai Zong Harbin Institute of Technology (Shenzhen)
Xiaochen Xie Harbin Institute of Technology (Shenzhen)
Zhaoji Ling Harbin Institute of Technology (Shenzhen)
Jing Dai The Chinese University of Hong Kong
Ka-Wai Kwok The Chinese University of Hong Kong

■ SuA01-3 11:20-11:35
0103 Neural Network-based Adaptive Control for Nonlinear Fully-Actuated Systems with Disturbances and State Constraints
Wushan Jia Harbin Institute of Technology (Shenzhen)
Yangzhao Yan Harbin Institute of Technology (Shenzhen)
Xiaochen Xie Harbin Institute of Technology (Shenzhen)

■ SuA01-4 11:35-11:50
0131 A Zonotope-Based Online Active Fault Diagnosis Method for Linear Time-Varying Systems
Bo Min The University of Hong Kong
Chenchen Fan The Hong Kong Polytechnic University
Lin Lin Southern University of Science and Technology
Yifang Zhang Zhejiang University
Xiaochen Xie Harbin Institute of Technology (Shenzhen)
James Lam The University of Hong Kong

■ SuA01-5 11:50-12:05
0140 Dissipative Filtering of Interval Type-2 Fuzzy Singular Systems under Stochastic Communication Protocols
Lin Xu Yan'an university
Jiangrong Li Yan'an university
Bohang Shen Yan'an university

■ SuA01-6 12:05-12:20
0161 Reachable Set Synthesis of Periodic Piecewise Systems with Multiple Packet Dropouts
Yun Liu Guangzhou University
Wen Yang East China University of Science and Technology

SuA02 **明华厅/Minghua Hall** **10:50-12:20**
 Regular Session (English Reports): Analysis and Control of Complex Network Systems Based on the High-Order Fully Actuated System Approach

Chair: Qingsong Liu Wuhan University of Science and Technology
 Co-Chair: Weiwei Luo China University of Mining and Technology

■ SuA02-1 10:50-11:05
 0105 Fully Actuated System Approach for Effective Control of Superheated Steam Temperature Control Systems
 Wenyang Xu Harbin Institute of Technology
 Xuefei Yang Harbin Institute of Technology
 Kai Zhang Harbin Institute of Technology

■ SuA02-2 11:05-11:20
 0157 Optimal Parameter Selection of Linear Graph Filter for Denoising Based on Distributed Gradient Descent
 Dan Xiong Wuhan University of Science and Technology

■ SuA02-3 11:20-11:35
 0199 A Weighted Projection Renormalization for Networked SIS Epidemic Dynamics Model
 Chen Zhou Wuhan University of Science and Technology
 Qingsong Liu Wuhan University of Science and Technology

■ SuA02-4 11:35-11:50
 0200 An Expressed and Private Opinion Dynamics with Appraisal Strategy
 Cong Lu Wuhan University of Science and Technology
 Qingsong Liu Wuhan University of Science and Technology

■ SuA02-5 11:50-12:05
 0276 Design and Performance Optimization of Efficient Compression Algorithm for Meteorological Satellite Data
 Feng Peng China University of Mining and Technology
 Yinghao Liu China University of Mining and Technology
 Kaiwen Lang China University of Mining and Technology
 Haoyang Shi China University of Mining and Technology
 Weiwei Luo China University of Mining and Technology

■ SuA02-6 12:05-12:20
 0326 Fixed-time stabilization of linear systems with a single input delay by piecewise-constant periodic feedback
 Zhe Zhang Nanjing University of Information Science and Technology
 Weiwei Luo China University of Mining and Technology
 Yunxia Song Center for Control Theory and Guidance Technology

SuA03 **长春厅/Changchun Hall** **10:50-12:20**
 Regular Session: Nonlinear Control and Optimization for Several Classes of Systems

Chair: Adiya Bao Northeastern University
 Co-Chair: Cuihua Zhang Yanshan University

■ SuA03-1 10:50-11:05
 0114 GAPD-Net: Efficient Pothole Detection via Low-Rank Adaptation and Gradient-Aware Decoder
 Yikai Men Northeast Agricultural University
 Shiqi Zou Harbin Institute of Technology
 Jingwei Xu Northeast Agricultural University
 Chenyi Wang Northeast Agricultural University

■ SuA03-2 11:05-11:20
 0115 Actor-Critic Enhanced Model Predictive Control with Dual-Tournament Online Evolution for Efficient Robotic Control

Jiashuo Liang Northeast Agricultural University
 Jingwei Xu Northeast Agricultural University
 Shiqi Zou Harbin Institute of Technology
 Xuanbin Xu Northeast Agricultural University

■ SuA03-3 11:20-11:35
 0196 A Dynamic Niching-Based Two-Stage Evolutionary Algorithm for Constrained Multimodal Multiobjective Optimization

Chen Hong Inner Mongolia University
 Zhiqiang Zheng Inner Mongolia University
 Zhi Weng Inner Mongolia University
 Wenjie Wang Inner Mongolia University
 Qingda Chen Inner Mongolia University

■ SuA03-4 11:35-11:50
 0201 Manifold-Based Hybrid Prediction for Dynamic Constrained Multiobjective Optimization

Wenjie Wang Inner Mongolia University
 Zhi Weng Inner Mongolia University
 Zhiqiang Zheng Inner Mongolia University
 Chen Hong Inner Mongolia University
 Qingda Chen Inner Mongolia University

■ SuA03-5 11:50-12:05
 0293 QP-Based Disturbed Transition-process Safety Gain Assignment for Nonlinear Systems

Kexin Hou Shenyang University of Technology
 Xiaoming Su Shenyang University of Technology
 Adiya Bao Northeastern University

■ SuA03-6 12:05-12:20
 0298 Containment Control of Nonlinear Multi-Agent Systems: An Output Regulation Approach

Jingyi Hua Shenyang University of Technology
 Xiaoming Su Shenyang University of Technology
 Adiya Bao Northeastern University

SuA04 **河北厅/Hebei Hall** **10:50-12:20**
 Regular Session: Fully Actuated System, Intelligent Perception and Control

Chair: Lingling Lv North China University of Water Conservancy and Electric Power
 Co-Chair: Yang Liu Beihang University

■ SuA04-1 10:50-11:05
 0082 Output feedback concurrent learning control for fully actuated system
 Jiaming Zhang Beihang University
 Yulin Duan Southern University of Science and Technology
 Changping Yu Beihang University
 Yang Liu Beihang University

■ SuA04-2 11:05-11:20
 0224 Attitude Tracking Control of Flight Vehicle in Terminal Guidance Phase Based on Fully Actuated System Approach

Anda Fang Harbin Institute of Technology
 Guangren Duan Harbin Institute of Technology

Xiaojun Ban	Harbin Institute of Technology
■ SuA04-3	11:20-11:35
0288 Neural Adaptive Guaranteed Cost Tracking Control for Monorail Crane Braking System Based on FAS Approach	
Tao Xu	Anhui University of Science and Technology
Gang Shen	Anhui University of Science and Technology
Yajun Gao	Beijing Institute of Control and Electric Technology
Liyao Hu	Anhui University of Science and Technology
■ SuA04-4	11:35-11:50
0470 Cooperative UAV-UGV Formation Control via Multi-Modal Cross-Platform Perception and State-Dependent Hierarchical Games	
Changping Yu	Beihang University
Yang Liu	Beihang University
■ SuA04-5	11:50-12:05
0481 A High-Order Fully Actuated System Approach for Discrete-Time Periodic Affine Nonlinear Systems	
Ruijie Fu	North China University of Water Resources and Electric Power
Lingling Lv	North China University of Water Resources and Electric Power
■ SuA04-6	12:05-12:20
0511 Reinforcement Learning-Based Adaptive Event-Triggered Control for Linear Discrete-Time Periodic Systems	
Guolei Liu	North China University of Water Resources and Electric Power
Lingling Lv	North China University of Water Resources and Electric Power

SuA05	天津厅/Tianjin Hall	10:50-12:20
Regular Session: Fully Actuated System Theory and Applications in Aerospace, Robotics and Vehicles		

Chair:	Rui Li	University of Electronic Science and Technology of China
Co-Chair:	Kai Zhang	Sichuan University
■ SuA05-1	10:50-11:05	
0172 A Hybrid-Action PPO-Based Adversarial Algorithm for Fixed-Wing UAVs Under Radar Constraints		
Cheng Song	Guangdong University of Technology	
Jiajun Zhao	AVIC Chengdu Aircraft Design & Research Institute	
Xiuwei Huang	Guangdong University of Technology	
Kai Zhang	Sichuan University	
Jie Tao	Zhejiang University	
■ SuA05-2	11:05-11:20	
0192 Prescribed-Time Stabilizing Controller Design for A Class of Uncertain Non-affine FASs		
Xue Zhang	Harbin Institute of Technology	
Guangren Duan	Harbin Institute of Technology	
■ SuA05-3	11:20-11:35	
0260 Lagrangian Feature Augmentation Networks for Control of Manipulator Based on Fully Actuated System Approach		
Xingjie He	Sichuan University	
Kai Zhang	Sichuan University	
Zhaoke Ning	Xi'an Space Radio Technology Research Institute	
Guanlong Su	Xi'an Space Radio Technology Research Institute	
Jiaolong Sun	Xi'an Space Radio Technology Research Institute	

■ SuA05-4	11:35-11:50	
0303 Predefined Time Attitude Tracking Control for Rigid Spacecraft Using Fully Actuated System Approach		
Jindou Xu	Harbin Institute of Technology	
Minjuan Huang	Harbin Institute of Technology	
Guangren Duan	Harbin Institute of Technology	
■ SuA05-5	11:50-12:05	
0526 An RRT* Path Planning Method Satisfying Kinodynamic Constraints		
Yuhang Zhong	University of Electronic Science and Technology of China	
Yingjing Shi	University of Electronic Science and Technology of China	
Rui Li	University of Electronic Science and Technology of China	
■ SuA05-6	12:05-12:20	
0659 On the Open Problem in Stability of the Flexible Spacecraft Phase Plane Control System: Some Conjectures		
Zhijia Chen	Beijing Institute of Control Engineering	
Yongchun Xie	Beijing Institute of Control Engineering	
Kai Zhang	Sichuan University	
Yong Li	Beijing Institute of Control Engineering	
Ruizhi Luo	Beijing Institute of Control Engineering	

SuA06	北京厅/Beijing Hall	10:50-12:20
Regular Session: Networked Control in the Age of Distributed Intelligence: Modeling, Control, and Optimization		

Chair:	Jiange Wang	Yanshan University
Co-Chair:	Xiaomiao Li	Yanshan University
■ SuA06-1	10:50-11:05	
0092 Non-Fragile Control for T-S Fuzzy Switched Positive Systems		
Zhendong Shao	Yanshan University	
Xiaomiao Li	Yanshan University	
Kai Ma	Yanshan University	
Fucai Liu	Yanshan University	
Zhiyong Bao	Yanshan University	
■ SuA06-2	11:05-11:20	
0106 Stability Analysis of Positive T-S Fuzzy Model-based Networked Control Systems under Event-Triggered Control Method		
Yuehao Du	Yanshan University	
Zhiyong Bao	Yanshan University	
Xiaomiao Li	Yanshan University	
Kai Ma	Yanshan University	
Fucai Liu	Yanshan University	
■ SuA06-3	11:20-11:35	
0133 Active Distributed Tracking via Dynamic Grid-based Mutual Information Planning		
Jianing Ma	Yanshan University	
Xiaolei Li	Yanshan University	
Jiange Wang	Yanshan University	
Heling Yuan	Dalian University of Technology	
Xu Fang	Dalian University of Technology	
■ SuA06-4	11:35-11:50	
0629 Improved Algorithm for Asymptotically Optimal Path Planning of Mobile Robots		

Wei Zheng Yanshan University
 Yingxu Li Yanshan University
 Yinan Liu Yanshan University
 Weiyuan Yan Yanshan University
 Lianbin Duan Yanshan University

■ SuA06-5 11:50-12:05
 0632 Data-Driven Model Predictive Control for Connected Vehicle Platoons: A Hankel-Based Approach
 Xianglong Li Yanshan University
 Jiange Wang Yanshan University
 Lijuan Chen Yanshan University
 Wei Gao Yanshan University
 Xiaolei Li Yanshan University

■ SuA06-6 12:05-12:20
 0150 Fixed/Prescribed-Time Synchronization Control for Multi-layer Complex Chaotic Networks
 Shixiang Sun Ludong University, Yantai, China
 Xinjiang Wei Ludong University, Yantai, China
 Lewei Dong Ludong University, Yantai, China

SuA07 **江苏厅/Jiangsu Hall** **10:50-12:20**
 Regular Session: Reinforcement Learning and Secure Collaboration in Complex Multi-agent Systems

Chair: Kuo Li Yanshan University
 Co-Chair: Xiu You Shanxi University

■ SuA07-1 10:50-11:05
 0069 Prescribed-Time Output Feedback Stabilization of Uncertain Nonholonomic Systems With Measurement Faults
 Xiu You Shanxi University
 Peng Chang Shanxi University
 Yi Ma Shanxi University
 Da Wang Shanxi University

■ SuA07-2 11:05-11:20
 0078 Adaptive Fuzzy Optimal Tracking Control for Multi-Input Systems
 Guangxin Shao Taiyuan University of Technology
 Yongfeng Lv Taiyuan University of Technology
 Yu Tang Taiyuan University of Technology
 Gengwu Zhang Taiyuan University of Technology

■ SuA07-3 11:20-11:35
 0124 The Fully Actuated System Theory-Based Adaptive Anti-Actuator Attack Tracking Control of Nonlinear Uncertain Systems and Its Application in QUAVs
 Yu Zhang Yanshan University
 Kuo Li Yanshan University
 Jiongzhi Qiu Yanshan University

■ SuA07-4 11:35-11:50
 0390 A Novel Smooth Parameter Projection Mechanism In Adaptive Control
 Xiangduan Zeng Shijiazhuang Tiedao University
 Jiashuai Guo Shijiazhuang Tiedao University
 Kuo Li Yanshan University

■ SuA07-5 11:50-12:05
 0458 Reduced-Order High-Gain Observer-Based Distributed Formation Tracking Control for Multi-UAV systems
 Jiongzhi Qiu Yanshan University
 Kuo Li Yanshan University
 Yu Zhang Yanshan University
 Wenliang Pei CITIC Heavy Industry Kaicheng Intelligent Equipment Co., Ltd.
 Ning Sun CITIC Heavy Industry Kaicheng Intelligent Equipment Co., Ltd.

■ SuA07-6 12:05-12:20
 0167 Path Tracking Control of Articulated Wheel Loaders Based on Improved Adaptive Model-Free Approach
 Runze Yang Yanshan University
 Chang Liu Yanshan University
 Jiannan Chen Yanshan University
 Bo Zhang Yanshan University
 Kuo Chen Yanshan University
 Jiafeng Zhou Yanshan University

SuA08 **沈阳厅/Shenyang Hall** **10:50-12:20**
 Regular Session: Intelligent Perception and Autonomous Control of Underactuated Unmanned Systems

Chair: Li Li Yanshan University
 Co-Chair: Zhenyu Gao Northeastern University at Qinhuangdao

■ SuA08-1 10:50-11:05
 0160 Trajectory Tracking Control for Underactuated Autonomous Vehicles on Rough Terrain: A Fully Actuated Approach
 Xulei Wang Yanshan University
 Li Li Yanshan University
 Qing Geng Yanshan University
 Yipeng Cao Yanshan University

■ SuA08-2 11:05-11:20
 0274 Integral Sliding Mode Trajectory Tracking Control for Robotic Manipulators Based on Fully Actuated System Approach
 Xitong Wang Yanshan University
 Jianxiong Li Yanshan University
 Yiming Fang Yanshan University
 Yana Yang Yanshan University

■ SuA08-3 11:20-11:35
 0365 Joint Resource Allocation and Routing for Truck-Drone Collaborative Delivery in Complex Urban Environments
 Ze Li Northeastern University at Qinhuangdao
 Zhenyu Gao Northeastern University at Qinhuangdao
 Ge Guo Northeastern University at Qinhuangdao

■ SuA08-4 11:35-11:50
 0443 Distributed Adaptive Optimal Secondary Control of DC Microgrids: A Fully Actuated System Approach Using an Identifier-Actor-Critic Architecture
 Sijie Zhang Tianjin University
 Zhiqiang Zuo Tianjin University
 Peng Li Tianjin University
 Yijing Wang Tianjin University

■ SuA08-5 11:50-12:05
0576 Optimized parameter-based fixed-time active disturbance rejection control for a 2-DOF pneumatic motion simulation platform with disturbances
Chao Liu Yanshan University
Li Li Yanshan University
Yipeng Cao Yanshan University
Jiaping Qiang Yanshan University

■ SuA08-6 12:05-12:20
0620 Lateral Control of Unmanned Ground Vehicle on Uneven Terrain: A Variable Gain Fully-Actuated System
Approach
Yipeng Cao Yanshan University
Li Li Yanshan University
Xulei Wang Yanshan University
Qing Geng Yanshan University
Shaomeng Gu Yanshan University

SuA09 闻涛厅/Wentao Hall 10:50-12:20
Regular Session: Advanced Control and Its Application in Complex Industrial Electronic Systems

Chair: Xiaoning Shen Harbin Institute of Technology
Co-Chair: Zhuang Liu Harbin Institute of Technology

■ SuA09-1 10:50-11:05
0231 A Fuzzy Logic-Based Adaptive Fusion Algorithm for GNSS/IMU in Conductor Galloping Monitoring
Deshan Kong Yichun Power Supply Company
Hao Chen Harbin Institute of Technology
Bo Yu State Grid Heilongjiang Electric Power Company Limited
Bowe Yao Harbin Institute of Technology
Xiaoning Shen Harbin Institute of Technology

■ SuA09-2 11:05-11:20
0239 Identification of Transmission Line Galloping Based on Improved Adaptive Mahony Filter
Bo Yu State Grid Heilongjiang Electric Power Company Limited
Baichun Shang Harbin Institute of Technology
Deshan Kong Yichun Power Supply Company
Fuxing Zhu Harbin Institute of Technology
Xiaoning Shen Harbin Institute of Technology

■ SuA09-3 11:20-11:35
0318 Predefined-Time Sliding Mode Control for Manipulators Based on Fully Actuated Systems
Junyao Zang Harbin Institute of Technology
Zhuang Liu Harbin Institute of Technology
Bowe Yao Harbin Institute of Technology
Yuqiang Wu Midea Group
Liheng Tuo Midea Group
Xiangyu Shao Harbin Institute of Technology
Chengwei Wu Harbin Institute of Technology
Jianxing Liu Harbin Institute of Technology

■ SuA09-4 11:35-11:50
0319 Predefined-time sliding mode control with prescribed performance for space manipulators based on HOPA approaches
Baichun Shang Harbin Institute of Technology
Zhuang Liu Harbin Institute of Technology

Fuxing Zhu Harbin Institute of Technology
Yue Zhao Harbin Institute of Technology
Xinpo Lin Harbin Institute of Technology
Xiaolong Ma Aerospace System Engineering Shanghai
Meng Chen Institute of Aerospace System Engineering Shanghai (ASES)
Jianxing Liu Harbin Institute of Technology

■ SuA09-5 11:50-12:05
0435 Robust Fully Actuated Control for Underactuated USVs via Dynamic Extension and Neural Compensation
Rui Tang Harbin Institute of Technology
Xinpo Lin Harbin Institute of Technology
Zhiyuan Zhao Harbin Institute of Technology
Mu Tong Harbin Institute of Technology (Weihai)
Bowen Yao Harbin Institute of Technology
Zhuang Liu Harbin Institute of Technology
Yabin Gao Harbin Institute of Technology
Huihui Song Harbin Institute of Technology

■ SuA09-6 12:05-12:20
0183 Detection and Estimation in Power System via Robust Unknown Input Observer
Mengqi Gao Xinjiang Institute of Technology
Xinyu Wang Yanshan University
Yue Zhang Pujiang CJLU Gongxing Industrial Design ResearchCo. Ltd.
Mingyue Zhang Yanshan University

SuA10 明光厅/Mingguang Hall 10:50-12:20
Regular Session: Analysis and Synthesis of Industrial Systems with Information-Security-Oriented Effects

Chair: Jun Hu Harbin University of Science and Technology
Co-Chair: Lei Zou Donghua University

■ SuA10-1 10:50-11:05
0236 Differentially Private Containment Control for Discrete-Time Multi-Agent Systems: A Privacy-Convergence Trade-off
Chen Zhang University of Shanghai for Science and Technology
Shuai Liu University of Shanghai for Science and Technology
Licheng Wang University of Shanghai for Science and Technology

■ SuA10-2 11:05-11:20
0250 Federated-Filtering-Based Fusion Estimation for Multi-Sensor Network Systems with Partial Privacy Preservation
Na Li Qingdao University of Science and Technology
Lei Zou Donghua University
0047

■ SuA10-3 11:20-11:35
0285 A Multi-Dimensional Situation Assessment Method for Multi-UAV Cooperative Search
Xinheng Xu Nanjing University of Science and Technology
Xingwang Liu Nanjing University of Science and Technology
Junting Dong Nanjing University of Science and Technology
Lifeng Ma Nanjing University of Science and Technology
Chen Gao Nanjing University of Science and Technology

■ SuA10-4 11:35-11:50
0290 Secure-Guaranteed Gaussian Approximation Fusion Filtering for Multi-Sensor Nonlinear Systems with Intermittent Interruption
Ruonan Luo Harbin University of Science and Technology
Junying Hu Harbin University of Science and Technology
Jun Hu Harbin University of Science and Technology
Hongxiang Liu Harbin University of Science and Technology
Hui Yu Harbin University of Science and Technology

■ SuA10-5 11:50-12:05
0292 Information-Secure Distributed State Estimation for Nonlinear Complex Networks Subject to DoS Attacks via Chaotic Encryption
Bingxin Lei Harbin University of Science and Technology
Jiaying Li Harbin University of Science and Technology
Jun Hu Harbin University of Science and Technology
Weiru Chen Harbin University of Science and Technology
Chong Tan Harbin University of Science and Technology

■ SuA10-6 12:05-12:20
0184 Short-Term Photovoltaic Forecasting Based on Transformer-BiLSTM
Xiaoyuan Luo Yanshan University
Hexiang Liu Yanshan University
Xinyu Wang Yanshan University

SuA11	福心厅/Fuxin Hall	10:50-12:20
Regular Session: Stochastic Control with Constraints and Applications		

Chair: Juanjuan Xu Shandong University
Co-Chair: Wei Wang Shandong University

■ SuA11-1 10:50-11:05
0225 Linear Encryption Against Stealthy Attacks on Remote State Estimation under Energy Constraints
Boqun Tan Linyi University
Jingmei Liu Linyi University
Juanjuan Xu Shandong University
Muhammad Obaid Aalam Linyi University
Xiao Liang Linyi University

■ SuA11-2 11:05-11:20
0228 Distributed Load Frequency Control of Multi-Area Smart Grid
Wenjing Yang Shandong University
Zhaorong Zhang Shandong University
Juanjuan Xu Shandong University

■ SuA11-3 11:20-11:35
0230 Stochastic Constrained LQR Approach for Reentry Trajectory Tracking of Hypersonic Vehicles
Ruixue Li Shandong University
Zhaorong Zhang Shandong University
Juanjuan Xu Shandong University

■ SuA11-4 11:35-11:50
0294 Optimal Control for Stochastic Systems with Random Access Protocols and Fading Channels
Xueyang Li Shandong University

Yu Chen Shandong University
Chunyan Han Shandong University
Wei Wang Shandong University

■ SuA11-5 11:50-12:05
0651 Linear Quadratic Regulation for 2-D Systems with Synchronous Input Delay via L-Shaped Transformation
Yaning Wang Shandong University
Xueyang Li Shandong University
Chunyan Han University of Jinan
Wei Wang Shandong University

■ SuA11-6 12:05-12:20
0541 Carrier Synchronization for Mud Pulse Signal Based on Intelligent Filtering under Unknown Noise Covariance
Matrices
Haiming Li China University of Petroleum (East China)
Li Sheng China University of Petroleum (East China)
Zeyu Xu China University of Petroleum (East China)

SuA12	福弘厅/Fuhong Hall	10:50-12:20
Regular Session: Fully Actuated System Theory and Its Application in Robot Control		

Chair: Ling Huang Harbin University of Science and Technology
Co-Chair: Liang He Northwestern Polytechnical University

■ SuA12-1 10:50-11:05
0190 Pathfinding Strategy for Subterranean Cables Using a Wheeled Quadruped Robot
Yiwei Xu Wuhan Institute of Technology
Ziang Wei Wuhan Institute of Technology
Binyi Lian Wuhan Institute of Technology
Xuhuan Xie Wuhan Institute of Technology
Peng Huang Wuhan Institute of Technology
Zixin Huang Wuhan Institute of Technology

■ SuA12-2 11:05-11:20
0217 Adaptive Non-Singular Fast Terminal Sliding Mode Control for Upper-Limb Rehabilitation Robots
Peng Zhang Harbin University of Science and Technology
Xiangai Ji Harbin University of Science and Technology

■ SuA12-3 11:20-11:35
0258 End-effector Force Control Tracking for UVMS based on Fully Actuated System Theory and Constrained Model Predictive Control
Zhen Ren Harbin Engineering University
Bing Li Harbin Engineering University
Ling Huang Harbin University of Science and Technology
Jiawei Wu Harbin University of Science and Technology
Yingran Liu Harbin Engineering University

■ SuA12-4 11:35-11:50
0418 Fixed-time LOS Guidance Law for Path Following of Underactuated Marine Vehicles with Sideslip Compensation
Junda Ma Harbin Engineering University
Zhengyang Li Harbin University of Science and Technology
Tao Feng Harbin Metro
Hongyu Zhou Harbin University of Science and Technology
Yuwei Xu Harbin University of Science and Technology

■ SuA12-5 11:50-12:05
 0466 Robust Trajectory Tracking Control for UAV-Manipulator Systems: A Fixed-Time Observer-Based Fully-Actuated System Approach
 Wenhao Li Northeast Forestry University
 Jiawei Wu Harbin Engineering University
 Bing Li Harbin Engineering University
 Yuntao Han Harbin Engineering University
 Jiashuai Li Northeast Forestry University

■ SuA12-6 12:05-12:20
 0548 Research on Autonomous Perception Path Planning and Fully Actuated Control of UAVs
 Yuzhe Bai Harbin Institute of Technology
 Guangren Duan Harbin Institute of Technology

SuA13 福瑞厅/Furui Hall 10:50-12:20
 Regular Session: New Developments in Control Theory and Applications

Chair: Bin Zhou Harbin Institute of Technology
 Co-Chair: Feng Zhang China Academy of Launch Vehicle Technology

■ SuA13-1 10:50-11:05
 0277 Characterizations of Functional Observability, Functional Detectability and the Generalized Separation Principle
 Junwei Cao Harbin Institute of Technology
 Bin Zhou Harbin Institute of Technology

■ SuA13-2 11:05-11:20
 0279 On Functional Controllability, Output Controllability and the Generalized Separation Principle
 Junwei Cao Harbin Institute of Technology
 Bin Zhou Harbin Institute of Technology

■ SuA13-3 11:20-11:35
 0282 Swarm Encirclement Planning Method of Fixed-Wing UAVs for Multiple Highly Maneuverable Targets
 Boyang An Harbin Institute of Technology
 Bin Zhou Harbin Institute of Technology
 Qiudi Wang Harbin Institute of Technology

■ SuA13-4 11:35-11:50
 0478 Fully Distributed Prescribed-Time Synchronization of Linear Multi-Agent Systems With Actuator Bias Faults
 Guanzhi Liu Harbin Institute of Technology
 Kai Zhang Harbin Institute of Technology

■ SuA13-5 11:50-12:05
 0502 Nonlinear Generalized Dynamic Predictive Control based on Different Disturbance estimation strategies
 Jialei Chen Beijing University of Technology
 Guang Sun China Academy of Launch Vehicle Technolog
 Feng Zhang China Academy of Launch Vehicle Technolog

■ SuA13-6 12:05-12:20
 0570 Attitude Maneuver and Vibration Suppression for Dumbbell-shaped Spacecraft Using a Fully-actuated System Approach Based on Modified Rodrigues Parameters
 Yuehang Li China Academic of Launch Vehicle Technology
 Feng Zhang China Academic of Launch Vehicle Technology
 Zhaohui Gao China Academic of Launch Vehicle Technology

SuA14 福祥厅/Fuxiang Hall 10:50-12:20
 Regular Session: Nonlinear System Control and Application Based on FAS Approach

Chair: Xiuwei Huang Guangdong University of Technology
 Co-Chair: Qian Wang Hangzhou Dianzi University

■ SuA14-1 10:50-11:05
 0635 Optimal Grid-Tied Charging Station Configuration Considering Representative Traffic Flow
 Chenming Yan North China Electric Power University
 Shuai Liu North China Electric Power University
 Xingtang Wu North China Electric Power University
 Yuhan Xu North China Electric Power University

■ SuA14-2 11:05-11:20
 0123 Fully-actuated System Approach for PMSM Based on Optimal Energy Constraint and Singular Perturbation Theory
 Jiajun Zhu Guangdong university of technology
 Xiuwei Huang Guangdong university of technology
 Qian Cui Guangdong university of technology
 Jie Tao Zhejiang University
 Congcong Tian Harbin Institute of Technology Shenzhen

■ SuA14-3 11:20-11:35
 0193 Stiffness Active Early Warning for Wind Turbine Drivetrain via Second-Order Fully Actuated System Approach
 Hanbin Wang Guangdong University of Technology
 Baoyi Shen Guangdong University of Technology
 Bin Zhang Guangdong University of Technology
 Xiuwei Huang Guangdong University of Technology

■ SuA14-4 11:35-11:50
 0465 Robot manipulator trajectory tracking control based on disturbance rejection analytical prediction
 Hanwen Zhang Central South University
 Zhiguang Zhang Central South University
 Haoming Yuan Central South University
 Caisheng Wei Central South University

■ SuA14-5 11:50-12:05
 0492 Trajectory Tracking of Robotic Manipulators via a Fully-Actuated System Combined with Control Barrier Functions Strategy
 Mengkun Zhang Henan University of Technology
 Hui Zhang Henan University of Technology
 Zhanyuan Cao Henan University of Technology
 Heliang Zhang Henan University of Technology
 Jilong Wang Henan University of Technology
 Jinlei Zhuang Anhui Polytechnic University
 Shijie Zhang Henan University of Technology

■ SuA14-6 12:05-12:20
 0556 Composite anti-disturbance control for nonholonomic systems based on fully actuated systems theory with disturbance interval estimation
 Zigang Liu North China Electric Power University
 Yuhan Xu North China Electric Power University
 Enjie Liang North China Electric Power University
 Xingtang Wu North China Electric Power University

Sunday, May 24, 2026 下午

SuB01	长春厅/Changchun Hall	14:00-16:00
Regular Session (English Reports): FASTA Young Scholars Research Fund Report Session 1 (Nanjing University of Aeronautics and Astronautics)		

Chair:	Xiaoyun Sun	Nanjing University of Aeronautics and Astronautics
Co-Chair:	Yong Wan	Nanjing University of Aeronautics and Astronautics
■ SuB01-1	14:00-14:15	
0100 Robust Adaptive Trajectory Tracking for Tilt-Quadrotor UAV via a Fully-Actuated System Approach		
Lei Lei		Nanjing University of Aeronautics and Astronautics
Yong Wan		Nanjing University of Aeronautics and Astronautics
■ SuB01-2	14:15-14:30	
0101 Fully-Actuated Inverse Reinforcement Learning Control for Satellite Formation		
Chenhao Zhao		Nanjing University of Aeronautics and Astronautics
Peng Zhang		Nanjing University of Aeronautics and Astronautics
Yingjie Wang		Northwestern Polytechnical University
■ SuB01-3	14:30-14:45	
0102 Observer-Based Safe Trajectory Tracking Control for Unmanned Helicopters via Control Barrier Functions and Fully Actuated System Approach		
Fangzheng Li		Nanjing University of Aeronautics and Astronautics
Zhenhua Zhao		Nanjing University of Aeronautics and Astronautics
Bin Jiang		Nanjing University of Aeronautics and Astronautics
■ SuB01-4	14:45-15:00	
0121 Fully Actuated System-Based Prescribed Performance Fault-Tolerant Cooperative Control for Multi-UAVs		
Minghao Chu		Nanjing University of Aeronautics and Astronautics
Haichuan Yang		Nanjing University of Aeronautics and Astronautics
Ruihan Zhu		Nanjing University of Aeronautics and Astronautics
Ziquan Yu		Nanjing University of Aeronautics and Astronautics
Bin Jiang		Nanjing University of Aeronautics and Astronautics
■ SuB01-5	15:00-15:15	
0129 Robust Adaptive Fault-Tolerant Attitude Control for Quadrotor UAVs Based on Fully Actuated System Approach		
Shiji Ren		Nanjing University of Aeronautics and Astronautics
Liyan Wen		Nanjing University of Aeronautics and Astronautics
Bin Jiang		Nanjing University of Aeronautics and Astronautics
Yajie Ma		Nanjing University of Aeronautics and Astronautics
■ SuB01-6	15:15-15:30	
0134 Model-Free Adaptive Control for High-Order Fully Actuated System		
Haobo Wen		Nanjing University of Aeronautics and Astronautics
Xiaoyun Sun		Nanjing University of Aeronautics and Astronautics
Qiang Shen		Shanghai Jiao Tong University
Ju Jiang		Nanjing University of Aeronautics and Astronautics
■ SuB01-7	15:30-15:45	
0297 Prescribed-time trajectory tracking for an underactuated 4-DOF slung load system via a fully actuated system approach		
Hui Tang		Nanjing University of Aeronautics and Astronautics
Qi Pan		Nanjing University of Aeronautics and Astronautics
Zhengyang Pan		Nanjing University of Aeronautics and Astronautics
Xiuhui Peng		Nanjing University of Aeronautics and Astronautics
■ SuB01-8	15:45-16:00	
0299 Distributed Adaptive Finite-Time Attitude Consensus on SO(3) via Geodesic Convex Hull Contraction		
Hui Tang		Nanjing University of Aeronautics and Astronautics

Xiuhui Peng	Nanjing University of Aeronautics and Astronautics
Gao Ruizhou	Science and Technology on Electro-optic Control Laboratory
Jixiang Li	Nanjing University of Aeronautics and Astronautics

SuB02	河北厅/Hebei Hall	14:00-16:00
Regular Session (English Reports): FASTA Young Scholars Research Fund Report Session 2 (Nanjing University of Aeronautics and Astronautics)		

Chair:	Ke Zhang	Nanjing University of Aeronautics and Astronautics
Co-Chair:	Wanglei Cheng	Nanjing University of Aeronautics and Astronautics
■ SuB02-1	14:00-14:15	
0071 A Fault Detection Scheme for UAV Swarm Networks Based on Dynamic Clustering and Hybrid Trust Mechanism		
Zhunyuan Ye		Nanjing University of Aeronautics and Astronautics
Zhihao Xu		Nanjing University of Aeronautics and Astronautics
Ke Zhang		Nanjing University of Aeronautics and Astronautics
Bin Jiang		Nanjing University of Aeronautics and Astronautics
■ SuB02-2	14:15-14:30	
0072 Multi-UAVs Collaborative Path Planning Based on Improved Particle Swarm Optimization and Artificial Potential Field		
Tianxiao Ma		Nanjing University of Aeronautics and Astronautics
Ke Zhang		Nanjing University of Aeronautics and Astronautics
Wanglei Cheng		Nanjing University of Aeronautics and Astronautics
Bin Jiang		Nanjing University of Aeronautics and Astronautics
■ SuB02-3	14:30-14:45	
0562 Game-based Fault-tolerant Cooperative Control for Unmanned Helicopters'formation under Faults and Attacks		
Hengyuan Zhang		Nanjing University of Aeronautics and Astronautics
Wenjie Jiang		Nanjing University of Aeronautics and Astronautics
Yuhang Xu		Nanjing University of Aeronautics and Astronautics
Li Guo		Anhui Polytechnic University
Bin Jiang		Nanjing University of Aeronautics and Astronautics
Zihao Liu		Nanjing University of Aeronautics and Astronautics
■ SuB02-4	14:45-15:00	
0088 Path Following of Quadrotor UAVs Based on High-Order Fully Actuated System Approach		
Xingquan Yin		Nanjing University of Aeronautics and Astronautics
Minhao Wu		Nanjing University of Aeronautics and Astronautics
Peng Wang		Nanjing University of Aeronautics and Astronautics
■ SuB02-5	15:00-15:15	
0095 Robust Adaptive Tracking and Formation Control of Quadrotor UAVs via High-Order Fully Actuated System Approaches		
Zibe Zhang		Nanjing University of Aeronautics and Astronautics
Jing Zhu		Nanjing University of Aeronautics and Astronautics
Hongyuan Zheng		Nanjing University of Aeronautics and Astronautics
Bin Jiang		Nanjing University of Aeronautics and Astronautics
■ SuB02-6	15:15-15:30	
0165 Fully Actuated System Approach-Based Practical Prescribed-Time Robust Control for Unmanned Helicopter		
Junjie Zhu		Nanjing University of Aeronautics and Astronautics
Wanglei Cheng		Nanjing University of Aeronautics and Astronautics
Ke Zhang		Nanjing University of Aeronautics and Astronautics
Bin Jiang		Nanjing University of Aeronautics and Astronautics

■ SuB02-7	15:30-15:45
0070 Disturbance Predictor-Based Fault-Tolerant Formation Control and Hierarchical Structure Collision Avoidance for Fixed-Wing UAVs: A Fully Actuated System Approach	
Bo Meng	Nanjing University of Aeronautics and Astronautics
Ke Zhang	Nanjing University of Aeronautics and Astronautics
Jingping Xia	Nanjing University of Aeronautics and Astronautics
Bin Jiang	Nanjing University of Aeronautics and Astronautics
■ SuB02-8	15:45-16:00
0128 Safety-Critical Trajectory Tracking of a Fully Actuated Tilted Hexarotor under LOE Faults	
Ziyi Zheng	Fuzhou University
Shangkun Liu	Fuzhou University
Jie Huang	Fuzhou University
Zehui Mao	Nanjing University of Aeronautics and Astronautics
Bin Jiang	Nanjing University of Aeronautics and Astronautics

SuB03	天津厅/Tianjin Hall	14:00-16:00
Regular Session (English Reports): FASTA Young Scholars Research Fund Report Session 3 (Nanjing University of Aeronautics and Astronautics)		

Chair: Peng Li Harbin Institute of Technology (Shenzhen)
 Co-Chair: Wenjie Lu Harbin Institute of Technology (Shenzhen)

■ SuB03-1	14:00-14:15
0132 Dueling Double Deep Q-Network Based Energy Management Strategy for Hybrid Electric Vehicles	
Fan Li	Sun Yat-sen University
Xuefang Li	Sun Yat-sen University
Xiaodong Li	Sun Yat-sen University
■ SuB03-2	14:15-14:30
0139 Adaptive Prescribed-Time Tracking Control for Multi-Motor Driving Servo Systems with High-Order Fully Actuated System Approach	
Shuangyi Hu	Zhejiang University of Technology
Qiang Chen	Zhejiang University of Technology
Xiongxiang He	Zhejiang University of Technology
■ SuB03-3	14:30-14:45
0170 Distributed Observer Design of Linear Systems with Time-varying Topologies	
Dongming Wang	Harbin Institute of Technology
Rui Wang	Harbin Institute of Technology
Peng Li	Harbin Institute of Technology (Shenzhen)
■ SuB03-4	14:45-15:00
0171 Estimation of Frequency and RoCoF of Non-stationary Signals in Power Systems: A Fast Convergent Approach	
Xuanqi Wang	Harbin Institute of Technology (Shenzhen)
Chaoyu Yang	Harbin Institute of Technology (Shenzhen)
Rui Wang	Harbin Institute of Technology
Peng Li	Harbin Institute of Technology (Shenzhen)
■ SuB03-5	15:00-15:15
0272 Anomaly Detection and Root Cause Identification in Multistage Industrial Processes via Causal Graph-Based Spatio-Temporal Learning	
Chensong Xu	Harbin Institute of Technology (Shenzhen)

Rui Wang	Harbin Institute of Technology
Peng Li	Harbin Institute of Technology (Shenzhen)
Yangkun Zhang	Harbin Institute of Technology (Shenzhen)
■ SuB03-6	15:15-15:30
0560 MTS-Pose: A Lightweight Stereo Multi-Task Framework for Underwater 6D Pose Estimation	
Shenghui Li	Harbin Institute of Technology (Shenzhen)
Xin Wang	Harbin Institute of Technology (Shenzhen)
Rui Wang	Harbin Institute of Technology
■ SuB03-7	15:30-15:45
0626 DIAMOND: Diffusion-Augmented Imitation Learning for Motion Planning in Autonomous Driving	
Wenxiao Ke	Harbin Institute of Technology (Shenzhen)
Wenjie Lu	Harbin Institute of Technology (Shenzhen)
■ SuB03-8	15:45-16:00
0022 Autonomous Magnetic Control of Capsule Robots with Deep Reinforcement Learning	
Zhiyuan Feng	Harbin Institute of Technology (Shenzhen)
Xinkai Yu	Harbin Institute of Technology
Shuang Song	Harbin Institute of Technology (Shenzhen)

SuB04	福弘厅/Fuhong Hall	14:00-16:00
Regular Session: FASTA Young Scholars Research Fund Report Session 4 (Shandong University)		

Chair: Wu Jiang	Shandong University
Co-Chair: Xiangyang Xing	Shandong University
■ SuB04-1	14:00-14:15
0044 Distributed-Observer-Based Control for Interconnected High-Order Fully-Actuated Affine Nonlinear Systems via Full-Measured-Canonical-Form	
Yuyan Li	Shandong University
Shuai Liu	Shandong University
■ SuB04-2	14:15-14:30
0550 Fully Actuated Boolean Control Networks: A Function Perturbation Approach	
Zewei Li	Shandong University
Yongyuan Yu	Shandong University
Changxi Li	Shandong University
Jun-e Feng	Shandong University
■ SuB04-3	14:30-14:45
0557 Networked H_∞ Control for Nonlinear Fully Actuated Systems under Round-Robin Scheduling and Multirate Sampling	
Jian Zou	Shandong University
Dawei Zhang	Shandong University
■ SuB04-4	14:45-15:00
0666 A Unified Fault-Tolerant Control Strategy Based on Asymmetric Modulation for IPOS DAB Converters Under Open-Circuit Faults	
Hanhui Che	Shandong University
Xiangyang Xing	Shandong University
Yan Li	Shandong University

■ SuB04-5 15:00-15:15
0063 A unified fully-actuated system framework for stabilization of linear time-invariant systems over finite fields and its applications to tracking problem
Miao Yu Shandong University
Yiliang Li Shandong University
Kaihua Xi Shandong University
Jun-e Feng Shandong University

■ SuB04-6 15:15-15:30
0090 Disturbance-Rejection Predictive Tracking Control for High-Order Nonlinear NCSs via the Fully Actuated System Approach
Ruifeng Zhang Shandong University
Zisheng Lu Shandong University
Rongni Yang Shandong University

■ SuB04-7 15:30-15:45
0145 Event-Triggered Optimized Tracking Control for Fully Actuated Single-Link Flexible Joint Manipulator Systems via Reinforcement Learning
Xueling Wan Shandong University
Ruopeng Li Shandong University
Qingrong Liu Shandong University of Finance and Economics
Xianfu Zhang Shandong University

■ SuB04-8 15:45-16:00
0159 Distributed Output-feedback Control of Feedforward Nonlinear Multi-Agent Systems With Input Quantization and State Delays
Ruopeng Li Shandong University
Xueling Wan Shandong University
Qingrong Liu Shandong University of Finance and Economics
Xianfu Zhang Shandong University

SuB05	江苏厅/Jiangsu Hall	14:00-16:00
Regular Session: FASTA Young Scholars Research Fund Report Session 5 (Shandong University)		

Chair: Jianwei Xia Liaocheng University
Co-Chair: Lantao Xing Shandong University

■ SuB05-1 14:00-14:15
0216 Event-Triggered control of Helicopter Systems using the High-Order Fully Actuated System Approach
Zifan Liu Shandong University
Chengxiang Li Shandong University
Lantao Xing Shandong University

■ SuB05-2 14:15-14:30
0489 A Fully Actuated System Approach to Nonlinear Systems over Finite Fields
Yunsi Yang Shandong University
Jun-e Feng Shandong University
Kaihua Xi Shandong University

■ SuB05-3 14:30-14:45
0538 Matrix-Weighted Consensus of Second-Order Multi-Agent Systems without Velocity Transmission
Tianyi Tang Shandong University
Huaibin Tang Shandong University

■ SuB05-4 14:45-15:00
0323 Adaptive Cooperative Control for Nonlinear High-Order Fully-Actuated Multi-Agent Systems Under Full-State Interval Constraints
Yuke Jia Liaocheng University
Wei Sun Liaocheng University

■ SuB05-5 15:00-15:15
0330 Stochastic Event-Triggered Distributed Optimization for Nonlinear Multi-Agent Systems Under Coupling Constraints
Huarong Yue Liaocheng University
Jianwei Xia Liaocheng University

■ SuB05-6 15:15-15:30
0464 Mean-square Stability Analysis of Quarter Vehicle Suspension System
Zizhao Li Liaocheng University
Wei Sun Liaocheng University

■ SuB05-7 15:30-15:45
0667 Fully Distributed Optimization for Multiple Flexible-Joint Robots: An Adaptive Fully Actuated System Approach
Rui Shang Liaocheng University
Wei Sun Liaocheng University

■ SuB05-8 15:45-16:00
0097 Internal Dynamics Stabilization and Tracking Control for Non-Minimum Phase Underactuated Hypersonic Flight Vehicles
Qiangying Wu Nanjing University of Aeronautics and Astronautics
Ruiyun Qi Nanjing University of Aeronautics and Astronautics
Bin Jiang Nanjing University of Aeronautics and Astronautics

SuB06	沈阳厅/Shenyang Hall	14:00-16:00
Regular Session: FASTA Young Scholars Research Fund Report Session 6 (Harbin Institute of Technology)		

Chair: Ruiqi Dong Harbin Institute of Technology (Shenzhen)
Co-Chair: Chengfei Yue Harbin Institute of Technology (Shenzhen)

■ SuB06-1 14:00-14:15
0093 Consensus-based State Estimation for Stochastic Discrete-Time Systems with Poisson-Distributed Disturbances under Directed Graphs
Weiqiang Chen Harbin Institute of Technology (Shenzhen)
Yutian Xu Harbin Institute of Technology (Shenzhen)
Jie Mei Harbin Institute of Technology (Shenzhen)
Guangfu Ma Harbin Institute of Technology

■ SuB06-2 14:15-14:30
0098 Anti-unwinding Attitude Maneuver Control Based on Fully Actuated System Approach for Spacecraft
Tong Li Harbin Institute of Technology (Shenzhen)
Tianyi Wang Harbin Institute of Technology (Shenzhen)
Ruiqi Dong Harbin Institute of Technology (Shenzhen)

■ SuB06-3 14:30-14:45
0491 Multi-Preset-Trajectories-Based Preassigned Performance Lateral-Directional Attitude Control for Underactuated Aircraft

Daiqi Yang Harbin Institute of Technology
 Wenxi Xu Harbin Institute of Technology
 Feng Tan Harbin Institute of Technology
 Mingzhe Hou Harbin Institute of Technology

■ SuB06-4 14:45-15:00
 0503 Data-Driven Pose Tracking Control for Model-Free Robotic Manipulators
 Xiaohan Bai Harbin Institute of Technology
 Feng Tan Harbin Institute of Technology
 Mingzhe Hou Harbin Institute of Technology

■ SuB06-5 15:00-15:15
 0387 Delay-Aware AUV Scheduling for Multi-Target Tracking under Error Propagation
 Zhaoming Zhang Shanghai Jiao Tong University
 Ziwen Yang Shanghai Jiao Tong University
 Wenbin Yu Shanghai Jiao Tong University
 Shanying Zhu Shanghai Jiao Tong University

■ SuB06-6 15:15-15:30
 0389 Cascade Model Predictive Control for AUV Trajectory Tracking Based on Fully Actuated System Approach
 Haodong Kang Shanghai Jiao Tong University
 Tailai Cao Shanghai Jiao Tong University
 Ziwen Yang Shanghai Jiao Tong University
 Wenbin Yu Shanghai Jiao Tong University
 Shanying Zhu Shanghai Jiao Tong University

■ SuB06-7 15:30-15:45
 0110 Cart Pendulum Control: A FAS Approach
 Guangren Duan Harbin Institute of Technology
 Weijie Ren Southern University of Science and Technology
 Haowen Liu Southern University of Science and Technology

■ SuB06-8 15:45-16:00
 0631 Data-Driven Control for Spacecraft Rendezvous Based on Koopman Operator with Adaptive Gaussian RBF and Tikhonov Regularization
 Yiheng Yang Sichuan University
 Yifan Guan Harbin Institute of Technology (Shenzhen)
 Yongzhuo Lai Harbin Institute of Technology (Shenzhen)
 Kai Zhang Sichuan University
 Ying Zhang Harbin Institute of Technology (Shenzhen)

SuB07 **福心厅/Fuxin Hall** **14:00-16:00**
 Regular Session: FASTA Young Scholars Research Fund Report Session 7 (Yanshan University)

Chair: Zhe Guan Yanshan University
 Co-Chair: Yanqiao Wei Yanshan University

■ SuB07-1 14:00-14:15
 0252 Lightweight Meta-Transfer Learning with Mobile-Former for Few-Shot Driver Facial Expression Recognition
 Tian Qin Yanshan University
 Man Hao Yanshan University

Zitong Lei Yanshan University
 Lingdi Fu Yanshan University
 Zhe Guan Yanshan University

■ SuB07-2 14:15-14:30
 0268 iGDAM-PER: LiDAR-Guided Waypoint Generation with Prioritized TD3 for Goal-Driven Exploration
 Yibo Li Yanshan University
 Zhe Guan Yanshan University
 Man Hao Yanshan University

■ SuB07-3 14:30-14:45
 0338 HOFA-Based Backstepping Control for Underactuated Overhead Cranes under Actuator Saturation
 Ce Zhang Yanshan University
 Zhe Guan Yanshan University
 Weili Ding Yanshan University
 Changchun Hua Yanshan University

■ SuB07-4 14:45-15:00
 0340 Data-Driven PID Adaptive Control for Robotic Manipulators with Guaranteed Asymptotic Tracking
 Zongyang Hu Yanshan University
 Zhe Guan Yanshan University
 Hao Yu Beijing Institute of Technology
 Changchun Hua Yanshan University

■ SuB07-5 15:00-15:15
 0619 Distributed Prescribed Performance Formation Control for Multi-Robot Systems with Unknown Control Coefficients
 Zhenfeng Wang Yanshan University
 Tao Chen Yanshan University
 Yafeng Li Yanshan University
 Dianrui Mu Yanshan University
 Zhe Guan Yanshan University

■ SuB07-6 15:15-15:30
 0522 Decentralized Fractional-Order Control For An Interconnected Nonlinear System Via Fully Actuated System Approach
 Yanqiao Wei Yanshan University
 Yanhai Wang Yanshan University
 Dayan Liu INSA Centre Val de Loire
 Guopin Liu Yanshan University
 Changchun Hua Yanshan University

■ SuB07-7 15:30-15:45
 0529 Synchronization Control of Fractional-order Hyperchaotic Systems Based on Fully Actuated System Approach
 Yanqiao Wei Yanshan University
 Dayan Liu INSA Centre Val de Loire
 Changchun Hua Yanshan University
 Zhibo Wang Anyang Institute of Technology

■ SuB07-8 15:45-16:00
 0625 Event-Triggered Output-Constrained Consensus of Nonlinear Multi-Agent Systems with Switching Topologies
 Ruixue Cui Yanshan University
 Changchun Hua Yanshan University
 Yafeng Li Yanshan University

SuB08 **福满厅/Fuman Hall** **14:00-16:00**
 Regular Session: FASTA Young Scholars Research Fund Report Session 8 (Yanshan University)

Chair: Liuliu Zhang Institute of Electrical Engineering
 Co-Chair: Cheng Qian Yanshan University

■ SuB08-1 14:00-14:15
 0271 An Adaptive Routing-based LSTM-Informer Fusion Model and Its Application in Time Series Forecasting
 Jiaqiang Chen Hebei University of Science and Technology
 Yuze Li Hebei University of Science and Technology
 Zhijie Li Hebei University of Science and Technology
 Jian Zhang Hebei University of Science and Technology

■ SuB08-2 14:15-14:30
 0305 Prescribed-Time Tracking Control of HOFA Systems via Composite Learning: Addressing Both Tracking and Output Constraints
 Yu Zhang Yanshan University
 Yixu Cai Yanshan University
 Keli Pang Yanshan University
 Changchun Hua Yanshan University

■ SuB08-3 14:30-14:45
 0369 Adaptive Neural Network Voltage Regulation for DGUs with Unknown ZIP Loads: A Fully Actuated System Approach
 Peng Wang Shanghai University
 Minrui Fei Shanghai University
 Dajun Du Shanghai University
 Yangjie Chen Shanghai University

■ SuB08-4 14:45-15:00
 0370 Adaptive Prescribed-Time Control for Main Drive System of the Rolling Mill Based on the FAS Approach
 Peng Wang Shanghai University
 Cheng Qian Yanshan University
 Lingchen Zhu Zhongyuan University of Technology
 Liuliu Zhang Institute of Electrical Engineering
 Changchun Hua Yanshan University

■ SuB08-5 15:00-15:15
 0375 Inverse Optimal Control of Fully Actuated Nonlinear Systems and Its Applications
 Xianglin Liu Yanshan University
 Liuliu Zhang Institute of Electrical Engineering
 Cheng Qian Yanshan University
 Songsong Liu Yanshan University
 Peng Wang Shanghai University

■ SuB08-6 15:15-15:30
 0376 Distributed Adaptive Containment Control of High-Order Fully Actuated Multiagent Systems With Actuator Attacks
 Songsong Liu Yanshan University
 Liuliu Zhang Institute of Electrical Engineering
 Cheng Qian Yanshan University
 Xianglin Liu Yanshan University
 Jiaojiao Li Yanshan University

■ SuB08-7 15:30-15:45
 0407 A Data-driven Prediction Model for Deformation Resistance Correction Coefficient of Cold Rolling Mill
 Yongwei Wang Yanshan University

Shuzong Chen Yanshan University
 Cheng Qian Yanshan University
 Le Liu Yanshan University

■ SuB08-8 15:45-16:00
 0446 High-Precision Intelligent Modeling for Strip Crown Prediction in Hot-Rolling Processes
 Minghan Qi Northeastern University at Qinhuangdao
 Xiaoyu Wang Northeastern University
 Na Zhou Beijing Shougang Co., Ltd.
 Shuzhi Wang Beijing Shougang Co., Ltd.
 Wen Peng Northeastern University

SuB09 **福瑞厅/Furui Hall** **14:00-16:00**
 Regular Session: FASTA Young Scholars Research Fund Report Session 9 (Harbin Institute of Technology (Shenzhen))

Chair: Guanglei Zhao Yanshan University
 Co-Chair: Qin Huang Guangdong Polytechnic Normal University

■ SuB09-1 14:00-14:15
 0596 Finite-iteration tracking for discrete-time linear high-order fully actuated systems
 Xiujian Zhao Harbin Institute of Technology (Shenzhen)
 Aiguo Wu Harbin Institute of Technology (Shenzhen)
 Ruiqi Dong Harbin Institute of Technology (Shenzhen)

■ SuB09-2 14:15-14:30
 0634 Predefined-Time Spacecraft Attitude Tracking with Tunable Anti-Fragile Performance
 Guanning Zhuang Harbin Institute of Technology (Shenzhen)
 Tianrui Bao Harbin Institute of Technology (Shenzhen)
 Ying Zhang Harbin Institute of Technology (Shenzhen)

■ SuB09-3 14:30-14:45
 0636 FAS-Based Trajectory Tracking Control of Robotic Manipulators Using PINN Modeling
 Zhiang Yuan Harbin Institute of Technology (Shenzhen)
 Yiheng Yang Sichuan University
 Ying Zhang Harbin Institute of Technology (Shenzhen)

■ SuB09-4 14:45-15:00
 0637 Event-triggered attitude tracking control for flexible spacecraft
 Jiuyang Huang Harbin Institute of Technology (Shenzhen)
 Xinuo Li Harbin Institute of Technology (Shenzhen)
 Ying Zhang Harbin Institute of Technology (Shenzhen)

■ SuB09-5 15:00-15:15
 0206 A Low-Complexity Fault-Tolerant Prescribed Performance Control Approach
 Qin Huang Guangdong Polytechnic Normal University
 Ying Zhang Harbin Institute of Technology (Shenzhen)
 Huijie Sun Central South University
 Jianbin Xiong Guangdong University of Technology

■ SuB09-6 15:15-15:30
 0223 Adaptive Robust Tracking Control of High-order Fully Actuated System
 Ranxin Dong Yanshan University
 Changchun Hua Yanshan University

■ SuB09-7 15:30-15:45
0331 Reduced-Order Extended State Observer-Based Sliding Mode Control for Loader
Chuancheng Yao Yanshan University
Guanglei Zhao Yanshan University
Jiannan Chen Yanshan University

■ SuB09-8 15:45-16:00
0452 A Privacy-Preserving Practical Fixed-Time Algorithm for Distributed Least Squares over Networked Multi-Agent Systems
Yuhua Xu Nanjing Audit University
Xinlei Liu Nanjing Audit University

SuB10 **福祥厅/Fuxiang Hall** **14:00-16:00**
Regular Session: FASTA Young Scholars Research Fund Report Session 10 (Harbin Institute of Technology)

Chair: Weizhen Liu Harbin Institute of Technology & Óbuda University
Co-Chair: Ping Li Óbuda University

■ SuB10-1 14:00-14:15
0027 Adaptive Fuzzy Control Based on Fully Actuated System Approach for Active Suspension
Yongshuo Zhang University of Jinan
Xianbo Wang Zhejiang University
Tenglong Huang Northwest A&F University
Menghua Zhang Shandong University

■ SuB10-2 14:15-14:30
0218 A Fully Actuated System Approach to the Balance Control of Cart-Pendulum System
Shengjia Chen Southern University of Science and Technology
Haowen Liu Southern University of Science and Technology
Guangren Duan Harbin Institute of Technology
Ping Li Óbuda University

■ SuB10-3 14:30-14:45
0309 Further Results on the FAS Approach to Tracking Control of Cart-pole Pendulum
Haowen Liu Southern University of Science and Technology
Mingjun Li Southern University of Science and Technology
Ping Li Óbuda University
Guangren Duan Harbin Institute of Technology

■ SuB10-4 14:45-15:00
0316 Prescribed Performance and Predefined-Time Control of Spacecraft Rendezvous
Minjuan Huang Harbin Institute of Technology
Weizhen Liu Harbin Institute of Technology & Óbuda University
Guangren Duan Harbin Institute of Technology

■ SuB10-5 15:00-15:15
0448 A Multimodal Brain Tumor Segmentation Method Based on Multiscale Feature Enhancement
Yuepeng Pan Harbin-University-of Science-and Technology
Xia Liu Harbin-University-of Science-and Technology
Yu Guo Heilongjiang East University
Bing Li Harbin-University of Science and Technology

■ SuB10-6 15:15-15:30
0643 Cooperative Stabilization for High-order Fully Actuated Switched Systems
Zekun Yang Southern University of Science and Technology
Guangren Duan Harbin Institute of Technology

■ SuB10-7 15:30-15:45
0099 Fixed-time Distributed Control for Networked Systems with High-order Switching
Liang Feng Southern University of Science and Technology
Ping Wang Beijing Information Science and Technology University
Ping Li Óbuda University
Weizhen Liu Harbin Institute of Technology & Óbuda University
Guangren Duan Harbin Institute of Technology
Bibo Zheng China University of Mining and Technology

■ SuB10-8 15:45-16:00
0107 Prescribed Performance Tracking Control for Underactuated Unmanned Surface Vessel
Yulin Duan Southern University of Science and Technology
Jiaming Zhang Beihang University
Weijie Ren Southern University of Science and Technology
Guangren Duan Harbin Institute of Technology

Poster Sessions

张贴报告 Poster Session 1: **May 23,**
Saturday 13: 30-15: 30
一楼国际会议中心 (前厅)
Foyer, Qinhuang Conference Hall, 1st Floor

0567 Output-Dependent FASs and Output Feedback Control, Part 2: Case of Multi-order FASs
Guangren Duan Harbin Institute of Technology

0571 Output-Dependent FASs and Output Feedback Control, Part 3: Performance Control
Guangren Duan Harbin Institute of Technology

0585 Output-Dependent FASs and Output Feedback Control, Part 1: Case of Single-order FASs
Guangren Duan Harbin Institute of Technology

0048 Finite-Time Adaptive Fuzzy Tracking Control for High-Order Nonlinear Strict-Feedback Time-Varying Delay Systems: A Fully Actuated System Approach
Kaichao Liu University of Science and Technology Liaoning
Yang Cui University of Science and Technology Liaoning

0055 Dynamic Event-Triggered Fixed-Time Control for Fully Actuated Systems with Unknown Gain
Tianyu Kang Nankai University
Jinxuan Zhang Nankai University
Fuyong Wang Nankai University
Zhongxin Liu Nankai University

0188 HOFA-Based Predefined-Time Stabilization of High-Order Nonlinear Systems Under Matched Disturbances
Alison Garza-Alonso Autonomous University of Nuevo Leon
Pablo Rodriguez-Ramirez Autonomous University of Nuevo Leon
Michael Basin Autonomous University of Nuevo Leon

0368 Asymptotic Full Actuation Control for Rail-Less Electric Bus Trains
Shuo Wang Southwest Jiaotong University
Fei Yan Southwest Jiaotong University
Guoxiang Gu Louisiana State University

0584 Output feedback control of discrete-time nonlinear high-order fully-actuated systems with input and output delays
Yuxuan Chen Harbin Institute of Technology (Shenzhen)
Shuoyi Zhang Beihang University
Aiguo Wu Harbin Institute of Technology (Shenzhen)

0287 Optimization of Data-Driven Billet Quality Prediction Model Based on DLLCOA Algorithm
张文博 华北理工大学
钱俊磊 华北理工大学
杜学强 唐山市钢铁企业流程控制与优化技术创新中心
曾凯 华北理工大学

0089 Adaptive Neural Finite-time Composite Control for Intelligent Ship Autopilot with Nonlinear Input and Complexity Avoidance
Lu Tong Bohai University
Siwen Liu Bohai University
Sijia Jia Bohai University
Huanqing Wang Bohai University

0155 Active Disturbance Rejection Control Approach of Grid-Forming Inverters Based on VSGs
Xinghua Liu Xi'an University of Technology
Xinyi Jing Xi'an University of Technology
Guangyu Song Xi'an University of Technology
Tuo Xie Xi'an University of Technology
Gang Zhang Xi'an University of Technology
Beibei Li Sichuan University

0156 Low-carbon Economic Dispatch of Electricity-Hydrogen Integrated Energy Systems Considering Carbon Capture System
Xinghua Liu Xi'an University of Technology
Ningyu Mao Xi'an University of Technology
Yuhao He Xi'an University of Technology
Panpan Zhang Xi'an University of Technology
Gang Zhang Xi'an University of Technology
Tuo Xie Xi'an University of Technology

0450 Distributed Load Frequency Control in Multi-Area Power Systems with Q-Learning Enhanced Adaptive Event-Triggered Control
Xiangkun Wang Chengdu University
Kaibo Shi University of Electronic Science and Technology of China
Yanlin Li Chengdu University
Xiao Cai Guangzhou University
Ming Zhu Chengdu University

0232 Pole-Dynamics Attacks Detection in MASs by Controller-side Identical Watermarking
Xuanfeng Shi Hebei University of Science and Technology
Changda Zhang Shanghai University

0233 Security Weakness of MASs with Event-Triggered Control for Distributed Replay Attacks
Jingbo Wang Hebei University of Science and Technology
Changda Zhang Shanghai University

0344 Neural-Network-Based Predefined-Time Formation Control of Multiple Unmanned Surface Vessels with Switching Topologies
Zuo Wang Huaqiao University
Hui Wang Liaocheng University
Wenhui Dong Shandong University
Yanzheng Zhu Shandong University of Science and Technology

0378 False Data Injection Attack Scheme in High-Order Fully Actuated Multi-Agent Systems under Resource Constraints
Chengyong Shang Ocean University of China
Yuchen Sun Ocean University of China
Wenle Zhang Ocean University of China

0401 Adaptive Consensus Control for Nonlinear Multi-Agent Systems With Edge-Event-Triggered Communication Under DoS Attacks
Weishang Sun Yanshan University
Changchun Hua Yanshan University
Ruixue Cui Yanshan University

0528 Consensus of Heterogeneous Multi-Agent Systems Under Deception Attacks: Dynamic Event-triggered Intermittent Impulsive Control
Yanjun Geng Yanshan University
Changchun Hua Yanshan University
Ruixue Cui Yanshan University
Yanyun Yang Yanshan University

0577 Distributed Cooperative Control of Multi-impact Oscillator Systems under Multi-Strategy False Data Injection Attacks
Ruohan Mi Taiyuan University of Technology
Yang Cao Southeast University
Jiafeng Yu Harbin Institute of Technology

0622 Resilient Control of Dual-City Interconnected Microgrids via Hybrid Reinforcement Learning
 Kewei Bi Shanghai Maritime University
 Fuxiao Tan Shanghai Maritime University

0656 Sampled-Data Bipartite Leader-Follower Synchronization of Complex Networks with Cooperative-Competitive Interactions
 Runan Guo Shandong University of Science and Technology
 Yanzheng Zhu Shandong University of Science and Technology
 Jiayan Ning Shandong University of Science and Technology

0664 MNCS Lab: A Mobile-Enabled Remote Laboratory Platform with Easy Integration of Control Experiment Units
 Jahan Zaib Bhatti Harbin Institute of Technology
 Guoping Liu Southern University of Science and Technology
 Muhammad Noman Hasan Beihang University

0665 A Programmable Block and MNCS Toolbox for Custom Algorithm Design in the MNCS Lab Android Platform
 Jahan Zaib Bhatti Harbin Institute of Technology
 Guoping Liu Southern University of Science and Technology
 Muhammad Noman Hasan Beihang University
 Faizan Shahid Harbin Institute of Technology

0138 Exponential Stabilization of Second-Order Fully Actuated T-S Fuzzy Systems via Event-Triggered Control
 Shihao Zhang Yanshan University
 Fucai Liu Yanshan University

0644 Adaptive Output-Feedback Control of Uncertain Nonlinear Systems via the Fully Actuated System Approach
 Wenshun Lv Southern University of Science and Technology
 Runan Guo Shandong University of Science and Technology

0137 Fault-Tolerant Attitude Control of Flexible Spacecraft Based on High-Order Fully-Actuated System Approach and Extended State Observer
 Zhengyan Li Harbin Institute of Technology
 Jing Huang Shanghai Aerospace Control Technology Institute
 Pengyu Wang Harbin Institute of Technology
 Yanning Guo Harbin Institute of Technology
 Yuhan Liu Harbin Institute of Technology

0459 Early Fault Detection of Drilling Equipment Using Gaussian Mixture Modeling and Wasserstein Distance
 Xiangxiang Zhang China University of Geosciences
 Peng Zhang China University of Geosciences
 Wenkai Hu China University of Geosciences
 Weihua Cao China University of Geosciences

0484 Data-Driven Soft Sensor Modeling via BLS-Based Algorithm Recommendation
 Kaixun He Shandong University of Science and Technology
 Huadong Yuan Shandong University of Science and Technology
 Yiting Song Shandong University of Science and Technology
 Zihua Wang Shandong University of Science and Technology
 Yaning Zhai Shandong University of Science and Technology
 Pengfei Cao Shandong University of Science and Technology

0530 Multi-Task Fault Diagnosis in Distributed Power Grids with Lightweight CNN
 Wei Xu Shanghai Maritime University
 Fuxiao Tan Shanghai Maritime University

0589 A Method for Wind Deflection Fault Probability Assessment Based on Improved Monte Carlo
 Chaoqiang Miao State Grid Tongling Electric Power Supply Company
 Nan Yang State Grid Tongling Electric Power Supply Company
 Yiming Zhao State Grid Tongling Electric Power Supply Company
 Yunliang Quan State Grid Tongling Electric Power Supply Company

0642 Fixed-Time Fault-Tolerant Control for Proton Exchange Membrane Fuel Cell Leakage via Super-Twisting Observer
 Zeqi Hu Zhejiang University
 Chouqin Pi Southern University of Science and Technology
 Jian Chen Southern University of Science and Technology
 Zhongliang Li Aix-Marseille University
 Daniel Hissel FEMTO-ST

0306 Coupled Extended State Observer-Based Fully Actuated Robust Control of a Stewart Platform
 Yizhe Jiang Harbin Institute of Technology
 Ziao Guan Harbin Institute of Technology (Weihai)
 Yi Zhou Harbin Institute of Technology (Weihai)
 Rundong Wang Harbin Institute of Technology
 Jiyuan Kuang Harbin Institute of Technology

0176 Dynamics Analysis and Circuit Design of a Chaotic System with a Three-Wing Attractor
 Weitao Liu Shenyang Jianzhu University
 Changchun Sun Shenyang Jianzhu University
 Hongrui Zhang Shenyang Jianzhu University

0209 A Switched Chaotic System with Coexisting Attractors
 Changchun Sun Shenyang Jianzhu University
 Li Zheng Shenyang Jianzhu University

0166 Optimized Modeling and Simulation Method for General Air Defense System Stimulation Models
 E Lei Shenyang Aircraft Design and Research Institute
 Guihu Jiang Shenyang Aircraft Design and Research Institute
 Yazhuo Wang Shenyang Aircraft Design and Research Institute
 Pengjiao Li Shenyang Aircraft Design and Research Institute
 Wenzhang Wan Shenyang Aircraft Design and Research Institute
 Shenmin Song Harbin Institute of Technology

0104 An Offline Adaptive Defect Detection Method via Style- and Instance-Level Domain-Invariant Feature Learning
 Jiamei Cheng Hebei University of Science and Technology
 Yumeng Hao Hebei University of Science and Technology
 Sai Zhang Hebei University of Science and Technology
 Chuhan Wang Hebei University of Science and Technology
 Lele Xi Hebei University of Science and Technology
 Shenshen Zhao Hebei University of Science and Technology

0168 Man-Machine Collaborative Task Planning Based on Visual Language Models
 Xian Liu Harbin Institute of Technology
 Weichao Sun Harbin Institute of Technology

0227 PERT-SAM: Progressive Enhanced Refinement and Tuning Defect Segmentation Method
 Jiamei Cheng Hebei University of Science and Technology
 Chuhan Wang Hebei University of Science and Technology
 Weichao Dong Hebei University of Science and Technology
 Jialiang Wang Hebei University of Science and Technology
 Huilai Fan Hebei University of Science and Technology
 Lei Zhou Hebei University of Science and Technology

0240 LSTM-Based Distributed Attacks Detection in MASs: A Framework Comparison Study
 Xiaoye An Hebei University of Science and Technology
 Changda Zhang Shanghai University

0256 YOLOv11-Based RGB-IR Multimodal Object Detection with Faster-EMA and DYT
 Xuebing Zhang Nanjing University of Science and Technology
 Zi Yang Nanjing University of Science and Technology

Dupengfei Zhai	Nanjing University of Science and Technology
Xuezheng Miao	Nanjing University of Science and Technology
0405 SAGNet: Spherical Anchor-Based Graph Neural Networks for Raw Point Cloud Detection	
Chenhao Ma	Southern University of Science and Technology
Xu Zhang	Southern University of Science and Technology
Zhiyun Lin	Southern University of Science and Technology
0649 Remotely Operated Vehicle Path Planning Based on Reward Gradient Prioritized Experience Replay	
Chunhui Liu	Shandong University of Science and Technology
Mingyang Li	Shandong University of Science and Technology
Peng Xu	Shandong University of Science and Technology
Zhixue Li	Shandong University of Science and Technology
Peiyu Qiu	Shandong University of Science and Technology
Zonglei Mou	Shandong University of Science and Technology
0185 Hybrid Predictive Control for Multi-Axis Robotic Systems with Improved Robustness Based on Fully Actuated System Theory	
Hao Fan	Shanghai Jiao Tong University
Qiyang Pan	Shanghai Jiao Tong University
Chaochen Gu	Shanghai Jiao Tong University
0237 Higher-order sliding mode control for the fully- actuated LCL grid-connected inverter	
Yanyu Zhao	Harbin Institute of Technology
Xuemei Zheng	Harbin Institute of Technology
0291 Adaptive Fault-Tolerant Control for the Speed and Tension System of the Reversible Cold Strip Rolling Mill: A Fully Actuated System Approach	
Le Liu	Yanshan University
Zhuolu Chen	Yanshan University
Nuan Shao	Hebei University of Environmental Engineering
Shuzong Chen	Yanshan University
0301 Finite-Time Control for the Speed and Tension System of the Reversible Cold Strip Rolling Mill Based on Fully-Actuated System Approach	
Le Liu	Yanshan University
Zhanming Liu	Yanshan University
Nuan Shao	Hebei University of Environmental Engineering
Yiming Fang	Yanshan University
0302 Tension Optimization Control of Dexterous Hands Based on the Fully Actuated System Approach	
Junning Zhang	Harbin Institute of Technology
Bohan Lv	Beijing Research Institute Precision Mechatronics and Controls
Longfei Jia	Beijing Research Institute of Precise Mechatronics and Controls
Pengfei Li	Beijing Research Institute of Precise Mechatronics and Controls
Yajing Guo	Beihang University
0641 Command Filter-Based Fixed-Time Tracking Control for Nonlinear Systems with Full-State Constraints	
Zhenlian Sun	Beijing Institute of Space Launch Technology
0662 Reinforcement Learning-Based Prescribed-Time Optimal Tracking Control for Uncertain Nonlinear Strict-Feedback Systems	
Zhiyi Gao	Beijing Institute of Technology
Gaojie Wang	Beijing Institute of Technology
Zhuoyue Song	Beijing Institute of Technology
0001 Finite-Time Adaptive Fault-Tolerant Control for Nonlinear Systems with State Constraints	
Xinxin Liu	University of Science and Technology Liaoning
Yang Cui	University of Science and Technology Liaoning

0033 Enhancing Autonomy in Rover Autopilots via Unstructured Coupled Adaptation	
Danping Sun	Southeast University
Di Liu	Southeast University
Simone Baldi	Southeast University
Wenwu Yu	Southeast University
Donghua Zhou	Tsinghua University
A. Astolfi	Imperial College London
0364 Reinforcement Learning Based Disturbance Rejection Control for High-Order Discrete-Time Nonlinear System	
Jianwei Ren	Shandong University of Science and Technology
Yanzheng Zhu	Shandong University of Science and Technology
Lin Liu	Aerospace Information Technology University
0469 Prescribed-Time Trajectory Tracking of Wheel Loader Based on Visual Servoing	
Ye Qian	Yanshan University
Bo Zhang	Yanshan University
Tong Yao	Yanshan University
Yixu Cai	Yanshan University
0475 Camera-Parameter-Independent Visual Servoing for Mobile Robots	
Yu Zhang	Yanshan University
Tong Yao	Yanshan University
Licui Zhao	Yanshan University
Yixu Cai	Yanshan University
0497 Full-state constrained control of unknown nonlinear systems with asymmetric prescribed performance functions	
Wu Shuang	Yanshan University
Changchun Hua	Yanshan University
Ranxin Dong	Yanshan University
0534 Adaptive Event-Triggered Control for Interconnected Nonlinear Systems With Global Output Constraints	
Yanyun Yang	Yanshan University
Changchun Hua	Yanshan University
Wei Tian	Yanshan University
YanJun Geng	Yanshan University
0655 Dual Closed-Loop Control of PMSM Combining Model-Free Adaptive Speed Control with Model Predictive Current Control	
Huili He	Shanghai Maritime University
Fuxiao Tan	Shanghai Maritime University
0352 Robust adaptive attitude control for liquid-filled flexible spacecraft with angular velocity constraints	
Fuzheng Xiao	Harbin Institute of Technology (Shenzhen)
Yongheng Yu	Harbin Institute of Technology
Liqun Chen	Harbin Institute of Technology (Shenzhen)
0628 Phase-Aware ESO and PPO Residual Control for Trans-MediumWater Entry	
Hengyang Xu	Shanghai Maritime University
Fuxiao Tan	Shanghai Maritime University
0108 Complexity-Aware Image Task Allocation in Heterogeneous Industrial Edge Computing via Riemannian Geometry	
Wenye Wang	Yanshan University
Yazhou Yuan	Yanshan University
Shengrui Huang	Yanshan University
Kai Ma	Yanshan University
Zhixin Liu	Yanshan University

0109 Preprocessing Degree-Driven Joint Optimization of Resources and Task Result Confidence for Industrial IoT

Edge Computing
 Shihao Wang Yanshan University
 Yazhou Yuan Yanshan University
 Ziteng Zhang Yanshan University
 Kai Ma Yanshan University
 Zhixin Liu Yanshan University

0259 Virtual synchronous generator control for the LCL grid-connected inverter fully- actuated system
 Zexuan Chang North Automatic Control Technology Institute

0270 Joint Optimization of Feeder Allocation and Pickup Scheduling in PCB Assembly via Cooperative Multi-Agent

Learning
 Baoqing Yin Harbin Institute of Technology
 Zhitai Liu Harbin Institute of Technology
 Xianqiang Yang Harbin Institute of Technology
 Guangyu Lu Yongjiang Lab

0337 Research on an Improved PID Control Algorithm for Large Time-Delay Systems

Yu Huang National Institute of Metrology
 Yun An National Institute of Metrology
 Zhun Li National Institute of Metrology

0355 Design and Research of an Intelligent Package Station Entry Robot System Based on Jetson Orin Nano

Zhengyang Tan City Institute, Dalian University of Technology
 Jiaxin Jin City Institute, Dalian University of Technology
 Xinhe Guo City Institute, Dalian University of Technology
 Jiayue Zhou City Institute, Dalian University of Technology
 Aili Li City Institute, Dalian University of Technology

张贴报告 Poster Session 2:

May 24, Sunday
 10: 45-12: 15

一楼国际会议中心 (前厅)
 Foyer, Qinhuang Conference Hall, 1st Floor

0356 Design of a Solar-Wind Hybrid Intelligent Streetlight Control System

Jincheng Cha City Institute, Dalian University of Technology
 Jiaxin Jin City Institute, Dalian University of Technology
 Yanzhe Chen City Institute, Dalian University of Technology
 Jinyu Zhou City Institute, Dalian University of Technology

0359 Design of Intelligent Warehouse Inspection Car Control System

Aili Li City Institute, Dalian University of Technology
 Jiaxin Jin City Institute, Dalian University of Technology
 Pengyu Luo City Institute, Dalian University of Technology
 Zhengyang Tan City Institute, Dalian University of Technology

0627 A Growth-State and Branch-Tip Based Adaptive Bi-RRT for Cartesian Path Planning

Shaopeng Zhang Harbin Institute of Technology (Shenzhen)
 Rui Zhang Shenzhen Polytechnic University
 Ying Zhang Harbin Institute of Technology (Shenzhen)

0052 Fully Actuated Decoupled Sequential Convex Optimization for UAV Formation

Gejun Yang Nanjing University of Aeronautics and Astronautics
 Xinhua Wang Nanjing University of Aeronautics and Astronautics
 Xiaoyun Sun Shanghai Jiao Tong University

0242 Online Learning-Based Distributionally Robust Nonlinear Predictive Control

Wenxuan Wang Shanghai Jiao Tong University
 Han Wang Shanghai Jiao Tong University
 Chao Ning Shanghai Jiao Tong University

0187 Pursuer Threat Area Prediction Based on Heteroscedastic Sparse Variational Gaussian Processes

Bowei Yan Harbin Institute of Technology
 Runle Du Beijing Institution of Space Long March Vehicle
 Xiaojun Ban Harbin Institute of Technology

0431 Robust Visual Localization in Dynamic Environment with Semantic-enhanced 3D Gaussian Splatting

Xianghong Ling Southern University of Science and Technology
 Zhiyun Lin Southern University of Science and Technology

0467 A Review of Cooperative Guidance Technology for High-Speed Moving Targets

Xiaoyu Zhuang China Aerospace Science and Industry Corporation
 Mingrui Hao Harbin Institute of Technology

0566 Research on 3D Cooperative Guidance Law Based on TRPO Method Under Multi-Constraint Conditions

Ge Lan Harbin Institute of Technology
 Runle Du Beijing Institution of Space Long March Vehicle
 Xiaojun Ban Harbin Institute of Technology

0568 Underwater Acoustic Doppler Velocity Estimation Based on Matched Filtering

Cheng Li Shanghai Maritime University
 Fuxiao Tan Shanghai Maritime University

0032 Tunable Predefined-Time Attitude Stabilization for Spacecraft

Yuyao Wu National University of Defense Technology
Zhichao Sha National University of Defense Technology
Xueying Wang National University of Defense Technology
Xin Long National University of Defense Technology
Jiming Liu National University of Defense Technology
Yaoyuan Zeng National University of Defense Technology

0324 A Multiple Attribute Priority Evaluation Method Based on MVR

Chao Zhang Beijing Institute of Remote Sensing Information
Shikai Li National University of Defense Technology
Bin Bai Beijing Institute of Remote Sensing Information
Xin Long National University of Defense Technology
Yu Xiao Beijing Normal University

0328 A Review of Space-Based Infrared Detection of Aerial Targets

Genggen Xuan Beijing Institute of Remote Sensing Information
Yanqi Zhu Beijing Institute of Remote Sensing Information
Guogong Li Beijing Institute of Remote Sensing Information
Dong Chen Beijing Institute of Remote Sensing Information

0363 Prescribed-Time Reduced-Order Observer for Linear Systems

Haifang Li Yanshan University
Zhe Zhang Nanjing University of Information Science and Technology
Yunxia Song Center for Control Theory and Guidance Technology

0118 Prescribed-Time Unknown-Input Observer Design for Linear Systems

Haifang Li Yanshan University
Yunxia Song Center for Control Theory and Guidance Technology

0068 Structure-Preserving Virtual-Input ZVD Shaping for Spacecraft

Dian Wang Nanjing University of Aeronautics and Astronautics
Peiran Li Air Force Engineering University
Yalin Qiao Central South University of Forestry and Technology
Yuan Liu Nanjing University of Aeronautics and Astronautics
Yunhua Wu Nanjing University of Aeronautics and Astronautics

0154 Disturbance Interval Observer-based Flight Control for Unmanned Helicopter

Kenan Yong Nanjing University of Aeronautics and Astronautics

0021 Fast and Inversion-Free Iterative Algorithms for Discrete Periodic Riccati Equations

Hongyu Wang Harbin Institute of Technology (Shenzhen)
Rui Zhang Shenzhen Polytechnic University
Ying Zhang Harbin Institute of Technology (Shenzhen)

0597 An improved reduced inversion methods for solving discrete periodic Riccati matrix equations

Yurui Wang Harbin Institute of Technology (Shenzhen)
Ying Zhang Harbin Institute of Technology (Shenzhen)

0395 ACL-SSA Optimized Particle Filtering for UWB/LiDAR Fusion-Based Indoor Localization

Baoyu Zhou Nanjing Institute of Technology
Hao Wu Nanjing Institute of Technology
Bo Chen Nanjing Institute of Technology
Yanling Shang Anyang Normal University
Fangzheng Gao Nanjing Institute of Technology

0449 PPO Based Deep Reinforcement Learning Control of Unmanned Aerial Vehicles

Bo Chen Nanjing Institute of Technology
Hao Wu Nanjing Institute of Technology
Baoyu Zhou Nanjing Institute of Technology
Yanling Shang Anyang Normal University
Fangzheng Gao Nanjing Institute of Technology

0554 Safety-Critical Control of UAVs with Nonsmooth Safety Sets

Ziquan Cheng Guangdong University of Technology
Hanli Chen Guangdong University of Technology
Qian Cui Guangdong University of Technology
Xiuwei Huang Guangdong University of Technology
Feng Zhang China Academy of Launch Vehicle Technology

0611 H-AlignEdit: Hierarchical Semantic Alignment for Latent Refinement

Yanhua Zhang Harbin Institute of Technology (Shenzhen)

0612 Few-Shot Font Generation via Diffusion Model with Multi-scale Style Extraction

Jiqian Huang Harbin Institute of Technology (Shenzhen)

0616 Multi-Revolution Low-Thrust GTO-to-GEO Orbital Transfers

Wenbo Zhao Harbin Institute of Technology (Shenzhen)

0051 Anti-windup sliding mode control for nonlinear systems

Qian Wang Hangzhou Dianzi University
Yuqi Jiang Hangzhou Dianzi University
Zhaoyang Leng Hangzhou Dianzi University

0433 Event-Driven Optimal Dynamic Positioning of Ships via Reinforcement Learning

Xiaoyang Gao University of Electronic Science and Technology of China

0546 Prescribed-Time Consensus of Nonlinear Multi-Agent Systems

Kai Zhang Harbin Institute of Technology

0552 Distributed event-triggered neuro-adaptive consensus for nonlinear multi-agent systems

Meilin Li University of Electronic Science and Technology of China

0563 Bias-Policy Iteration for Fully Actuated Continuous-Time Linear Periodic Systems

Huaiyuan Jiang Harbin Institute of Technology

0414 Flexible and Safe Navigation of Autonomous Underwater Vehicles

Yujie Tang Harbin Institute of Technology (Shenzhen)
Zilu Wang Harbin Institute of Technology (Shenzhen)

0036 Resilient Event-Triggered Flocking Control of Multiagent Systems

Zhaoyuan Liu Yanshan University
Xiaoyuan Luo Yanshan University
Xiaolei Li Yanshan University
Di Chen Chinese Academy of Sciences
Wei Qi China National Petroleum Corporation

0633 Distributed Source Seeking for MAS Under Event-Triggered Communication

Jiapeng Zhao Yanshan University
Xiaolei Li Yanshan University
Jiange Wang Yanshan University

Di Chen Chinese Academy of Sciences
Wei Qi China National Petroleum Corporation

0382 Flexible Prescribed Performance Control for Multi-Agent Systems
Wenjun Peng University of Science and Technology Beijing
Linlin Li University of Science and Technology Beijing

0415 Privacy and Security Trade-off in Interconnected Systems
Haojun Wang University of Science and Technology Beijing
Linlin Li University of Science and Technology Beijing

0461 A Generative Adversarial Active Learning Framework With Real-Data Sampling
Junhao Lv University of Science and Technology Beijing
Yiming Shi University of Science and Technology Beijing
Hanwen Zhang University of Science and Technology Beijing

0457 Variable gain hierarchical sliding mode control for flexible spacecraft attitude
Shijia Chen Shenyang Aerospace University
Xinzhu Sun Shenyang Aerospace University

0477 Precision Trajectory Tracking Control for Space Manipulators in On-Orbit Assembly
Maoguo Li Harbin Institute of Technology
Xianglong Kong Shanghai Institute of Satellite Engineering
Jianrong Li Harbin Institute of Technology
Ning Zhang Harbin Institute of Technology
Jianqiao Zhang Shanghai Academy of Spaceflight Technology
Zichun Ma Harbin Institute of Technology
Shiyu Li Harbin Institute of Technology
Ziyi Xu Harbin Institute of Technology
Shengxin Sun Harbin Institute of Technology

0479 Precision Force Control for a Flexible-Base Space Manipulator in Asteroid Surface Excavation
Shiyu Li Harbin Institute of Technology
Xianglong Kong Shanghai Institute of Satellite Engineering
Ning Zhang Harbin Institute of Technology
Jianqiao Zhang Shanghai Academy of Spaceflight Technology
Maoguo Li Harbin Institute of Technology
Zichun Ma Harbin Institute of Technology
Ziyi Xu Harbin Institute of Technology
Shengxin Sun Harbin Institute of Technology
Jianrong Li Harbin Institute of Technology

0079 A Fully Actuated System Approach to Tracking Control for Bridge Crane System
Tianyou Xu Hebei University of Science and Technology
Zhijie Li Hebei University of Science and Technology
Xianbo Hua Hebei University of Science and Technology
Jian Zhang Hebei University of Science and Technology
Wei Liu Hebei University of Science and Technology
Zelong Zhang Hebei University of Science and Technology

0125 Global prescribed performance control for Systems with Input Quantization
Zhijie Li Hebei University of Science and Technology
Wei Liu Hebei University of Science and Technology
Tianyou Xu Hebei University of Science and Technology
Jiaqiang Chen Hebei University of Science and Technology
Jian Zhang Hebei University of Science and Technology
Jinkai Zhao Hebei University of Science and Technology

0371 Leader-following Consensus Control For High-Order Fully Actuated nonlinear MASs
Xiaosong Wang Yanshan University
Liulu Zhang Institute of Electrical Engineering
Changchun Hua Yanshan University
Songsong Liu Yanshan University

0623 Finite-Time Adaptive Sliding Mode Trajectory Tracking Control for Traveling Mechanism
Wei Lv Yanshan University
Guopin Liu Yanshan University
Xi Luo Yanshan University
Yanqiao Wei Yanshan University

0558 Trajectory Tracking Control for 4WID Electric Vehicles with Feedforward Preview
Kaiyang Feng Yanshan University
Boqiang Zhang Henan University of Technology
Guoqiang Chen Henan Polytechnic University
Hebo Yu Zhejiang PanGood Power Technology Co., Ltd.
Tenglong Huang Northwest A&F University
Haohan Zhao Tsinghua University
Xin Ren Beijing Trinova Auto Tech Co., Ltd.
Yahui Zhang Yanshan University

0561 High-Order Fully Actuated Adaptive Control for Hydraulic Active Suspension Actuators
Yahui Zhang Yanshan University
Yiyang Wang Yanshan University
Jiaheng Wang Yanshan University
Boqiang Zhang Henan University of Technology
Yinshu Wang Shandong Lingong Heavy Machinery
Xin Jin Yutong Heavy Industries
Hualiang Tian Zhengzhou Newdafang Heavy Industry Technology
Tenglong Huang Northwest A&F University
Mingli Xie Yanshan University

0515 PPO-NODE: End-to-End Vision-Based Obstacle Avoidance for UAVs
Chaolin Fan Harbin Institute of Technology
Kaixin Xu China North Industries Group Corporation Limited
Jianan Yang Harbin Institute of Technology

0540 Robust and Efficient Model Predictive Attitude Control for Hybrid Quadrotors
Tong Wu Harbin Institute of Technology
Weifeng Du Harbin Institute of Technology
Jianan Yang Harbin Institute of Technology
Ming Liu Harbin Institute of Technology
Lixian Zhang Harbin Institute of Technology

0494 Synthetic CT generation based on the multi-sequence CBCT using Respath-CycleGAN
Songyu Chen Harbin University of Science and Technology
Liwei Deng Harbin University of Science and Technology
Jie Hu Harbin University of Science and Technology
Jing Wang South China Normal University
Xin Yang Sun Yat-sen University Cancer Center
Sijuan Huang Sun Yat-sen University Cancer Center

0495 DuCCA: Dual-domain Cross-coupled Coordinate Attention for Reliable Visible Cues
Jie Xu Harbin University of Science and Technology
Tian Zhou Harbin University of Science and Technology
Liwei Deng Harbin University of Science and Technology

0506 Leader-Following Consensus of Multi-Agent Systems with Markov Process

Ying Yang Chengdu University
Kaibo Shi University of Electronic Science and Technology of China
Ke Tang Chengdu University

0533 Synchronization of reaction-diffusion neural networks with leakage term

Yanyi Cao Chengdu University
Yaping Sun Sichuan University
Nan Zhou Chengdu University
Kaibo Shi University of Electronic Science and Technology of China

0654 Finite-Time Recursive Sliding Mode Control of Uncertain Electro-Hydraulic Servo Systems

Tingting Ran Chengdu University
Yu Wang Chengdu University
Xin Chen University of Electronic Science and Technology of China
Qing Guo University of Electronic Science and Technology of China
Shuai Li Chengdu University

0045 Prescribed-Time Consensus of Multi-Agent Systems via Noise-Robust Data-Driven Control

Zhiwei Zhao Tangshan University
Yi Ren North China University of Science and Technology
Chao Ge North China University of Science and Technology
Binghui Ji North China University of Science and Technology

0135 Distributed Containment Control of Multi-agent Systems via Adaptive Intermittent Communication

Chao Ge North China University of Science and Technology
Baobo Shi North China University of Science and Technology
Zhiwei Zhao Tangshan University
Haoyu Jin North China University of Science and Technology
Mingzhuo Wang North China University of Science and Technology

0085 High-Efficiency Positioning and Swing Control for 3D Overhead Cranes

Heng Zhang Yanshan University
Weili Ding Yanshan University
Yafeng Li Yanshan University

0094 Practical Model Predictive Control for Underactuated 3-D Truck Cranes

Rongjia Lin Nankai University
Zhanxiang Wang Nankai University
Shuang Wang Xuzhou Heavy Machinery Co., Ltd.
Junpeng Sun Nankai University
Biao Lu Nankai University

0353 Digital Twin Robot System for Ceramic Defect Detection and Localization

Jian Zhang Yanshan University
Weili Ding Yanshan University
Heng Zhang Yanshan University

0521 Simultaneous Algebraic Estimation of Pseudo-state and Disturbance

Yanqiao Wei Yanshan University
Dayan Liu INSA Centre Val de Loire
Changchun Hua Yanshan University

0569 A Model and Data Dual-Driven Multiscale Control Framework for Large-Scale Urban Road Networks

Miao Liu Northeastern University at Qinhuangdao
Meng Han Northeastern University at Qinhuangdao

0243 Data-Driven Cooperative Learning Control for Multi-Agent Systems

Na Lin Qingdao University of Science & Technology
Ronghu Chi Foshan University

0345 Robust Fusion and Integrity Assurance for Vehicle Localization

Ge Guo Northeastern University
Guangheng Liu Northeastern University
Jiageng Liu Northeastern University

0396 RHDO: Robust High-Dynamic Radar Odometry

Zhaoye Zhang Northeastern University
Zhengsong Wang Northeastern University
Ge Guo Northeastern University

0527 Prescribed-time tracking control of uncertain MIMO nonlinear systems with unknown control coefficients

Guangtai Tian Sichuan University
Mehdi Golestani Southern University of Science and Technology
He Kong Southern University of Science and Technology

0456 Learning Soil-Adaptive Robotic Excavation via Diffusion Policy

Zichun Ma Harbin Institute of Technology
Jianqiao Zhang Shanghai Academy of Spaceflight Technology
Jianrong Li Harbin Institute of Technology
Ning Zhang Harbin Institute of Technology
Maoguo Li Harbin Institute of Technology
Ziyi Xu Harbin Institute of Technology
Shiyu Li Harbin Institute of Technology
Shengxin Sun Harbin Institute of Technology

0377 Neural-Network-Based Control with Integral Barrier Lyapunov Functions for Nonlinear Active Suspension Systems with Actuator

Yuxuan Fan Northwest A&F University
Menghua Zhang Shandong University
Zhengsheng Chen China University of Mining and Technology
Weizhong Chen Xi'an Ploytechnic University
Haohan Zhao Tsinghua University
Yahui Zhang Yanshan University
Tenglong Huang Northwest A&F University

0262 Distributed Event-Triggered Fuzzy Adaptive Control for Multiple Robotic Arms with Finite-Time Performance Constraints

Enrui Xue Soochow University
Min Ma Soochow University
Yuyang Gao Soochow University

Author Index

P = poster
 SPL = Semi-plenary Lectures
 WSF = Women Scientists Forum

PL = Plenary Lectures
 TJF = Top Journal Forum
 CEF = Chief Engineer Forum

EICF = Editors-in-Chief Forum
 IF = Invited Forum
 GF = Growth Forum

A

Aalam Muhammad Obaid.....SuA11-0225	108
An Boyang.....SuA13-0282	110
An Tianjiao.....SaA14-0245	89
.....SaA14-0246	89
An Xiaoye.....P-0240	127
An Yun.....P-0337	130
Astolfi A.....P-0033	129

B

Bai Bin.....P-0324	132
Bai Haojie.....SaB03-0507	93
Bai Xiaohan.....SuB06-0503	118
Bai Xing.....SaA13-0047	88
Bai Yuzhe.....SuA12-0548	110
Baldi Simone.....P-0033	129
Ban Xiaojun.....SuA04-0224	101
.....P-0187	131
.....P-0566	131
Bao Adiya.....SuA03-0293	101
.....SuA03-0298	101
Bao Dan.....SaB04-0539	94
Bao Tianrui.....SuB09-0634	121
Bao Zhiyong.....SuA06-0092	103
.....SuA06-0106	103
Basin Michael.....P-0188	124
Bhatti Jahan Zaib.....P-0664	126
.....P-0665	126
Bi Kewei.....P-0622	126
Bian Guibin.....TJF-4	41

C

Cai Bicheng.....SaA03-0581	77
Cai Guangbin.....SaA03-0454	78
.....SaA03-0455	78
Cai Miao.....SaB04-0234	93
.....SaB04-0518	94
Cai Xiao.....P-0450	125
Cai Yixu.....SuB08-0305	120
.....P-0469	129
.....P-0475	129
Cao Junwei.....SuA13-0277	110
.....SuA13-0279	110
Cao Pengfei.....P-0484	126
Cao Shuqing.....SaB06-0505	95
.....SaB06-0583	95
Cao Tailai.....SuB06-0389	118
Cao Weihua.....P-0459	126
Cao Yang.....P-0577	125
Cao Yangzhou.....SaA10-0238	85
Cao Yanyi.....P-0533	136

Cao Yipeng.....SuA08-0160	105
.....SuA08-0576	106
.....SuA08-0620	106
Cao Zhanyuan.....SaB08-0650	98
.....SuA14-0492	111
Cen Hanyu.....SaB05-0496	94
Cha Jincheng.....P-0356	131
Chai Li.....SPL1-3	33
Chang Peng.....SuA07-0069	104
Chang Zexuan.....P-0259	130
Che Hanhui.....SuB04-0666	115
Chen Bo.....P-0395	132
.....P-0449	133
Chen Chen.....SaA02-0334	76
Chen Chuang.....SaB04-0539	94
Chen Di.....P-0036	133
.....P-0633	134
Chen Dong.....P-0328	132
Chen Guoliang.....SuA01-0058	99
Chen Guoqiang.....P-0558	135
Chen Hanli.....P-0554	133
Chen Hao.....SuA09-0231	106
Chen Haoran.....SaA08-0113	83
Chen Jialei.....SuA13-0502	110
Chen Jian.....P-0642	127
Chen Jiannan.....SaA09-0205	84
.....SaA09-0207	84
.....SaA09-0247	84
.....SaA09-0429	84
.....SaA09-0553	85
.....SaB01-0392	91
.....SuA07-0167	105
.....SuB09-0331	122
Chen Jiaqiang.....SaA04-0383	78
.....SaB01-0126	91
.....SuB08-0271	120
.....P-0125	134
Chen Kuo.....SuA07-0167	105
Chen Liangming.....SaA10-0573	85
Chen Liheng.....SaA08-0059	83
Chen Lijuan.....SuA06-0632	104
Chen Liqun.....P-0352	129
Chen Meng.....SuA09-0319	107
Chen Peiguang.....SaA14-0339	89
Chen Qiang.....SuB03-0139	114
Chen Qingda.....SuA03-0196	101
.....SuA03-0201	101
Chen Shengjia.....SuB10-0218	122
Chen Shijia.....P-0457	134

Chen Shuzong.....SuB08-0407	121
.....P-0291	128
Chen Songyu.....P-0494	135
Chen Tao.....SuB07-0619	119
Chen Weiqiang.....SuB06-0093	117
Chen Weiru.....SuA10-0292	108
Chen Weizhong.....P-0377	137
Chen Wenbai.....SaA04-0410	78
Chen Xiaotao.....SaA09-0517	84
Chen Xin.....SaB05-0366	94
.....P-0654	136
Chen Xingrui.....SaA10-0211	85
Chen Xueqin.....SaA03-0581	77
.....SaA03-0360	77
.....SaA03-0397	77
Chen Yangjie.....SuB08-0369	120
Chen Yanzhe.....P-0356	131
Chen Yu.....SuA11-0294	109
Chen Yuhan.....SaA02-0321	76
Chen Yuxuan.....P-0584	124
Chen Zhengsheng.....P-0377	137
Chen Zhihua.....SuA05-0659	103
Chen Zhijun.....SaA01-0222	75
Chen Zhuolu.....P-0291	128
Cheng Jiamei.....P-0104	127
.....P-0227	127
Cheng Lan.....SaA13-0057	88
Cheng Wanglei.....SuB02-0072	113
.....SuB02-0165	113
Cheng Yan.....SaA13-0440	88
Cheng Zihao.....SaA03-0454	78
Cheng Ziquan.....P-0554	133
Chi Ronghu.....P-0243	137
Chu Jiale.....SaB07-0342	97
Chu Minghao.....SuB01-0121	112
Chu Zhong.....SaA10-0215	86
Cui Hailong.....SaA02-0402	76
.....SaB07-0399	97
Cui Jingyu.....SaA13-0149	89
Cui Kaixin.....SaA10-0393	85
.....SaA13-0158	89
Cui Qian.....SuA14-0123	111
.....P-0554	133
Cui Ruixue.....SuB07-0625	119
.....P-0401	125
.....P-0528	125
Cui Yang.....P-0048	124
.....P-0001	128
Cui Yongcheng.....SaA07-0213	82

D

Dai Jing.....SuA01-0060	99
Dai Lifei.....SaA08-0113	83
Dai Mingyu.....SaB04-0234	93
Dang Gang.....SaA13-0057	88
Dashkovskiy Sergey.....PL-3	25

Deng Feiqi.....IF1-1	46
Deng Liwei.....P-0494	135
.....P-0495	135
Ding Jianzhao.....CEF3	69
Ding Weili.....WSF5	67
.....SuB07-0338	119
.....P-0085	136
.....P-0353	136
Ding Yi.....SaA01-0241	75
Dong Bo.....SaA14-0246	89
Dong Chenyu.....SaA14-0404	90
Dong Hao.....SaA13-0083	88
Dong Hongli.....WSF1	63
Dong Junting.....SuA10-0285	107
Dong Lewei.....SuA06-0150	104
Dong Ranxin.....SuB09-0223	121
.....P-0497	129
Dong Ruiqi.....SuB06-0098	117
.....SuB09-0596	121
Dong Weichao.....P-0227	127
Dong Wenhui.....P-0344	125
Du Dajun.....SuB08-0369	120
Du Runle.....P-0187	131
.....P-0566	131
Du Weifeng.....P-0540	135
Du Xueqiang.....P-0287	124
Du Yuehao.....SuA06-0106	103
Du Zhiwei.....SaA13-0057	88
Duan Guangren.....SaA01-0222	75
.....SaA01-0241	75
.....SaA01-0248	75
.....SaA01-0286	75
.....SaA01-0498	76
.....SaA03-0284	77
.....SaA03-0411	77
.....SaA04-0111	79
.....SaA10-0573	85
.....SaA10-0215	86
.....SaA11-0555	86
.....SaA11-0582	86
.....SaB01-0347	91
.....SaB01-0590	91
.....SaB02-0152	91
.....SaB03-0500	93
.....SuA04-0224	101
.....SuA05-0192	102
.....SuA05-0303	103
.....SuA12-0548	110
.....SuB06-0110	118
.....SuB10-0218	122
.....SuB10-0309	122
.....SuB10-0316	122
.....SuB10-0643	123
.....SuB10-0099	123
.....SuB10-0107	123

.....P-0567	124	Gao Yabin.....	SuA09-0435	107	Han Dong.....	SaB05-0499	94	Hua Changchun	SaA05-0255	79			
.....P-0571	124	Gao Yajun.....	SuA04-0288	102	Han Fei.....	SaB06-0062	95	.....SaA05-0439	80			
.....P-0585	124	Gao Yan.....	SaB03-0221	92	.....SaB06-0505	95	.....SaA06-0312	81			
Duan Haibin.....	IF3-4	58	Gao Yiwei.....	SaA12-0425	87	.....SaB06-0583	95	.....SaA06-0362	81		
Duan Lianbin.....	SuA06-0629	104	Gao Yuyang.....	SaA08-0261	84	.....SaB06-0639	96	.....SaA07-0509	83		
Duan Yulin.....	SuA04-0082	101	.....P-0262	137	Han Honggui.....	IF2-3	52	.....SaA09-0120	85		
.....SuB10-0107	123	Gao Zhaohui.....	SuA13-0570	110	Han Jiazheng.....	SaA08-0113	83	.....SaB01-0392	91			
F													
Fan Chaolin.....	P-0515	135	Gao Zhenyu.....	SaA01-0647	75	Han Meng.....	P-0569	136	.....SaB02-0621	92		
Fan Chenchen.....	SuA01-0131	99	.....SuA08-0365	105	Han Shiyu.....	SaB03-0500	93	.....SuB07-0338	119		
Fan Hao.....	P-0185	128	Gao Zhiyi.....	P-0662	128	Han Song.....	SaA07-0163	82	.....SuB07-0340	119		
Fan Huilai.....	P-0227	127	Garza-Alonso Alison	P-0188	124	.....SaA07-0164	82	.....SuB07-0522	119		
Fan Jiayi.....	SaA12-0426	87	Ge Chao.....	P-0045	136	Han Yuntao.....	SuA12-0466	110	.....SuB07-0529	119		
Fan Jinpeng.....	SaA11-0555	86	.....P-0135	136	Hao Kuangrong.....	SaA13-0440	88	.....SuB07-0625	119		
.....SaA11-0582	86	Geng Qing.....	SuA08-0160	105	Hao Lingguang.....	SaA13-0440	88	.....SuB08-0305	120			
Fan Xuen.....	SaA03-0454	78	.....SuA08-0620	106	Hao Man.....	SuB07-0252	118	.....SuB08-0370	120		
Fan Yuxuan.....	P-0377	137	Geng Yanjun.....	P-0528	125	.....SuB07-0268	119	.....SuB09-0223	121		
Fang Anda.....	SuA04-0224	101	.....P-0534	129	Hao Mingrui.....	P-0467	131	.....P-0401	125		
Fang Hupeng.....	SaB04-0539	94	Golestani Mehdi.....	P-0527	137	Hao Yibo.....	SaA07-0509	82	.....P-0528	125		
Fang Xu.....	SuA06-0133	103	GongMengtong.....	SaB02-0061	91	Hao Yumeng.....	P-0104	127	.....P-0497	129		
Fang Yiming.....	SuA08-0274	105	Gu Chaochen.....	P-0185	128	Hasan Muhammad Noman	P-0664	126	.....P-0534	129		
.....P-0301	128	Gu Guoxiang.....	IF3-1	55	.....P-0665	126	.....P-0371	135	.....P-0521	136
Fang Yue.....	SaA08-0179	84	.....P-0368	124	He Fan.....	SaA08-0113	83	.....P-0521	136		
Fei Minrui.....	SuB08-0369	120	Gu Haibo.....	SaA02-0460	77	He Huili.....	P-0655	129	Hua Jingyi.....	SuA03-0298	101		
Feng Jun-e.....	SuB04-0550	115	.....SaA12-0426	87	He Kaixun.....	P-0484	126	Hua Xianbo.....	P-0079	134		
.....SuB04-0063	116SaB05-0384	94	He Xiangda.....	SaA09-0205	84SaA09-0207	84	Huang Fei.....	SaB06-0639	96		
.....SuB05-0489	116	Gu Shaomeng.....	SuA08-0620	106SaA09-0207	84	He Xiaoqiang.....	SaB04-0483	93	Huang Jie.....	SuB02-0128	114	
Feng Kaiyang.....	P-0558	135	Gu Yu.....	SaA07-0213	82	He Xingjie.....	SuA05-0260	102	Huang Jing.....	P-0137	126		
Feng Liang.....	SaA03-0295	77	Guan Tao.....	SaA10-0512	85	He Xinyi.....	SaA01-0647	75	Huang Jinyang.....	SaA01-0141	75		
.....SuB10-0099	123	Guan Xiaoyi.....	SaB01-0347	91SaB02-0204	92SuB02-0204	92	Huang Jiqian.....	P-0612	133		
Feng Shuaigang.....	SaA04-0640	79	Guan Yifan.....	SuB06-0631	118	He Xiongxiang.....	SuB03-0139	114	Huang Jiuyang.....	SuB09-0637	121		
Feng Shuyao.....	SaA06-0493	81	Guan Zhe.....	SuB07-0252	119	He Yuhao.....	P-0156	125	Huang Keke.....	SaB03-0269	93		
Feng Tao.....	SuA12-0418	109	.....SuB07-0268	119	Hissel Daniel.....	P-0642	127	Huang Ling.....	SuA12-0258	109		
Feng Xiaoqian.....	SaA08-0513	83	.....SuB07-0338	119	Hong Chen.....	SuA03-0196	101	Huang Minjuan.....	SuA05-0303	103		
Feng Zhiyuan.....	SuB03-0022	115SuB07-0340	119SuA03-0201	101SuB10-0316	122	Huang Peng.....	SuA12-0190	109		
Fu Fangzhou.....	SaB06-0508	96	.....SuB07-0619	119	Hong Junjie.....	SaA08-0513	83	Huang Qin.....	SuB09-0206	121		
Fu Lingdi.....	SuB07-0252	119	Guan Ziao.....	P-0306	127	Hou Kexin.....	SuA03-0293	101	Huang Shengrui.....	P-0108	129		
Fu Rui.....	SaA08-0113	83	Guo Ge.....	SaB02-0204	92	Hou Mingzhe.....	SaA03-0360	77	Huang Sijuan.....	P-0494	135		
Fu Ruijie.....	SuA04-0481	102P-0345	137SuB06-0491	118SuB06-0503	118	Huang Tenglong.....	SaA13-0119	88		
Fu Yichuan.....	SaA08-0574	83P-0396	137SuB06-0503	118	Hou Zheng.....	SaB07-0658	97P-0558	135		
G													
Gao Baokang.....	SaB03-0269	92	.....SuA08-0365	105	Hou Zhongsheng.....	SPL1-1	31	.....P-0561	135		
Gao Chen.....	SaB03-0203	92	Guo Jiashuai.....	SuA07-0390	104	Hu Jie.....	P-0494	135P-0377	137			
.....SaB03-0280	93	Guo Li.....	SuB02-0562	113	Hu Jun.....	SuA10-0290	108	Huang Xin.....	SaA09-0598	85			
.....SuA10-0285	107	Guo Qing.....	P-0654	136SuA10-0292	108SuA10-0292	108	Huang Xiuwei.....	SuA05-0172	102		
Gao Fangzheng.....	P-0395	132	Guo Qingzheng.....	SaA08-0059	83	Hu Junying.....	SuA10-0290	108SuA14-0123	111			
.....P-0449	133	Guo Runan.....	P-0656	126	Hu Liyao.....	SuA04-0288	102	.....SuA14-0193	111			
Gao Haiyan.....	SaA12-0520	87	.....P-0644	126	Hu Qinglei.....	IF4-2	61	.....P-0554	133		
Gao Huijun.....	EiCF-3	28	Guo Runsheng.....	SaA06-0453	81	Hu Shuangyi.....	SuB03-0139	114	Huang Yi.....	SaB01-0590	91		
Gao Mengqi.....	SuA09-0183	107	Guo Xinhe.....	P-0355	130	Hu Wenkai.....	P-0459	126	Huang Yu.....	P-0337	130		
Gao Qing.....	SaA12-0425	87	Guo Yajing.....	P-0302	128	Hu Yanqing.....	TJF-7	44	Huang Zixin.....	SuA12-0190	109		
Gao Ruizhou.....	SuB01-0299	113	Guo Yanning.....	P-0137	126	Hu Yutong.....	SaA05-0281	79	Huo Tao.....	SaA03-0397	77		
Gao Wei.....	SuA06-0632	104	Guo Yu.....	SuB10-0448	122	Hu Zeqi.....	P-0642	127	J				
Gao Xiaoyang.....	P-0433	133	Guo Yushen.....	SaB06-0062	95	Hu Zeyun.....	SaA05-0281	79	Ji Binghui.....	P-0045	136		
Gao Xinlei.....	SaA12-0300	87	H										
			Han Chunyan*.....	SuA11-0294	109	Hu Zongyang.....	SuB07-0340	119	Ji Wenqiang.....	SaA06-0304	81		
			Han Chunyan**.....	SuA11-0651	109								

Ji Xiangai.....SuA12-0217	109	.....SuA09-0239	106	Li Jiahui.....SaB03-0214	92	.....P-0479	134
Ji Zebin.....SaA14-0245	89	Kong He.....SaA10-0573	85	Li Jiangrong.....SuA01-0140	99	.....P-0456	137
.....SaA14-0246	89	.....SaA11-0572	86	Li Jianrong.....P-0477	134	Li Shuai.....P-0654	136
Jia Jiangbo.....SaB08-0349	98	.....P-0527	137	.....P-0479	134	Li Shujun.....SaB04-0445	93
Jia Longfei.....P-0302	128	Kong Xianglong.....P-0477	134	.....P-0456	137	Li Tong.....SuB06-0098	117
Jia Qiang.....SaB04-0445	93	.....P-0479	134	Li Jianxiong.....SaA06-0362	81	Li Wenhao*.....SaB07-0348	96
Jia Sijia.....P-0089	124	Kong Xinrui.....SaA05-0439	80	.....SuA08-0274	105	Li Wenhao**.....SuA12-0466	110
Jia Wushan.....SuA01-0103	99	Kovacs Levente.....SaB01-0590	91	Li Jiaojiao.....SuB08-0376	120	Li Xianglong.....SuA06-0632	104
Jia Yuke.....SuB05-0323	117	Kuang Jiyuan.....P-0306	127	Li Jiashuai.....SuA12-0466	110	Li Xiaodong.....SuB03-0132	114
Jiang Bin.....PL-1	23	Kwok Ka-Wai.....SuA01-0060	99	Li Jiaying.....SuA10-0292	108	Li Xiaolei.....SuA06-0133	103
.....SaB02-0086	91	L		Li Jinna.....SaA11-0257	86	.....SuA06-0632	104
.....SuB01-0102	112	Lai Yongzhuo.....SuB06-0631	118	Li Jixiang.....SuB01-0299	113	.....P-0036	133
.....SuB01-0121	112	Lam James.....SuA01-0131	99	Li Junpeng.....SaA04-0474	79	.....P-0633	133
.....SuB02-0071	113	Lan Ge.....P-0566	131	.....SaA06-0312	81	Li Xiaomiao.....SuA06-0092	103
.....SuB02-0072	113	Lang Kaiwen.....SuA02-0276	100	.....SaA06-0617	81	.....SuA06-0106	103
.....SuB02-0562	113	Lei Bingxin.....SuA10-0292	108	Li Kuo.....SPL2-3	37	Li Xinqi.....SaA11-0257	86
.....SuB02-0095	113	Lei E.....P-0166	127	.....SuA07-0124	104	Li Xينو.....SaB06-0630	96
.....SuB02-0165	113	Lei Lei.....SuB01-0100	112	.....SuA07-0390	104	.....SuB09-0637	121
.....SuB02-0070	114	Lei Zitong.....SuB07-0252	119	.....SuA07-0458	105	Li Xuedong.....SaA03-0284	77
.....SuB02-0128	114	Leng Zhaoyang.....P-0051	133	Li Li.....SuA08-0160	105	Li Xuefang.....SuB03-0132	114
.....SuB05-0097	117	Li Aili.....P-0355	130	.....SuA08-0576	106	Li Xueyang.....SuA11-0294	108
Jiang Bin.....SuB01-0129	112	.....P-0359	131	.....SuA08-0620	106	.....SuA11-0651	109
Jiang Changhui.....SaB04-0234	93	Li Aming.....TJF-6	43	Li Linlin.....SaB03-0507	93	Li Yafeng.....SaA04-0410	78
Jiang Dalong.....SaA09-0553	84	Li Beibei.....P-0155	125	.....P-0382	134	.....SaA04-0640	79
Jiang Guihu.....P-0166	127	Li Bin.....SaA10-0211	85	.....P-0415	134	.....SaA04-0645	79
Jiang Huaiyuan.....P-0563	133	.....SaA10-0238	85	Li Liwei.....SaB05-0496	94	.....SaB01-0392	91
Jiang Hucheng.....SaA14-0245	89	.....SaA10-0441	85	Li Long.....SaA14-0409	90	.....SuB07-0619	119
Jiang Ju.....SuB01-0134	112	.....SaA10-0512	85	Li Maoguo.....P-0477	134	.....SuB07-0625	119
Jiang Nan.....SaA12-0473	87	.....SaB01-0347	91	.....P-0479	134	.....P-0085	136
Jiang Ning.....SaB03-0203	92	.....SaB02-0235	92	.....P-0456	137	Li Yan.....SuB04-0666	115
Jiang Wenjie.....SuB02-0562	113	Li Bing*.....SuA12-0258	109	.....P-0552	133	Li Yankai.....SaA04-0253	78
Jiang Yanji.....SaA13-0083	88	.....SuA12-0466	110	Li Mingjun.....SaA04-0111	79	Li Yanlin.....P-0450	125
Jiang Yizhe.....P-0306	127	Li Bing**.....SuB10-0448	122	.....SuB10-0309	122	Li Yibo.....SuB07-0268	119
Jiang Yuhao.....SaA13-0119	88	Li Bo.....SaB07-0373	97	Li Mingyang.....P-0649	128	Li Yiliang.....SuB04-0063	116
Jiang Yuqi.....P-0051	133	Li Caihua.....SaB03-0221	92	Li Na.....SuA10-0250	107	Li Yingxu.....SaA06-0053	80
Jiao Hongyu.....SaA13-0083	88	Li Changxi.....SuB04-0550	115	Li Ning.....SaA03-0581	77	.....SuA06-0629	104
Jiao Shiyu.....SaA05-0657	80	Li Cheng.....P-0568	131	Li Peiran.....P-0068	132	Li Yong.....SuA05-0659	103
Jiao Xiaohong.....SaA13-0119	89	Li Chengxiang.....SuB05-0216	116	Li Peng*.....SuA08-0443	105	Li Yuehang.....SuA13-0570	110
Jin Haoyu.....P-0135	136	Li Enpu.....SaA06-0304	81	Li Peng**.....SuB03-0170	114	Li Yuyan.....SuB04-0044	115
Jin Jiabin.....P-0355	130	Li Fan.....SuB03-0132	114	.....SuB03-0171	114	Li Yuze.....SuB08-0271	120
.....P-0356	131	Li Fang.....SaB03-0214	92	.....SuB03-0272	115	Li Ze.....SuA08-0365	105
.....P-0359	131	Li Fangyuan.....SaA04-0410	78	Li Pengfei.....P-0302	128	Li Zewei.....SuB04-0550	115
Jin Kaijing.....SaA13-0158	89	Li Fangzheng.....SuB01-0102	112	Li Pengjiao.....P-0166	127	Li Zhan.....SPL2-4	38
Jin Mingwei.....SaA08-0179	83	Li Gang*.....SaA13-0083	88	Li Pengyu.....SaA13-0158	89	Li Zhengyan.....P-0137	126
Jin Wenfeng.....SaB04-0483	93	Li Gang**.....SaA13-0149	89	Li Ping.....SuB10-0218	122	Li Zhengyang.....SuA12-0418	109
Jin Xin.....SaA13-0119	89	Li Guanghui.....SaB02-0152	91	.....SuB10-0309	122	Li Zhijie.....SaA04-0383	78
.....P-0561	135	Li Guicun.....SaB06-0639	95	.....SuB10-0099	123	.....SaB01-0126	90
Jing Xinyi.....P-0155	125	Li Guogong.....P-0328	132	Li Rong.....SaA13-0047	88	.....SuB08-0271	120
Jingyang Sun.....SaA08-0050	83	Li Haifang.....SaA09-0120	85	Li Rui.....SuA05-0526	103	.....P-0079	134
K		.....P-0363	132	Li Ruixue.....SuA11-0230	108	.....P-0125	134
Kang Haodong.....SuB06-0389	118	.....P-0118	132	Li Ruopeng.....SuB04-0145	116	Li Zhixue.....P-0649	128
Kang Tianyu.....P-0055	124	Li Haiming.....SuA11-0541	109	.....SuB04-0159	116	Li Zhongliang.....P-0642	127
Ke Wenxiao.....SuB03-0626	115	Li Hao.....SaA04-0640	79	Li Shenghui.....SuB03-0560	115	Li Zhun.....P-0337	130
Kong Deming.....SaB03-0203	92	Li Haolin.....SaA14-0408	90	Li Shikai.....P-0324	132	Li Zhuoyang.....SaA04-0253	78
Kong Deshan.....SuA09-0231	106	Li Hongchao.....SaA06-0091	81	Li Shiyu.....P-0477	134	Li Zhuoyu.....SaA11-0422	86

.....P-0456	137	.....SuB08-0376	120	Shao Xiangyu.....SuA09-0318	106	.....SaB06-0080	96
Mao Ningyu.....P-0156	125	.....SuB08-0407	121	Shao Zhendong.....SuA06-0092	103	.....SuB09-0206	121
Mao Zehui.....SuB02-0128	114	Qian Junlei.....P-0287	124	Shen Baoyi.....SuA14-0193	111	Sun Jian*.....IF3-5	59		
Mei Jie.....SuB06-0093	117	Qian Tianyi.....SaA13-0083	88	Shen Bohang.....SuA01-0140	99	Sun Jian*.....SaA14-0409	90		
Men Yikai.....SuA03-0114	100	Qian Yangyang.....SaA02-0436	76	Shen Gang.....SuA04-0288	102	Sun Jiaolong.....SuA05-0260	102		
Meng Bo.....SuB02-0070	114	Qian Ye.....P-0469	129	Shen Hongbin.....IF4-1	60	Sun Jun.....SaB06-0508	96		
Meng Qingzhuo.....SaA14-0408	90	Qian Zhen.....SaB06-0508	96	Shen Jiajun.....SaA12-0419	87	Sun Junpeng.....P-0094	136		
Meng Xianglei.....SaA01-0286	76	Qiang Jiaping.....SuA08-0576	106	Shen Qiang.....SuB01-0134	112	Sun Kangkang.....SaA08-0179	84		
Meng Yifan.....SaA07-0147	82	Qiao Senjie.....SaA07-0164	82	Shen Xiaoning.....SuA09-0231	106	Sun Mengqi.....SaB08-0349	98		
Mi Ruohan.....P-0577	125	Qiao Shan.....SaA10-0393	85	.....SuA09-0239	106	Sun Ning.....SaA07-0458	105	
Miao Chaoqiang.....P-0589	126	Qiao Tingting.....SaA12-0480	87	Shen Yihui.....SaA05-0388	80	Sun Ningsen.....SaA05-0255	79		
Miao Xuezheng.....P-0256	128	Qiao Yalin.....P-0068	132	Sheng Li.....SaB01-0314	91	Sun Rui.....SaA07-0147	82		
Min Bo.....SaA02-0462	76	Qin Haixing.....SaA13-0149	89	.....SaB02-0061	91	Sun Shengxin.....P-0477	134	
.....SuA01-0131	99	Qin Tian.....SuB07-0252	118	.....SuA11-0541	109	.....P-0479	134
Min Huifang.....SaA05-0367	80	Qin Yi.....SaA14-0245	89	Shi Baobo.....P-0135	136	.....P-0456	137	
.....SaA05-0385	80	.....SaA14-0246	89	Shi Hanzhe.....SuA01-0058	99	Sun Shixiang.....SuA06-0150	104	
.....SaA05-0388	80	Qiu Jianbin.....IF4-4	62	Shi Haoyang.....SuA02-0276	100	Sun Wei.....SuB05-0323	117		
.....SaA05-0391	80	.....SaA08-0574	83	Shi Jiantao.....SaB04-0539	94	.....SuB05-0464	117
Mou Zonglei.....P-0649	128	.....SaA08-0179	84	Shi Kaibo.....P-0450	125	.....SuB05-0667	117
Mu Dianrui.....SaB01-0392	91	Qiu Jiongzhi.....SuA07-0124	104	.....P-0506	136	Sun Weichao.....P-0168	127	
.....SuB07-0619	119	.....SuA07-0458	105	.....P-0533	136	Sun Weishang.....P-0401	125
Mu Jinzhen.....SaB06-0062	95	Qiu Peiyu.....P-0649	128	Shi Le.....SaA04-0474	79	Sun Xiaoyun*.....P-0052	131		
N				Quan Sheng.....CEF1	68	Sun Xiaoyun**.....SuB01-0134	112		
Ning Chao.....SPL2-2	36	Quan Yunliang.....P-0589	126	.....EiCF-2	27	Sun Xinzhu.....P-0457	134	
.....P-0242	131	R				Shi Wenrui.....SaA01-0141	75	Sun Yaping.....P-0533	136
Ning Jiayan.....P-0656	126	Ran Tingting.....P-0654	136	Shi Xuanfeng.....P-0232	125	Sun Yuchen.....P-0378	125		
Ning Zhaoke.....SuA05-0260	102	Ren Bei.....SaA04-0645	79	Shi Yiming.....P-0461	134	Sun Yutao.....SaB06-0505	95		
Niu Ben.....SaA11-0638	87	Ren Jianwei.....P-0364	129	Shi Yingjing.....SuA05-0526	103	.....SaB06-0583	95	
O				Ren Shiji.....SuB01-0129	112	Song Cheng*.....SaA08-0050	83	Sun Zhenlian.....P-0641	128
Ou Junfeng.....SaA08-0513	83	Ren Weijie.....SaA04-0111	79	Song Cheng**.....SuA05-0172	102	Sun Zimo.....SaA08-0261	84		
P			SaA10-0573	85	T			
Pan Qi.....SuB01-0297	112	.....SaB02-0152	91	Song Guangyu.....P-0155	125	Tan Boqun.....SuA11-0225	108	
Pan Qiyang.....P-0185	128	.....SuB06-0110	118	Song Huihui.....SuA09-0435	107	Tan Chong.....SuA10-0292	108	
Pan Yuepeng.....SuB10-0448	122	.....SuB10-0107	123	Song Shenmin.....P-0166	127	Tan Feng.....SuB06-0491	118	
Pan Zhengyang.....SuB01-0297	112	Ren Xin.....P-0558	135	Song Shuang.....SuB03-0022	115	.....SuB06-0503	118	
Pang Keli.....SuB08-0305	120	Ren Yi.....P-0045	136	Song Shuzhi.....SaB08-0580	98	Tan Fuxiao.....P-0622	126		
Pei Haizheng.....SaA07-0148	82	Ren Zhen.....SuA12-0258	109	Song Yiting.....P-0484	126	.....P-0530	126	
Pei Haoran.....SaB05-0413	95	Rodriguez-Ramirez Pablo.....P-0188	124	Song Yunxia.....SuA02-0326	100	.....P-0655	129	
Pei Wenliang.....SuA07-0458	105	Rui Guo.....SaB04-0549	93	.....P-0363	132	.....P-0628	129
Peng Feng.....SuA02-0276	100	S			P-0118	132P-0568	131
Peng Haichao.....SaA14-0403	90	Sang Hong.....SaA11-0422	86	Song Yuxuan.....SaA14-0409	90	Tan Shaolin.....SaA12-0426	88		
.....SaA14-0404	90	Sha Zhichao.....P-0032	132	Song Zhuoyue.....P-0662	128	.....SaA12-0427	88	
Peng Wen.....SuB08-0446	121	Shahid Faizan.....P-0665	126	Su Guanlong.....SuA05-0260	102	Tan Zhengyang.....P-0355	130		
Peng Wenjun.....P-0382	134	Shan Wenqi.....SaB07-0658	97	Su Jingyi.....SaA12-0425	87	.....P-0359	131	
Peng Xiuhui.....SuB01-0297	112	Shang Baichun.....SuA09-0239	106	Su Qi.....TJF-9	45	Tang Huaibin.....SuB05-0538	116		
.....SuB01-0299	113	.....SuA09-0319	106	Su Xiaoming.....SuA03-0293	101	Tang Hui.....SuB01-0297	112	
Pi Chouqin.....P-0642	127	Shang Chengyong.....P-0378	125	.....SuA03-0298	101	.....SuB01-0299	112
Q				Shang Rui.....SuB05-0667	117P-0209	127	Tang Ke.....P-0506	136
Qi Minghan.....SuB08-0446	121	Shang Yanling.....P-0395	132	Sun Danping.....P-0033	129	Tang Rui.....SuA09-0435	107		
Qi Ruiyun.....SuB05-0097	117	.....P-0449	133	Sun Deke.....SaA08-0574	83	Tang Tianyi.....SuB05-0538	116	
Qi Wei.....P-0036	133	Shang Yiming.....SaA03-0454	78	Sun Guang.....SuA13-0502	110	Tang Yang.....EiCF-5	30		
.....P-0633	134	Shao Guangxin.....SuA07-0078	104	Sun Hongbo.....SaA14-0408	90	Tang Yu.....SuA07-0078	104		
Qian Cheng.....SuB08-0370	120	Shao Nuan.....P-0291	128	Sun Hongrui.....SaA04-0474	79	Tang Yujie.....P-0414	133		
.....SuB08-0375	120	.....P-0301	128	Sun Huanbo.....SaA14-0403	90	Tao Jie.....SuA05-0172	102	
.....SuB08-0375	120	Shao Shuyi.....SaA04-0253	78	Sun Huijie.....SaB06-0077	96	.....SuA14-0123	111	

Tian Congcong	SuA14-0123	111	Wang Jingyi	SaB04-0549	93	Wang Xiubo	SaA01-0647	75	Wen Li	TJF-2	40
Tian Dapeng	SaB07-0332	96	Wang Jun	EiCF-1	26		SaA01-0498	76	Wen Liyan	SuB01-0129	112
	SaB07-0348	97	Wang Licheng	SuA10-0236	107		SaB02-0204	92	Weng Zhi	SuA03-0196	101
	SaB07-0350	97	Wang Lili	SaA02-0334	76	Wang Xuanqi	SuB03-0171	114		SuA03-0201	101
	SaB07-0373	97	Wang Meng	SaA14-0408	90	Wang Xueying	P-0032	132	Wu Aiguo	SuB09-0596	121
Tian Guangtai	SaA10-0441	85	Wang Mengjiao	SaA14-0403	90	Wang Xulei	SuA08-0160	105		P-0584	124
	SaB01-0347	91	Wang Minghao	SaB05-0496	94		SuA08-0620	106	Wu Chengwei	SuA09-0318	106
	P-0527	137		SaB05-0499	94	Wang Yanhai	SuB07-0522	119	Wu Dehao	SaB03-0269	92
Tian Hualiang	P-0561	135	Wang Mingzhuo	P-0135	136	Wang Yaning	SuA11-0651	109	Wu Dongrui	EiCF-4	29
Tian Jianyan	SaA13-0149	89	Wang Peng	SuB08-0369	120	Wang Yantao	SaA01-0286	76	Wu Hangzhe	SaA07-0142	82
Tian Wei	SaB02-0621	92		SuB08-0370	120	Wang Yazhuo	P-0166	127	Wu Hao	P-0395	132
	P-0534	129		SuB08-0375	120	Wang Yijing	SuA08-0443	105		P-0449	133
Tian Yuping	SaA02-0423	76	Wang Peng	SuB02-0088	113	Wang Yingjie	SaA06-0493	81	Wu Haobin	SaB06-0077	96
Tong Lu	P-0089	124	Wang Pengyu	P-0137	126		SuB01-0101	112	Wu Jiawei*	SuA12-0258	109
Tong Mu	SuA09-0435	107	Wang Ping	SaA03-0295	77	Wang Yinsheng	SaB05-0406	95	Wu Jiawei**	SuA12-0466	110
Tuo Liheng	SuA09-0318	106		SuB10-0099	123	Wang Yinshu	SaA13-0119	89	Wu Longfei	SaA14-0398	90
	W		Wang Pinlin	SaB05-0501	94		P-0561	135	Wu Lulu	SaA12-0300	87
Wan Wenzhang	P-0166	127	Wang Qian	P-0051	133	Wang Yiyi	P-0561	135	Wu Minhao	SuB02-0088	113
Wan Xueling	SuB04-0145	116	Wang Qiudi	SuA13-0282	110	Wang Yongchao	SaA03-0455	78	Wu Qiangying	SuB05-0097	117
	SuB04-0159	116	Wang Rui	SuB03-0170	114	Wang Yongwei	SuB08-0407	120	Wu Shuang	P-0497	129
Wan Yan	SaA02-0436	76		SuB03-0171	114	Wang Youqing	IF4-3	61	Wu Shuangshuang	SaA04-0410	78
Wan Yong	SuB01-0100	112		SuB03-0272	115	Wang Yu	P-0654	136		SaA04-0645	79
Wang Annan	SaB06-0080	96		SuB03-0560	115	Wang Yueling	SaA06-0053	80	Wu Siqing	SaB03-0269	92
Wang Chenxi	SaB03-0263	92	Wang Rundong	P-0306	127	Wang Yurui	P-0597	132	Wu Tao	SaA02-0402	76
Wang Chenyi	SuA03-0114	100	Wang Shihao	P-0109	130	Wang Yutang	SaB07-0348	97	Wu Tiantian	SaB03-0221	92
Wang Chong	SaA09-0429	84	Wang Shuang	P-0094	136		SaB07-0373	97	Wu Tong*	SaA03-0454	78
Wang Chuhan	P-0104	127	Wang Shuo	P-0368	124		SaB07-0374	97	Wu Tong**	P-0540	135
	P-0227	127	Wang Shuzhi	SuB08-0446	121	Wang Yuwei	SaA14-0339	89	Wu Xiang	SaB08-0650	98
Wang Da*	SaA04-0645	79	Wang Tan	SaA11-0582	86	Wang Yuzhong	SaA11-0412	86	Wu Xinghong	SaA09-0598	85
Wang Da**	SuA07-0069	104	Wang Tianyi	SuB06-0098	117	Wang Zhanxiang	P-0094	136	Wu Xingtang	SuA14-0635	111
Wang Dayi	IF3-3	57	Wang Tianyue	SaA07-0148	82	Wang Zhao	SaA14-0409	90		SuA14-0556	111
Wang Dian	P-0068	132	Wang Tong	SaA11-0257	86	Wang Zhenfeng	SuB07-0619	119	Wu Xuekai	SaA07-0509	82
Wang Dong	GFB2	73	Wang Wei*	SaA12-0419	87	Wang Zhengsong	P-0396	137	Wu Xuyang	SaA02-0423	76
Wang Dongming	SuB03-0170	114		SaA12-0427	88	Wang Zhenqian	SaB05-0501	94	Wu Yubo	SaA07-0147	82
Wang Fuyong	P-0055	124	Wang Wei**	SaA14-0339	89	Wang Zhibo	SuB07-0529	119		SaA07-0148	82
Wang Gaojie	P-0662	128	Wang Wei***	SuA11-0294	109	Wang Zhishu	SaB07-0374	97	Wu Yuhu	SaB07-0658	97
Wang Han	P-0242	131		SuA11-0651	109	Wang Zhongshi	SaB07-0350	97	Wu Yunhua	P-0068	132
Wang Hanbin	SuA14-0193	111	Wang Weiling	SaB04-0483	93	Wang Zihua	P-0484	126	Wu Yuqiang*	SaA12-0520	87
Wang Haojun	P-0415	134	Wang Wenjie	SuA03-0196	101	Wang Zilu	P-0414	133	Wu Yuqiang*	SuA09-0318	106
Wang He	SaA14-0404	90		SuA03-0201	101	Wang Zuo	P-0344	125	Wu Yuyao	SaB06-0080	96
Wang Hongbin	SaA06-0053	80	Wang Wenqi	SaA06-0617	81	Wei Bowen	SaA08-0513	83		P-0032	132
Wang Hongyu	P-0021	132	Wang Wenxuan	P-0242	131	Wei Caisheng	SuA14-0465	111	Wu Zengbin	SaA07-0067	82
Wang Huanqing	P-0089	124	Wang Wenye	P-0108	129	Wei Junchao	SaA12-0480	87	Wu Zhengguang	GFA4	72
Wang Hui	P-0344	125	Wang Xianbo	SuB10-0027	122	Wei Rao	SaB01-0392	91	Wu Zhigang	TJF-5	42
Wang Jiaheng	P-0561	135	Wang Xiangkun	P-0450	125	Wei Xinjiang	SuA06-0150	104	Wu Zhihui	SaB03-0221	92
Wang Jialiang	P-0227	127	Wang Xiaoguang	SaA01-0286	75	Wei Yanqiao	SuB07-0522	119		X	
Wang Jiange	SuA06-0133	103	Wang Xiaojuan	SaA10-0441	85		SuB07-0529	119	Xi Kaihua	SuB04-0063	116
	SuA06-0632	104	Wang Xiaosong	P-0371	135		P-0623	135		SuB05-0489	116
	P-0633	133	Wang Xiaoyu	SuB08-0446	121		P-0521	136	Xi Lele	P-0104	127
Wang Jihe	SaB06-0077	96	Wang Xin	SuB03-0560	115	Wei Zhangyu	SaB08-0544	98	Xia Chengyi	SaB04-0421	93
	SaB06-0080	96	Wang Xinhua	P-0052	131	Wei Ziang	SuA12-0190	109	Xia Jianwei	SuA01-0058	99
Wang Jilong	SaB08-0650	98	Wang Xinyu	SaA09-0517	84	Wen Congyu	SaB05-0501	94		SuB05-0330	117
	SuA14-0492	111		SuA09-0183	107	Wen Guanghui	GFA5	72	Xia Jingping	SuB02-0070	114
Wang Jing	P-0494	135		SuA10-0184	108	Wen Guilin	SaA13-0119	89	Xia Shixin	SaA05-0367	79
Wang Jingbo	P-0233	125	Wang Xitong	SuA08-0274	105	Wen Haobo	SuB01-0134	112		SaA05-0388	80

Xia Yunyang	SaA01-0141	75	Xu Xuanbin	SuA03-0115	101	Yang Yiheng	SuB06-0631	118	Yu Yongheng	P-0352	129
Xiao Fuzheng	P-0352	129	Xu Yiwei	SuA12-0190	109		SuB09-0636	121	Yu Yongyuan	SuB04-0550	115
Xiao Yu	SaB06-0077	96	Xu Yuhan	SuA14-0635	111	Yang Ying	P-0506	136	Yu Ziquan	SuB01-0121	112
	P-0324	132		SuA14-0556	111	Yang Yuguang	SaB05-0413	95	Yuan Haoming	SuA14-0465	111
Xie Mingli	P-0561	135	Xu Yuhang	SuB02-0562	113	Yang Yungsi	SuB05-0489	116	Yuan Heling	SuA06-0133	103
Xie Tuo	P-0155	125	Xu Yuhua	SuB09-0452	122	Yang Zekun	SuB10-0643	123	Yuan Huadong	P-0484	126
	P-0156	125	Xu Yunchen	SaA05-0657	80	Yang Zhixin	SaA11-0412	86	Yuan Ruihan	SaA14-0339	89
Xie Xiaochen	SuA01-0060	99	Xu Yutian	SuB06-0093	117	Yang Zi	P-0256	127		SaA14-0398	90
	SuA01-0103	99	Xu Yuwei	SuA12-0418	109	Yang Ziwen	SuB06-0387	118	Yuan Tong	SaA09-0247	84
	SuA01-0131	99	Xu Zeyu	SuA11-0541	109		SuB06-0389	118	Yuan Xin	SaB06-0508	96
Xie Xuhuan	SuA12-0190	109	Xu Zhihao	SuB02-0071	113	Yao Bowei	SuA09-0231	106	Yuan Yazhou	P-0108	129
Xie Yongchun	SuA05-0659	103	Xu Ziyi	P-0477	134		SuA09-0318	106		P-0109	130
Xie Zhengwen	SaB05-0384	94		P-0479	134	Yao Bowen	SuA09-0435	107	Yuan Zhiang	SuB09-0636	121
Xin Shouqiao	SaA14-0398	90		P-0456	137	Yao Chuancheng	SuB09-0331	122	Yue Chengfei	SaA03-0397	77
Xing Lantao	SuB05-0216	116	Xuan Genggen	P-0328	132	Yao Fuxing	SaA11-0572	86	Yue Dongdong	SaB04-0539	94
Xing Xiangyang	SuB04-0666	115	Xue Enrui	P-0262	137	Yao Tong	P-0469	129	Yue Huarong	SuB05-0330	117
Xing Youpeng	SaA04-0116	78	Xue Yile	SaA13-0440	88		P-0475	129	Yue Tong	SaA01-0286	76
Xiong Dan	SuA02-0157	100	XuTiantian	TJF-3	40	Ye Dongsheng	SaA09-0598	85		Z	
Xiong Jianbin	SuB09-0206	121		Y		Ye Yanyan	SaB04-0483	93	Zang Junyao	SuA09-0318	106
Xu Chensong	SuB03-0272	114	Yan Bowei	P-0187	131	Ye Zhunyan	SuB02-0071	113	Zeng Depeng	SaA08-0513	83
Xu Haowei	SaB06-0630	96	Yan Chenming	SuA14-0635	111	Ye Zihao	SaA01-0647	75	Zeng Kai	P-0287	124
Xu Hengyang	P-0628	129	Yan Fei	P-0368	124	Ye Ziqi	SaA03-0454	78	Zeng Xiangduan	SuA07-0390	104
Xu Hongyuan	SaA12-0427	88	Yan Jiaqi	SaA12-0427	88	Yi Yingmin	SaA04-0253	78	Zeng Yaoyuan	P-0032	132
Xu Jie	P-0495	135	Yan Weiyuan	SuA06-0629	104	Yin Baoqing	P-0270	130	Zha Kailan	SaB03-0280	93
Xu Jindou	SaA03-0284	77	Yan Yangzhao	SuA01-0103	99		SaA05-0367	79	Zhai Dupengfei	P-0256	128
	SuA05-0303	103	Yan Zhixin	SaB08-0652	98		SaA05-0388	80	Zhai Yaning	P-0484	126
Xu Jing	GFA2	71	Yana Yang	SuA08-0274	105	Yin Xingquan	SuB02-0088	113	Zhang Baochang	SaB05-0413	95
Xu Jingwei	SuA03-0114	100	Yang Chaoyu	SuB03-0171	114	Yin Zeyang	SaA04-0116	78	Zhang Benfa	SaA14-0404	90
	SuA03-0115	101	Yang Chengkai	SaA14-0409	90	Yong Kenan	SaA04-0116	78	Zhang Bin	SuA14-0193	111
Xu Juanjuan	SuA11-0225	108	Yang Chong	SaB03-0507	93		P-0154	132	Zhang Bo	SuA07-0167	105
	SuA11-0228	108	Yang Daiqi	SuB06-0491	118	Yongqin He	SaA08-0050	83		P-0469	129
	SuA11-0230	108	Yang Gejun	P-0052	131	You Keyou	IF2-5	54	Zhang Boqiang	SaA13-0119	89
Xu Kaixin	P-0515	135	Yang Haichuan	SuB01-0121	112	Yu Bo	SuA07-0069	104		P-0558	135
Xu Lin	SuA01-0140	99	Yang Jianan	SaB08-0544	98		SuA09-0231	106		P-0561	135
Xu Lixue	SaA01-0647	75		P-0515	135	Yu Changping	SuA09-0239	106	Zhang Ce	SuB07-0338	119
Xu Peng	P-0649	128		P-0540	135		SuA04-0082	101	Zhang Changda	P-0232	125
Xu Qi	SaA14-0403	90	Yang Liang	SaB08-0650	98		SuA04-0470	102		P-0233	125
	SaA14-0404	90	Yang Liu	SaB08-0652	98	Yu Chenyang	SaA06-0453	81		P-0240	127
Xu Qian	SaA07-0067	82	Yang Nan	P-0589	126	Yu Hao	SuB07-0340	119	Zhang Changzhu	SaA08-0113	83
Xu Rui*	SaB07-0332	96	Yang Qiqi	SaA12-0300	87	Yu Haobiao	SaB06-0639	96	Zhang Chao	P-0324	132
Xu Rui**	SaB07-0350	97	Yang Rongni	SuB04-0090	116	Yu Hebo	P-0558	135	Zhang Chaoyi	SaA08-0574	83
Xu Shengyuan	IF1-4	49	Yang Runze	SuA07-0167	105	Yu Hui	SuA10-0290	108	Zhang Chen	SuA10-0236	107
Xu Shuting	SaA13-0440	88	Yang Te	SuA01-0058	99	Yu Jiafeng	P-0577	125	Zhang Chi	SaA10-0573	85
Xu Tao	SuA04-0288	102	Yang Wen	SuA01-0161	99	Yu Jiangbo	SaA12-0300	87	Zhang Cuihua	SaA05-0255	79
Xu Tianyou	P-0079	134	Yang Wenjing	SuA11-0228	108	Yu Jiangfan	TJF-8	44		SaA05-0281	79
	P-0125	134	Yang Xianqiang	P-0270	130	Yu Miao	SuB04-0063	116		SaA05-0439	80
Xu Wei	P-0530	126	Yang Xin	P-0494	135	Yu Muye	SaB06-0508	96		SaA07-0509	82
Xu Wenqing	SaB06-0508	96	Yang Xuefei	SuA02-0105	100	Yu Wenbin	SuB06-0387	118	Zhang Dawei*	SaA01-0311	75
Xu Wenxi	SuB06-0491	118	Yang Yana	SaA06-0312	81		SuB06-0389	118		SaA01-0286	75
Xu Wenyang	SuA02-0105	100		SaA06-0362	81	Yu Wenwu	P-0033	129	Zhang Dawei**	SuB04-0557	115
Xu Xiang	SaA02-0402	76		SaA06-0617	81	Yu Xinkai	SuB03-0022	115	Zhang Feng	SuA13-0502	110
	SaA02-0516	76	Yang Yanhua	SaA04-0253	78	Yu Yang	SaA03-0360	77		SuA13-0570	110
	SaB07-0399	97	Yang Yanyun	P-0528	125		SaA03-0397	77		P-0554	133
Xu Xinheng	SuA10-0285	107		P-0534	129	Yu Yezhen	SaA04-0116	78	Zhang Gang	P-0155	125
Xu Xinying	SaA13-0047	88	Yang Yi	SaB05-0496	94	Yu Yi	SaB01-0590	91		P-0156	125

Zhang Gengwu .....SuA07-0078	104	Zhang Lixian .....SaB08-0544	98	Zhang Yangkun .....SuB03-0272	115	Zhao Jiajun.....SuA05-0172	102
Zhang Hanwen*.....SaB03-0507	93	.....P-0540	135	Zhang Yangqianhui.....SaB05-0499	94	Zhao Jiapeng.....P-0633	133
.....P-0461	134	Zhang Menghua .....SuB10-0027	122	Zhang Yanhua.....P-0611	133	Zhao Jinkai .....P-0125	134
Zhang Hanwen** .....SuA14-0465	111	.....P-0377	137	Zhang Yapeng.....SaA06-0091	81	Zhao Licui .....P-0475	129
Zhang Hao .....WSF3	65	Zhang Mengkun.....SaB08-0650	98	Zhang Yifang .....SuA01-0131	99	Zhao Mengyang.....SaA02-0460	77
Zhang Haotian.....SaB05-0366	94	.....SuA14-0492	111	Zhang Ying* .....SaA05-0439	80	Zhao Ning .....SaA07-0163	82
Zhang He .....SaB06-0062	95	Zhang Mengxi.....SaA05-0385	80	.....SaA07-0213	82	Zhao Qingqing.....SaB03-0203	92
.....SaB06-0639	96	.....SaA05-0391	80	.....SaA07-0509	83	Zhao Shenshen.....P-0104	127
Zhang Heliang .....SuA14-0492	111	Zhang Mengyang.....SaA07-0147	82	Zhang Ying**.....SaB06-0630	96	Zhao Wenbo .....P-0616	133
Zhang Heng .....P-0085	136	.....SaA07-0148	82	.....SuB06-0631	118	Zhao Xin* .....GFA1	71
.....P-0353	136	Zhang Mingyue.....SuA09-0183	107	.....SuB09-0634	121	Zhao Xin**.....SaA14-0403	90
Zhang Hengyuan .....SuB02-0562	113	Zhang Ning .....P-0477	134	.....SuB09-0636	121	Zhao Xiujuan.....SuB09-0596	121
Zhang Heting .....SaA06-0304	81	.....P-0479	134	.....SuB09-0637	121	Zhao Xudong .....IF2-2	52
Zhang Hongrui.....P-0176	127	.....P-0456	137	.....SuB09-0206	121	Zhao Yanyu .....P-0237	128
Zhang Huanshui .....SPL1-2	32	Zhang Panpan .....P-0156	125	.....P-0627	131	Zhao Yiming.....P-0589	126
Zhang Hui .....SaB08-0650	98	Zhang Peng* .....SuA12-0217	109	.....P-0021	132	Zhao Yong.....SaA03-0581	77
.....SuA14-0492	111	Zhang Peng** .....P-0459	126	.....P-0597	132	Zhao Yue.....SuA09-0319	107
Zhang Jiaming .....SuA04-0082	101	Zhang Peng*** .....SuB01-0101	112	Zhang Yinghui .....CEF4	70	Zhao Zhenhua .....SuB01-0102	112
.....SuB10-0107	123	Zhang Pengcheng.....SaA05-0657	80	Zhang Yingwei.....WSF2	64	Zhao Zhiwei .....P-0045	136
Zhang Jian* .....SaA04-0383	78	Zhang Qihang.....SaA14-0409	90	Zhang Yongshuo.....SuB10-0027	122	.....P-0135	136
.....SaB01-0126	91	Zhang Rui .....P-0627	131	Zhang Yu* .....SaB02-0235	92	Zhao Zhiyuan.....SuA09-0435	107
.....SuB08-0271	120	.....P-0021	132	Zhang Yu**.....SuA07-0124	104	Zhao Zhizhe .....SaB08-0349	98
.....P-0079	134	Zhang Ruifeng .....SuB04-0090	116	.....SuA07-0458	105	Zhen Ran .....SaB08-0349	98
.....P-0125	134	Zhang Sai.....P-0104	127	.....SuB08-0305	120	Zheng Bibo .....SuB10-0099	123
Zhang Jian**.....P-0353	136	Zhang Shaopeng .....P-0627	131	.....P-0475	129	Zheng Hongyuan .....SuB02-0095	113
Zhang Jianqiao .....P-0477	134	Zhang Shihao .....P-0138	126	Zhang Yue.....SaA14-0403	90	Zheng Hui .....SaA03-0455	78
.....P-0479	134	Zhang Shijie .....SaB08-0650	98	.....SaA14-0404	90	Zheng Li .....P-0209	127
.....P-0456	137	.....SuA14-0492	111	Zhang Yuee.....SuA09-0183	107	Zheng Qi .....SaA08-0179	83
Zhang Jianyu.....SaA09-0429	84	Zhang Shunzhi.....SaB08-0544	98	Zhang Zelong .....SaA04-0383	78	Zheng Qingwei .....SaA08-0513	83
Zhang Jiawei .....SaB08-0490	97	Zhang Shuoyi.....P-0584	124	.....SaB01-0126	91	Zheng Qiyu .....SaA14-0409	90
Zhang Jiayi.....SaA08-0059	83	Zhang Shuyuan.....SaA09-0598	85	.....P-0079	134	Zheng Wei.....SaA06-0053	80
Zhang Jifeng .....IF3-2	56	Zhang Sijie .....SuA08-0443	105	Zhang Zhaoming .....SuB06-0387	118	.....SuA06-0629	104
Zhang Jinxuan.....P-0055	124	Zhang Siming.....SaA03-0581	77	Zhang Zhaorong.....SuA11-0228	108	Zheng Xuemei.....P-0237	128
Zhang Juan .....SaB05-0413	95	Zhang Tengfei.....SaA06-0312	81	.....SuA11-0230	108	Zheng Zhiqiang .....SuA03-0196	101
Zhang Junhua .....SaA06-0493	81	.....SaA06-0362	81	Zhang Zhaoye.....P-0396	137	.....SuA03-0201	101
Zhang Junning .....P-0302	128	Zhang Tianhao.....SaA08-0574	83	Zhang Zhe .....SuA02-0326	100	Zheng Zixuan.....SaA06-0493	81
Zhang Junxiang.....SaA10-0215	86	Zhang Tongzhou.....SaA07-0067	82	.....P-0363	132	Zheng Ziyi .....SuB02-0128	114
Zhang Kai* .....SuB06-0631	118	.....SaA07-0142	82	Zhang Zhiguang .....SuA14-0465	111	Zhong Yuhang .....SuA05-0526	103
.....SuA05-0172	102	Zhang Wei.....GFA3	72	Zhang Zhongcai.....SaA12-0300	87	.....P-0395	132
.....SuA05-0260	102	Zhang Wenbo .....P-0287	124	.....SaA12-0473	87	.....P-0449	133
.....SuA05-0659	103	Zhang Wenle.....P-0378	125	.....SaA12-0480	87	Zhou Bin.....SuA13-0277	110
Zhang Kai**.....SuA13-0478	110	Zhang Wenxin.....SaB03-0221	92	Zhang Zibei .....SuB02-0095	113	.....SuA13-0279	110
.....SuA02-0105	100	Zhang Xianfu .....SuB04-0145	116	.....P-0109	130	.....SuA13-0282	110
.....P-0546	133	.....SuB04-0159	116	Zhao Boyang.....SaA07-0509	82	Zhou Chen .....SuA02-0199	100
Zhang Ke.....SPL2-1	35	Zhang Xiangxiang .....P-0459	126	Zhao Chenhao .....SuB01-0101	112	Zhou Donghua .....SaB01-0314	91
.....SaB02-0086	91	Zhang Xinyu.....SaA04-0253	78	Zhao Dongjing .....SaB07-0332	96	.....SaB02-0061	91
.....SuB02-0071	113	Zhang Xu .....P-0405	128	Zhao Guanglei .....SaB07-0342	97	.....SaB04-0518	94
.....SuB02-0072	113	Zhang Xuanhe .....SaA03-0360	77	.....SaB07-0399	97	.....P-0033	129
.....SuB02-0165	113	Zhang Xue.....SuA05-0192	102	.....SuB09-0331	122	Zhou Fang.....SaA12-0425	87
.....SuB02-0070	114	Zhang Xuebing .....P-0256	127	Zhao Guowei.....SaA08-0059	83	Zhou Hongyu .....SuA12-0418	109
Zhang Kuo .....SaB08-0349	98	Zhang Xujie.....SaA03-0411	77	Zhao Haohan .....P-0558	135	Zhou Jiafeng.....SuA07-0167	105
Zhang Liuliu .....SuB08-0370	120	Zhang Yahui.....SaA13-0119	88	.....P-0377	137	Zhou Jiayue .....P-0355	130
.....SuB08-0375	120	.....P-0558	135	Zhao Huanyu .....SaA05-0657	80	Zhou Jing.....SaB03-0269	92
.....SuB08-0376	120	.....P-0561	135	Zhao Jiaao.....SaA07-0163	82	Zhou Jinsong .....SaB07-0350	97
.....P-0371	135	.....P-0377	137	.....SaA07-0164	82	Zhou Jinyu .....P-0356	131

Zhou Lei*	SaB04-0428	93	Zhu Qinghua	CEF2	69
Zhou Lei**	P-0227	127	Zhu Ruihan	SuB01-0121	112
Zhou Na	SuB08-0446	121	Zhu Shanying	SuB06-0387	118
Zhou Nan	P-0533	136		SuB06-0389	118
Zhou Tai	SaA04-0645	79	Zhu Xiaohong	SaA14-0408	90
Zhou Tian	P-0495	135	Zhu Xinye	SaA14-0246	89
Zhou Tong	IF1-3	48	Zhu Yanqi	P-0328	132
Zhou Wei	SaA01-0141	75	Zhu Yanzheng	P-0344	125
Zhou Wenbo	SaB06-0505	95		P-0656	126
	SaB06-0583	95		P-0364	129
Zhou Wenyu	SaA06-0493	81	Zhu Zhao	SaA02-0423	76
Zhou Xiaoshuang	SaA06-0312	81	Zhuang Guanning	SuB09-0634	121
	SaA06-0617	81	Zhuang Jinlei	SuA14-0492	111
Zhou Yang	SaA01-0141	75	Zhuang Songlin	TJF-1	39
Zhou Yi	P-0306	127	Zhuang Xiaoyu	P-0467	131
Zhou Youmei	SaA09-0598	85	Zhuge Huayang	SaB05-0514	94
Zhu Chaoran	SaA07-0142	82	Zong Kai	SuA01-0060	99
Zhu Fuxing	SuA09-0239	106	Zou Jian	SuB04-0557	115
	SuA09-0319	107	Zou Lei	SaB03-0263	92
Zhu Jiajun	SuA14-0123	111		SuA10-0250	107
Zhu Jing	SuB02-0095	113	Zou Shiqi	SuA03-0114	100
Zhu Junjie	SuB02-0165	113		SuA03-0115	101
Zhu Lingchen	SuB08-0370	120	Zuo Zhiqiang	SuA08-0443	105
Zhu Ming	P-0450	125			

Chair/Co-Chair Index

C=Chair, CC=Co-Chair
SPL = Semi-plenary Lectures
WSF = Women Scientists Forum

PL = Plenary Lectures
TJF = Top Journal Forum
CEF = Chief Engineer Forum

EICF = Editors-in-Chief Forum
IF = Invited Forum
GF = Growth Forum

A			Li Yafeng	SaA04	CC	78	
An Tianjiao	SaA14	C	89	.....	SaB01	CC	91
B			Li Zhijie	SaA04	C	78	
Bao Adiya	SuA03	C	101	.....	SaB01	C	90
C			Liang Ye	SaB08	C	97	
Cai Bo	CEF	CC	68	Lin Zhiyun	SPL1-4	C	33
Cai Guangbin	SaA03	CC	78	Liu Ming	SPL2-3	C	37
Chen Mou	SPL2-1	C	35	Liu Qingsong	SuA02	C	100
Cheng Wanglei	SuB02	CC	113	Liu Tao	SPL2-4	C	38
Cui Kaixin	SaA13	C	89	.....	SaA02	C	76
D			Liu Weizhen	SuB10	C	122	
Deng Feiqi	IF	C	46	Liu Xiaoping	PL-2	C	24
Dong Bo	SaA14	CC	89	Liu Yang	SuA04	CC	101
Dong Hongli	WSF	C	63	.....	IF	C	51
Dong Ruiqi	SuB06	C	117	Liu Yungang	IF	C	50
Duan Guanren	EICF	C	26	Liu Zhuang	SuA09	CC	106
Duan Haibin	IF	C	58	Lu Wenjie	SuB03	CC	115
F			Luo Weiwei	SuA02	CC	100	
Fan Chenchen	SuA01	CC	99	Lv Lingling	SuA04	C	102
Feng June	SPL1-2	C	32	M			
Fu Fangzhou	SaB06	C	96	Ma Dan	SaA11	CC	86
G			Min Huifang	SaA05	C	80	
Gao Chen	SaB03	CC	92	Q			
Gao Huijun	TJF	C	39	Qian Cheng	SuB08	CC	120
Gao Zhenyu	SuA08	CC	105	Qiu Jianbin	IF	C	62
Gu Guoxiang	PL-3	C	25	.....	SaA08	C	83
Guan Zhe	SuB07	C	119	S			
Guo Ge	SPL1-3	C	33	Shen Hongbin	IF	C	60
H			Shen Xiaoning	SuA09	C	106	
Han Fei	CEF	C	68	Sun Huijie	SaB06	CC	96
.....	SaB06	CC	95	Sun Xiaoyun**	SuB01	C	112
Hou Mingzhe	SaA03	C	77	T			
Hu Jun	SuA10	C	108	Tian Dapeng	SaB07	C	97
Huang Ling	SuA12	C	109	Tian Guangtai	SaA10	CC	85
Huang Qin	SuB09	CC	121	W			
Huang Xiuwei	SuA14	C	111	Wan Yong	SuB01	CC	112
L			Wang Jiange	SuA06	C	103	
Li Bin	SaA10	C	85	Wang Jingyi	SaB04	CC	93
.....	GFB	C	73	Wang Minghao	SaB05	CC	94
Li Gang	SaA13	CC	89	Wang Wei	SuA11	CC	109
Li Haifang	SaA09	C	85	Wang Xinyu	SaA09	CC	84
Li Junpeng	SaA06	CC	81	Wang Xiubo	SaA01	C	75
Li Kuo	SuA07	C	104	Wang Yutang	SaB07	CC	97
Li Li	SuA08	C	105	Wang Yuzhong	SaA11	C	86
Li Peng	SuB03	C	114	Wei Yanqiao	SuB07	CC	119
Li Ping	SuB10	CC	122	X			
Li Rui	SuA05	C	103	Xia Jianwei	SuB05	C	117
Li Xiaomiao	SuA06	CC	103	Xie Xiaochen	SuA01	C	99

