
第四届全驱系统理论与应用会议
The 4th Conference on Fully Actuated System
Theory and Applications
(FASTA 2025)

程序册

Final Program

主办单位

南京理工大学

中国自动化学会全驱系统理论与应用专业委员会

亚洲控制协会全驱系统理论与应用专业委员会

承办单位

南京理工大学自动化学院

Organizing Institutions

Nanjing University of Science and Technology

Technical Committee on Fully Actuated System Theory and Applications, CAA

Technical Committee on Fully Actuated System Theory and Applications, ACA

Host Institution

School of Automation, Nanjing University of Science and Technology

2025 年7月4-6 日, 中国·南京

July 4-6, 2025, Nanjing, China

Proceedings of FASTA2025

IEEE Catalog Number: CFP25DM5-ART

ISBN: 979-8-3315-2692-4

FASTA2025 网站: <https://fasta2025.scimeeting.cn/>

Website of FASTA2024: <https://fasta2025.scimeeting.cn/en/web/index/25936>

FASTA2025 会议论文管理系统网址

(Website of FASTA2025 Paper Management System): <http://cms.amss.ac.cn/>

联系方式

	负责人	分工	联系方式
会务组	卢静, 张颖, 田小娟	总体负责	19217055199 (田)
	姚娟, 陈静宇, 汪纯	现场注册	13517315716 (汪)
	卢静, 陈碧玉	交通安排	18021501363 (卢)
	蔡晨晓, 李芳菲	住宿安排	13517318131 (李)
	谢云云, 罗靓	会场安排	13552779915 (罗)
	卢静, 田小娟	餐饮安排	19217055199 (田)
酒店	南京青旅宾馆		025-69679999 (前台)

会议程序总览 (Program at a Glance)

第三届全驱系统理论与应用会议

日期	时间	日程	主持人	会场
7月4日 (星期五) July 4 (Friday)	08:00-22:00	报到注册		南京青旅宾馆
	20:00-21:00	中国自动化学会全驱系统理论与应用专业委员会工作会议		3F-第一会议室
7月5日 (星期六) July 5 (Saturday)	8:30-9:00	开幕式致辞		3F-钟山厅
	9:00-9:45	大会报告一: Dynamic Linearizability implies static stabilizability and related results Speaker: Alessandro Astolfi Imperial College London, UK		3F-钟山厅
	9:45-10:30	大会报告二: Synchronization of Heterogeneous Multi-agent Systems through Singular Perturbation Speaker: Hyungbo Shim Seoul National University, South Korea		3F-钟山厅
	10:30-11:00	合影、茶歇		1F-宾馆外广场
	11:00-11:45	大会报告三: Fault Tolerant Control of High-Order Fully Actuated Systems Speaker: Donghua Zhou Southeast University, China		3F-钟山厅
	12:00	午餐自助		2F-玫瑰厅 4F-紫金厅 4F-金陵厅
	13:30-15:30	分组报告一, 张贴报告一, FASTA 优秀青年论文奖评选		
	15:30-16:00	茶歇		
	16:00-18:00	分组报告二, 张贴报告一, FASTA 优秀学生论文奖评选		
	18:00-19:30	晚餐自助		2F-玫瑰厅
7月6日 (星期天) July 6 (Sunday)	8:15-10:15 分会场报告 (一)	1.Optimal Fully Actuated System Approach (FASA) Based Control Theory and Applications Speaker: Bin Li Sichuan University, China		4F-紫金厅
		2.Distributed online resource allocation with free-in and free-out nodes Speaker: Maojiao Ye Nanjing University of Science and Technology, China		
		3.Motion control of underactuated robots based on the fully actuated system approach and related applications Speaker: Ning Sun Nankai University, China		
		4. Lightweight learning model for industrial intelligent computing: Taking the energy industry as an example Speaker: Wei Dai China University of Mining and Technology, China		
	8:15-10:15 分会场报告 (二)	1. Intelligent Perception and Control for Spacecraft Proximity Operations with Non-Cooperative Targets Speaker: Qinglei Hu Beihang University, China		4F-金陵厅
		2. Constrained Control of High-Order Fully Actuated Systems Speaker: Yuanlong Li Shanghai Jiao Tong University, China		
		3.Feedback Shaping for Logical Dynamic Systems Speaker: Hongsheng Qi Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China		
		4. A Fully Actuated System Approach to Underactuated Systems Control—The Example of Cubli Speaker: He Kong Southern University of Science and Technology, China		
	10:15-10:45	茶歇		
	10:45-12:15	分组报告三, 张贴报告二		
	12:00	午餐自助		2F-玫瑰厅

	13:30-15:30	分组报告四, 张贴报告二	
	15:30-16:00	茶歇	
	16:00-17:00	闭幕式	3F-钟山厅
	17:30-20:00	晚宴	3F-钟山厅

The 4th Conference on Fully Actuated System Theory and Applications

欢迎辞



段广仁院士
会议总主席



徐胜元教授
会议程序委员会主席


第四届全驱系统理论与应用会议(The 4th Conference on Fully Actuated System Theory and Applications, FASTA2025)将于2025年7月4-6日在江苏省南京市召开。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、南京理工大学徐胜元教授担任。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,更好地宣传全驱系统理论与应用领域的研究成果,推动全驱系统理论与应用研究的发展。会议采用大会报告、分会场报告、分组报告和张贴论文等形式进行交流。会议的工作语言为中文和英文。会议收录的论文会后将提交IEEE Xplore数据库。


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最衷心的感谢与最热烈的欢迎!

本届会议由南京理工大学、中国自动化学会全驱系统理论与应用专业委员会、亚洲控制协会全驱系统理论与应用专业委员会共同主办,南京理工大学自动化学院承办,IEEE广州分会、IEEE工业电子协会、IEEE南京分会、南京信息工程大学、江苏省自动化学会、江苏省电机工程学会、空间目标感知全国重点实验室协办。会议共收到来自中国、澳大利亚、新加坡、美国、日本、加拿大、英国等9个国家和地区的投稿665篇(包括论文580篇,长摘要85篇),经过严格、认真的评审程序,共有517篇论文和81篇长摘要被会议录用。本次会议安排口头报告51组,共378篇论文和长摘要,会议期间共安排12-13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162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Alessandro Astolfi教授(伦敦帝国理工学院,英国),Hyungbo Shim教授(首尔大学,韩国),Dong-Hua Zhou教授(东南大学,中国)。本次会议组织了两个分会场报告,分别邀请了北京航空航天大学的胡庆雷教授,四川大学的李彬教授,南京理工大学的叶茂娇教授,南开大学的孙宁教授,中国矿业大学的代伟教授,上海交通大学的李元龙教授、中国科学院数学与系统科学研究院的齐洪胜研究员、南方科技大学的孔贺教授担任主讲嘉宾。为了进一步营造学术氛围,鼓励更多青年科学工作者和学生投身于全驱系统控制理论与应用的研究,进一步提高学术论文的质量和会议的影响力,会议设立“FASTA优秀青年论文奖”和“FASTA最佳学生论文奖”,旨在奖励优秀青年学者以推动学科高端人才培养,进一步促进自动控制理论与应用的发展。

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对第四届全驱系统理论与应用会议的支持!第四届全驱系统理论与应用会议欢迎您!


会议总主席


会议程序委员会主席

Welcome Address



Guangren Duan
General Chair



Shengyuan Xu
Program Committee Chair

The 4th Conference on Fully Actuated System Theory and Applications (FASTA2025) will be held from July 4 to 6, 2025, in Nanjing, Jiangsu Province, China. The Conference Chair is Professor Duan Guangren, Academician of the Chinese Academy of Sciences and Professor at Harbin Institute of Technology. The Program Committee Chair is Professor Xu Shengyuan, recipient of the National Science Fund for Distinguished Young Scholars and a high-level talent of the Ministry of Education, from Nanjing University of Science and Technology. 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, to better disseminate research achievements in this field, and to promote the advancement of fully actuated system theory and applications. The conference will feature various forms of communication, including plenary lectures, invited sessions, oral presentations, and poster sessions. The working languages of the conference are Chinese and English. Papers accepted by the conference will be submitted to the IEEE Xplore database after the event.

On behalf of the Program Committee and the Organizing Committee, we extend our sincerest gratitude and warmest welcome to all contributing authors and participants!

This conference is jointly organized by Nanjing University of Science and Technology, the Fully Actuated System Theory and Applications Technical Committee of the Chinese Association of Automation, and the Fully Actuated System Theory and Applications Technical Committee of the Asian Control Association. It is hosted by the School of Automation at Nanjing University of Science and Technology and co-organized by the IEEE Guangzhou Section, IEEE Industrial Electronics Society, IEEE Nanjing Section, Nanjing University of Information Science and Technology, Jiangsu Association of Automation, Jiangsu Electrical Engineering Society, and the National Key Laboratory of Space Object Perception. The conference received a total of 665 submissions (including 580 full papers and 85 extended abstracts) from nine countries and regions, including China, Australia, Singapore, the United States, Japan, Canada, and the United Kingdom. After a rigorous and thorough review process, 517 papers and 81 extended abstracts were accepted. The conference will feature 51 oral presentation sessions, comprising 378 papers and extended

abstracts, with 12-13 meeting rooms allocated for four rounds of oral presentations. Additionally, two poster sessions will be held, featuring 162 papers and extended abstracts.

We are honored to have invited three internationally renowned scholars to deliver plenary lectures: Professor Alessandro Astolfi (Imperial College London, UK), Professor Hyungbo Shim (Seoul National University, South Korea), and Professor Dong-Hua Zhou (Southeast University, China). The conference has also organized two invited sessions, featuring distinguished speakers including Professor Hu Qinglei (Beihang University), Professor Li Bin (Sichuan University), Professor Ye Maojiao (Nanjing University of Science and Technology), Professor Sun Ning (Nankai University), Professor Dai Wei (China University of Mining and Technology), Professor Li Yuanlong (Shanghai Jiao Tong University), Researcher Qi Hongsheng (Academy of Mathematics and Systems Science, Chinese Academy of Sciences), and Professor Kong He (Southern University of Science and Technology).

To further foster an academic atmosphere, encourage more young researchers and students to engage in the study of fully actuated system control theory and applications, and enhance the quality of academic papers and the conference's influence, the conference has established the "FASTA Outstanding Youth Paper Award" and the "FASTA Best Student Paper Award." These awards aim to recognize outstanding young scholars, promote the cultivation of high-level talent in the field, and further advance the development of automatic control theory and applications.

Here, we would like to express our deepest gratitude to all those who have contributed to the successful organization of this conference! We sincerely thank the reviewers and Program Committee members for their rigorous evaluation of the submitted papers. We also extend our appreciation to the organizing committee and volunteers for their enthusiastic support. Special thanks go to the plenary and invited speakers for accepting our invitations and sharing their latest research findings with all participants. Finally, on behalf of the Program Committee, we would like to express our heartfelt thanks to all authors and attendees for their support of the 4th Conference on Fully Actuated System Theory and Applications! Welcome to *the* 4th *Conference on Fully Actuated System Theory and Applications!*



Guangren Duan
General Chair



Shengyuan Xu
Program Committee Chair

组织机构 (Conference Committees)

- 主办单位：南京理工大学
中国自动化学会全驱系统理论与应用专业委员会
亚洲控制协会全驱系统理论与应用专业委员会
- 承办单位：南京理工大学自动化学院
- 协办单位：IEEE Guangzhou Section
IEEE Industrial Electronics Society
IEEE Nanjing Section
南京信息工程大学
江苏省自动化学会
江苏省电机工程学会

会议组织

顾问委员会（按姓氏笔画顺序）

于登云	中国航天科技集团	王耀南	湖南大学
包为民	中国航天科技集团	付梦印	南京理工大学
乔红	中国科学院自动化所	陈杰	同济大学
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	魏毅寅	中国航天科工集团

会议总主席

段广仁 哈尔滨工业大学

- 主席：徐胜元 南京理工大学
- 区域主席：

高会军 哈尔滨工业大学

林参 香港大学

刘德荣 南方科技大学

施阳 维多利亚大学

谢立华 新加坡南洋理工大学

岳东 南京邮电大学
- 副主席：

葛泉波 南京信息工程大学

潘志文 IEEE Nanjing Section

陈谋 南京航空航天大学

李世华 东南大学
- 程序委员会秘书长：蔡晨晓 南京理工大学
- 程序委员会副秘书长：马倩 南京理工大学
- 程序委员会委员：张颖 哈尔滨工业大学（深圳）
叶茂娇 南京理工大学
全驱系统理论与应用专业委员会委员及部分特邀专家

组织委员会

组织委员会主席：	杨 力	南京理工大学	
	屈 艺	南京理工大学	
组织委员会副主席：	王 军	南京理工大学	马立丰 南京理工大学
	殷明慧	南京理工大学	
秘书长	卢 静	南京理工大学	
	权 浩	南京理工大学	
副秘书长	邹文成	南京理工大学	
	陈静宇	南京理工大学	
张贴论文主席	张保勇	南京理工大学	
评奖论文主席	周 彬	哈尔滨工业大学	

出版委员会

主席	吴爱国	哈尔滨工业大学（深圳）
	费树岷	东南大学
副主席	宋 程	南京理工大学
	谢云云	南京理工大学

国际程序委员会委员（按姓氏拼音首字母排序）

Abu-Rub, Haitham	Texas A&M University at Qatar
Ahn, Choon Ki	Korea University
Ahn, Hyo-Sung	Gwangju Institute of Science and Technology
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
Buticchi, Giampaolo	University of Nottingham Ningbo China
Günter, Sandro	University of Nottingham Ningbo China
Iwasaki, Makot	Nagoya Institute of Technology

Jenabzadeh, Ahmadreza	Shenzhen University
Kawano, Yu	Hiroshima University
Kaynak, Okyay	Bogazici University
Lam, James	The University of Hong Kong
Lee, Tae Hee	Jeonbuk National University
Mokarram, Mrzieh	Shiraz University
Navarro-Alarcon, David	The Hong Kong Polytechnic University
Nounou, Hazem	Texas A&M University at Qatar
Ogura, Masaki	Osaka University
Park, Ju	Yeungnam University
Tan, Chee Pin	Monash University
Teo, KokLay	Curtin University
班晓军	哈尔滨工业大学
蔡晨晓	南京理工大学
蔡光斌	火箭军工程大学
柴 利	武汉科技大学
陈彩莲	上海交通大学
陈 辞	广东工业大学
陈力恒	哈尔滨工程大学
陈立群	上海大学
陈亮名	南方科技大学
陈小杰	电子科技大学
陈新开	芝浦工业大学
陈杨杨	东南大学
崔荣恒	曲阜师范大学
崔 阳	辽宁科技大学
崔玉康	深圳大学
丁克蜜	南方科技大学
丁世宏	江苏大学

丁伟利	燕山大学
董海荣	山东科技大学
董宏丽	东北石油大学
董瑞琦	哈尔滨工业大学（深圳）
董志远	哈尔滨工业大学（深圳）
段广仁	哈尔滨工业大学
樊 渊	安徽大学
范军芳	北京信息科技大学
方勇纯	南开大学
冯俊娥	山东大学
符方舟	中山大学
付敏跃	南方科技大学
高会军	哈尔滨工业大学
葛树志	新加坡国立大学
龚有敏	哈尔滨工业大学（深圳）
顾大可	东北电力大学
顾国祥	路易斯安娜州立大学
韩 飞	上海航天控制技术研究所
韩红桂	北京工业大学
郝明瑞	中国航天科工集团第三研究院
和望利	华东理工大学
贺 亮	西北工业大学
侯明哲	哈尔滨工业大学
侯忠生	青岛大学
胡 军	哈尔滨理工大学
胡庆雷	北京航空航天大学
华长春	燕山大学
黄 玲	哈尔滨理工大学
黄秀韦	广东工业大学

纪文强	河北工业大学
姜 斌	南京航空航天大学
姜怀远	哈尔滨工业大学
靳水林	哈尔滨工业大学
孔 贺	南方科技大学
李 彬	四川大学
李朝艳	哈尔滨工业大学
李繁飙	中南大学
李 萍	南方科技大学
李 瑞	电子科技大学
李少远	上海交通大学
李铁山	电子科技大学
李雪芳	中山大学
李 湛	哈尔滨工业大学
李智斌	山东科技大学
林志赞	南方科技大学
刘德荣	南方科技大学
刘方舟	哈尔滨工业大学
刘国平	南方科技大学
刘健行	哈尔滨工业大学
刘 璐	香港城市大学
刘 明	哈尔滨工业大学
刘腾飞	东北大学
刘万泉	中山大学
刘 伟	华南理工大学
刘文慧	南京理工大学
刘 杨	北京航空航天大学
罗威威	哈尔滨工业大学
吕灵灵	华北水利水电大学

马 丹	东北大学
马 磊	中国矿业大学
马立丰	南京理工大学
梅 杰	哈尔滨工业大学（深圳）
苗子博	哈尔滨工业大学（深圳）
闵惠芳	南京理工大学
缪志强	湖南大学
那 靖	昆明理工大学
戚文念	哈尔滨工业大学
齐文海	曲阜师范大学
丘 立	香港中文大学（深圳）
邱剑彬	哈尔滨工业大学
邱 丽	深圳大学
余 维	郑州大学
史明明	四川大学
宋申民	哈尔滨工业大学
孙光辉	哈尔滨工业大学
孙慧杰	中山大学
孙维超	哈尔滨工业大学
孙 伟	聊城大学
孙希明	大连理工大学
孙振东	山东科技大学
万雄波	中国地质大学
王好谦	清华大学
王宏霞	山东科技大学
王 龙	北京大学
王 鹏	上海交通大学
王 茜	杭州电子科技大学
王申全	长春工业大学

王 桐	哈尔滨工业大学
王 伟	山东大学
王 伟	大连理工大学
王秀博	东北大学秦皇岛分校
王占山	东北大学
魏才盛	中南大学
温广辉	东南大学
温长云	新加坡南洋理工大学
文 杰	哈尔滨工业大学（深圳）
吴爱国	哈尔滨工业大学（深圳）
吴立刚	哈尔滨工业大学
武云丽	北京控制工程研究所
夏卫国	大连理工大学
夏元清	北京理工大学
肖 峰	华北电力大学
谢晓晨	哈尔滨工业大学（深圳）
忻 欣	东南大学
邢兰涛	山东大学
徐娟娟	山东大学
徐明亮	郑州大学
徐胜元	南京理工大学
徐 翔	南方科技大学
徐晓东	中南大学
徐 勇	北京理工大学
徐雨田	哈尔滨工业大学（深圳）
许文盈	东南大学
闫 飞	西南交通大学
杨嘉楠	哈尔滨工业大学
杨学博	哈尔滨工业大学

杨亚娜	燕山大学
杨 懿	北京航空航天大学
杨再跃	南方科技大学
杨紫雯	上海交通大学
姚秀明	北京交通大学
衣 鹏	同济大学
雍可南	南京航空航天大学
余 弦	深圳大学
余 翔	北京航空航天大学
余长君	上海大学
于兴虎	宁波智能装备研究院有限公司
张保勇	南京理工大学
张承玺	江南大学
张 丹	浙江工业大学
张 烽	中国运载火箭技术研究院
张国峰	香港理工大学
张 恒	江苏海洋大学
张宏伟	哈尔滨工业大学
张化光	东北大学
张焕水	山东科技大学
张金会	北京理工大学
张锦绣	中山大学
张 凯	四川大学
张 柯	南京航空航天大学
张立宪	哈尔滨工业大学
张 刘	吉林大学
张清瑞	中山大学
张世杰	河南工业大学
张 颖	哈尔滨工业大学（深圳）

张中才	曲阜师范大学
赵春晖	浙江大学
赵广磊	燕山大学
赵 林	新加坡国立大学
郑 凯	大连海事大学
钟麦英	山东科技大学
周 彬	哈尔滨工业大学
周东华	东南大学
周克敏	南京大学
朱庆华	上海航天技术研究院
朱善迎	上海交通大学
朱延正	山东科技大学
邹 云	南京理工大学
左宗玉	北京航空航天大学

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或会议网站 (https://fasta2025.scimeeting.cn/cn/web/index/25936_2273981)。

Oral Presentation: 15 minutes (including discussion). Please refer to the final program or the conference website (<http://fasta2024.fasta-en.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版（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 (https://fasta2025.scimeeting.cn/cn/web/index/25936_2273981)

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://fasta2024.fasta-en.org.cn/index/lists?id=344>

大会报告 (Plenary Lectures)

Plenary Lecture 1

7月5日 9:00-9:45

July 5, 9:00-9:45 3F-钟山厅

Alessandro Astolfi

Imperial College London, U.K.

Dynamic linearizability implies static stabilizability and related results

Abstract: This talk discusses how the property of dynamic linearizability, to be understood as linearizability by means of the dynamic extension algorithm, implies the existence of static, possibly time varying, control laws yielding asymptotic output tracking with arbitrary speed of convergence and asymptotic stabilization with a computable bound on the region of attraction. Similar results hold for systems which are only input/output linearizable by means of dynamic state feedback, provided that the inverse dynamics possess certain stability properties. Applications to the problem of regional stabilization and trajectory tracking under-actuated systems are also discussed.



Alessandro Astolfi was born in Rome, Italy, in 1967. He graduated in electrical engineering from the University of Rome in 1991. In 1992 he joined ETH-Zurich where he obtained a M.Sc. in Information Theory in 1995 and the Ph.D. degree with Medal of Honor in 1995 with a thesis on discontinuous stabilization of nonholonomic systems. In 1996 he was awarded a Ph.D. from the University of Rome “La Sapienza” for his work on nonlinear robust control. Since 1996 he has been with the Electrical and Electronic Engineering Department of Imperial College London, London (UK), where he is currently Professor of Nonlinear Control Theory and College Consul for the Faculty of Engineering and Business School. From 2010 to 2022 he served as Head of the Control

and Power Group at Imperial College London and from 1998 to 2003 he was an Associate Professor at the Dept. of Electronics and Information of the Politecnico of Milano. Since 2005 he has also been a Professor at Dipartimento di Ingegneria Civile e Ingegneria Informatica, University of Rome Tor Vergata. He has been a visiting lecturer in “Nonlinear Control” in several universities, including ETH-Zurich (1995-1996); Terza University of Rome (1996); Rice University, Houston (1999); Kepler University, Linz (2000); SUPELEC, Paris (2001), Northeastern University, Boston (2013), the University of Cyprus (2018--), and Southeast University, China (2019--).

His research interests are focused on mathematical control theory and control applications, with special emphasis for the problems of discontinuous stabilization, robust and adaptive control, observer design and model reduction. He is the author of over 190 journal papers; 30 book chapters; and over 370 papers in refereed conference proceedings. He is the author (with D. Karagiannis and R. Ortega) of the monograph “Nonlinear and Adaptive Control with Applications” (Springer-Verlag).

He is the recipient of the IEEE CSS A. Ruberti Young Researcher Prize (2007), the IEEE RAS Googol

Best New Application Paper Award (2009), the IEEE CSS George S. Axelby Outstanding Paper Award (2012), the Automatica Best Paper Award (2017), and the IEEE Transactions on Control Systems Technology Outstanding Paper Award (2023). He is a “Distinguished Member” of the IEEE CSS, IEEE Fellow, IFAC Fellow, IET Fellow, and Member of the Academia Europaea. He served as Associate Editor for Automatica, Systems and Control Letters, the IEEE Trans. on Automatic Control, the International Journal of Control, the European Journal of Control and the Journal of the Franklin Institute; as Area Editor for the Int. J. of Adaptive Control and Signal Processing; as Senior Editor for the IEEE Trans. on Automatic Control; and as Editor-in-Chief for the European Journal of Control. He is currently Editor-in-Chief of the IEEE Trans. on Automatic Control (2018--). He served as Chair of the IEEE CSS Conference Editorial Board (2010-2017) and in the IPC of several international conferences. He has served as Chair of the IEEE CSS Antonio Ruberti Young Researcher Prize (2015-2021); he is Vice Chair of the IFAC Technical Board (2020-2026) and he has been a Member of the IEEE Fellow Committee (2016), (2019-2022). He is currently a member of the IEEE PSPB Strategic Planning Committee.

Plenary Lecture 2

7月5日 9:45-10:30

July 5, 9:45-10:30 3F-钟山厅

Hyungbo Shim

Seoul National University, Korea

Synchronization of Heterogeneous Multi-agent Systems through Singular Perturbation

Abstract: The talk begins with a brief introduction to the blended dynamics theorem. We then discuss the intuition behind the theorem using a singular perturbation interpretation. This interpretation leads to an extension of enforced synchronization via impulsive gossiping, which in turn provides a singular perturbation argument for hybrid systems. We also discuss several applications of the blended dynamics theorem.



Hyungbo Shim received his B.S., M.S., and Ph.D. degrees from Seoul National University. He was a postdoctoral researcher at the University of California, Santa Barbara, and is currently a professor at Seoul National University. He has served as an associate editor for Automatica, IEEE Transactions on Automatic Control, and the International Journal of Robust and Nonlinear Control. He is a senior member of IEEE, an IFAC Distinguished Lecturer, and a member of the Korean Academy of Science and Technology. His research interests include stability analysis of nonlinear systems, observer design, disturbance observers, secure control systems, and synchronization in multi-agent systems.

周东华

Southeast University, China

Fault Tolerant Control of High-Order Fully Actuated Systems

Abstract: High-order fully actuated systems are more suitable for controller design, because the whole structure is fully parameterized, and the nonlinearity can be decoupled. However, system faults may disrupt the nonlinear cancellation principle of fully actuated systems, thus fault tolerant control (FTC) of high-order fully actuated systems need to be studied, which is a key technology to improve the safety and reliability of complex systems. This report gives the latest progress of my group on the FTC of high-order fully actuated systems, including both deterministic and stochastic systems.



Donghua Zhou: Professor, doctoral supervisor at Southeast University, Chief Scientist of the Institute of Intelligent Unmanned Systems, and Director of the National-Local Joint Engineering Research Center for Mine Safety Detection Technology and Automation Equipment. He holds a Ph.D. from Shanghai Jiao Tong University and completed his postdoctoral studies at Zhejiang University. He has previously served as the Director of the Department of Automation at Tsinghua University, Vice President of Shandong University of Science and Technology, Chairman of the Teaching Steering Committee for Automation-related Majors in Higher Education

Institutions under the Ministry of Education, member of the 6th and 7th Control Science and Engineering Discipline Evaluation Group of the State Council, and Chairman of the Fault Diagnosis and Safety Committee of the Chinese Association of Automation for three consecutive terms (the 3rd, 4th, and 5th). He is a recipient of the National Science Fund for Distinguished Young Scholars, a Distinguished Professor of the Changjiang Scholars Program, a Leading Talent of the "Ten Thousand Talents Plan," the leader of an innovative research group funded by the National Natural Science Foundation, and the head of a national university teacher team in the style of Huang Danian. He also enjoys a special government allowance from the State Council. He concurrently holds positions such as a member of the IFAC Technical Committee on Fault Detection, Supervision, and Safety for Technical Processes and Vice Chairman of the Chinese Association of Automation.

His primary research interests include fault diagnosis and fault-tolerant control of dynamic systems, as well as theories for operational safety assessment. As the first completing author, he has received three national-level awards (including two second prizes for the National Natural Science Award and one second prize for National Teaching Achievements), and five first prizes for science and technology from provincial/ministerial levels and nation.

分会场报告 (Semi-plenary Lectures)

Semi-plenary Session 1

7月6 日 8:15-10:15

July 6, 8:15-10:15 4F-紫金厅

Speakers: Bin Li, Sichuan University, China
Maojiao Ye, Nanjing University of Science and Technology, China
Ning Sun, Nankai University, China
Wei Dai, China University of Mining and Technology, China



Title: Optimal Fully Actuated System Approach (FASA) Based Control Theory and Applications

Abstract: In this talk, the optimal fully actuated system approach (FASA) based theory is presented. First, the idea of the theory is given. Then, the required numerical optimal control method is introduced. Last but not least, three applications of the optimal FASA-based control are provided to show the effectiveness and advantages of the proposed theory.

Bin Li is the professor and doctoral supervisor at School of Aeronautics and Astronautic, Sichuan University. He was selected for the National High-Level Talent Youth Program, the Sichuan Provincial Top Youth Talent Program, and Sichuan Provincial Distinguished Expert. He is a Senior Member of IEEE and serves as an editorial board member for top international journals IEEE Transactions on Neural Networks and Learning Systems and Applied Mathematical Modeling. His primary research focuses on optimization-based control theory and its applications in autonomous decision-making and control of unmanned aerial vehicles/swarms. He has published over 80 SCI-indexed journal papers, obtained more than 50 authorized national invention patents, and authored one English monograph. He has led key national projects such as Key Program of National Natural Science Foundation of China. He was awarded the 9th Youth Scientist Award by the Chinese Association of Automation.



Title: Distributed online resource allocation with free-in and free-out nodes

Abstract: In this talk, an online resource allocation problem with free-in and free-out nodes is introduced. A distributed online optimization algorithm is constructed for agents to achieve the minimization of their total cost while satisfying local box constraints and a global balancing equality constraint. In the developed algorithm, the agents update their decision variables and dual variables via the projected gradient method and dual averaging method, respectively. A dynamic regret and an accumulation of constraint violation are introduced as performance indices of evaluating the established

algorithm.

Maojiao Ye received the B.Eng. degree in automation from the University of Electronic Science and Technology of China, Sichuan, China, in 2012 and the Ph.D. degree from Nanyang Technological University, Singapore, in 2016. She was a research fellow in the School of Electrical and Electronic Engineering at Nanyang Technological University from 2016 to 2017. She is currently a Professor with the School of Automaton, Nanjing University of Science and Technology. Her research interests include game theory, distributed optimization, and their applications.

Prof. Ye was a recipient of the Young Scientist Award from the Chinese Association of Automation in 2023, Guan Zhao-Zhi Award in the 36th Chinese Control Conference 2017, and the Best Paper Award in the 15th IEEE International Conference on Control and Automation 2019. She received the National Natural Science Fund for Excellent Young Scholars in 2022. She was selected into the 7th Young Elite Scientists Sponsorship Program by the China Association for Science and Technology (CAST). Prof. Ye is an Associate Editor of IEEE Transactions on Industrial Informatics, IEEE/CAA Journal of Automatica Sinica, Control Engineering Practice, and IEEE CSS Conference Editorial Board. She is the Vice-Chair of IEEE IES Technical Committee on Network-Based Control Systems and Applications and Secretary of ACA Technical Committee on MetaSystems and MetaControl.



Title: Motion control of underactuated robots based on the fully actuated system approach and related applications

Abstract: In practice, many mechanical systems, such as naval vessels, cranes, and helicopters, are underactuated to reduce energy consumption and enhance flexibility. However, compounded by strong nonlinearity arising from state coupling, the underactuated nature and high-order unavailable states pose significant challenges to motion control (particularly for un-actuated states lacking independent actuators or kinematic constraints). This talk mainly discusses the method of rearranging nonlinear underactuated systems into high-order

linear fully-actuated systems, and further introduces an adaptive control method based on the fully actuated system approach, as well as a universal and scalable analysis method. In addition, the fully actuated system approach is applied to pneumatic artificial muscle-actuated robots, where their disturbance rejection and hysteresis modeling problems are considered. Finally, comparative tests on hardware platforms verify the feasibility of the proposed methods based on the fully actuated system approach.

Ning Sun is a Young Scholar of the Changjiang Scholars Program and a professor with Nankai University, Tianjin, China, and the Shenzhen Research Institute of Nankai University, Shenzhen, China. He received the B.S. degree in measurement & control technology and instruments from Wuhan University, Wuhan, China, in 2009, and the Ph.D. degree in control theory and control engineering from Nankai University, Tianjin, China, in 2014; he was a Japan Society for the Promotion of Science (JSPS) Fellow from 2018 to 2019. His research interests include intelligent control for mechatronic/robotic systems with an emphasis on (industrial) applications. Dr. Sun received the 2021 IEEE Transactions on Industrial Electronics Outstanding Paper Award, the Machines 2021 Young Investigator Award, the 2019

Wu Wenjun Artificial Intelligence Excellent Youth Award, the ICCAR 2022 Young Scientist Award, the 2024 IEEE Transactions on Systems, Man, and Cybernetics: Systems Outstanding Associate Editor Award, the 2023 International Journal of Control, Automation, and Systems Best Associate Editor, and several outstanding journal/conference paper awards. He serves as an Associate Editor for several journals, including the IEEE Transactions on Industrial Electronics, IEEE Transactions on SMC: Systems, IEEE Transactions on Intelligent Transportation Systems, and IEEE/ASME Transactions on Mechatronics. He is a Senior Member of the IEEE.



**Title: Lightweight learning model for industrial intelligent computing:
Taking the energy industry as an example**

Abstract: The deep integration of new-generation artificial intelligence (AI) technologies with the manufacturing industry is driving a profound industrial transformation. As a cornerstone of China's energy supply system, coal plays a fundamental role in both energy security and system regulation. In alignment with the national "dual carbon" development strategy, the coal industry is gradually evolving from automation and informatization toward intelligentization. However, in practical production settings, the industry faces a series of challenges, such as difficulties in

detecting key operational indicators like product quality and yield, time-varying working conditions, unclear mechanisms, complexity in control method design, and challenges in validating control systems due to intricate control structures. These issues present new challenges for the intelligent transformation of the energy and resources sector. This report introduces a lightweight machine learning model and, taking the coal industry as a case study, addresses its real-world intelligentization needs. By integrating data and domain knowledge, combining intelligent behavior with intelligent methodologies, and merging modeling with control, the report demonstrates how AI technologies can be applied to the coal preparation process. The goal is to achieve AI-driven modeling and operational optimization control for coal sorting. Finally, the report explores new opportunities and challenges brought by the industrial internet in the realm of intelligent computing.

Wei Dai is a Full Professor and Vice Dean of the School of Information and Control Engineering, China University of Mining and Technology, where he also supervises PhD candidates. He is a recipient of the National Young Talents Program, the Jiangsu Distinguished Young Scholars Fund, and the Jiangsu Excellent Young Scholars Fund. He has also been recognized as an Excellent Young Backbone Teacher under Jiangsu's "Qinglan Project" and is a IEEE Senior Member. He currently serves as a council member of the Jiangsu Association of Automation and the Jiangsu Coal Society. His main research interests include AI-driven modeling and operational optimization control of complex process industrial systems, as well as next-generation AI methodologies such as federated learning and incremental learning. His research has been recognized with multiple awards, including the Second Prize of the Ministry of Education Natural Science Award, the First Prize of the Liaoning Patent Award, the Youth Science and Technology Award of the Chinese Association of Automation (CAA), the Youth Science and Technology Award of China Coal Society, the First and Second Prizes of CAA Natural Science Awards, the Second Prize of the CAA Science and Technology Progress Award, the Innovation Award (Individual) from the China Industry-University-Research Institute Collaboration Association, and the Third Prize of Jiangsu Science and Technology Award. He has successfully transferred four patents into application.

Speakers: Qinglei Hu, Beihang University, China

Yuanlong Li, Shanghai Jiao Tong University, China

Hongsheng Qi, Chinese Academy of Sciences, China

He Kong, Southern University of Science and Technology, China

**Title: Intelligent Perception and Control for Spacecraft Proximity Operations with Non-Cooperative Targets**

Abstract: Spacecraft proximity operations with non-cooperative targets, as enabling technologies for some current and near-future missions such as removing space debris, repairing defunct satellites, etc., have garnered extensive attention. The success of these missions heavily relies on accurate target perception and safe proximity control. However, the non-cooperative nature of targets and the complexities of the space environment pose

significant challenges for the target perception and control of spacecraft proximity operations. In this talk, I would like to share our recent research advances on the intelligent perception and control for spacecraft proximity operations with non-cooperative targets. The main research contents include: 1) intelligent target perception in the complex space environment, including representation and determination of semantic information, three-dimensional reconstruction, and pose measurement of space non-cooperative targets; 2) reinforcement-learning-based intelligent proximity control under complex motion and physical constraints; 3) simulation and experimental validation of the proposed method in typical scenes. The research results provide significant theoretical and technical support for the autonomous manipulation and control of space non-cooperative targets. Finally, I shall close by discussing on-going and future research avenues that can further address some practical engineering problem in spacecraft proximity operations.

Qinglei Hu obtained his B.Eng. degree in electrical and electronic engineering from Zhengzhou University, Zhengzhou, China, in 2001, and his Ph.D. degree with the specialization in guidance and control from Harbin Institute of Technology, Harbin, China, in 2006. From 2003 to 2014, he was with the Department of Control Science and Engineering, Harbin Institute of Technology, and then he joined Beihang University in 2014 as a Full Professor. His current research interests include intelligent perception and control, fault diagnosis and fault-tolerant control, and their applications in autonomous spacecraft systems. He has published five monographs in Elsevier, Springer, etc., and 80+ journal papers in IEEE transactions and AIAA journals. He has authorized 30+ national invention patents. He has won the second prize of national Technological Invention Award and the first prize of national defense technological invention Award. He has been appointed the Changjiang Distinguished Professorship, and has been selected as Thomson Reuters Highly Cited Researchers from 2016-2022. Currently, he serves as an Associate Editor for Aerospace Science and Technology.

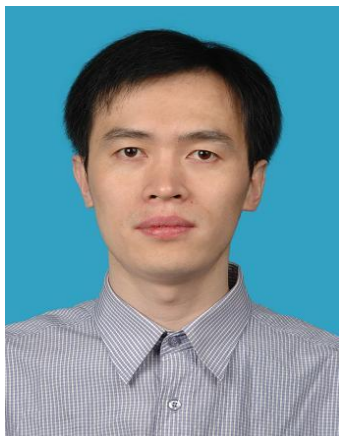


Title: Constrained Control of High-Order Fully Actuated Systems

Abstract: High-order fully actuated system (HOFAS) approach presents a promising framework for addressing nonlinear control problems. However, the efficacy of this methodology is constrained by prevalent physical limitations in practical engineering applications. Specifically, system state constraints restrict the design freedom of feedback gains, thus preventing the arbitrary assignment of closed-loop poles. On the other hand, input saturation constraints compromise the system's full-actuation property. Consequently, the pre-designed controllers may fail to completely eliminate the inherent system nonlinearities and establish the desired closed-loop linear dynamics. This report introduces two methods for

handling constrained control problems in HOFAS, namely, explicit reference governor design and anti-windup compensation.

Yuanlong Li is currently a Professor at Shanghai Jiao Tong University. He received the Ph.D. degree in control theory and control engineering from Shanghai Jiao Tong University, Shanghai, China, in 2015. He was a Visiting Graduate Student with the Charles L. Brown Department of Electrical and Computer Engineering, University of Virginia, Charlottesville, USA, from September 2011 to August 2012. He served as Principal Investigator for the NSFC Excellent Young Scientists Fund Project. His research interests include nonlinear control theory and constrained control systems.



Title: Feedback Shaping for Logical Dynamic Systems

Abstract: Logical dynamic systems (LDS) are a class of discrete-time dynamic systems where states and inputs take values from finite sets, and evolution follows logical rules (such as Boolean functions). They arise in various application domains, such as biology, computer networks, and social networks etc. The representation and control of such systems have attracted much attention in recent years. In a parallel line of research, Koopman developed an operator view of nonlinear dynamical systems, which shows that, by making use of observable functions, every nonlinear dynamics can be represented as a (possibly infinite dimensional) linear system. In this talk, we first present a

Koopman representation for LDS. Then, we establish a necessary and sufficient condition for shaping the closed-loop dynamics via feedback into any desired form for logical systems under the representation, and we develop a feedback control synthesis algorithm to solve this feedback shaping problem.

Hongsheng Qi received his Ph.D. degree in systems theory from Academy of Mathematics and Systems Science, Chinese Academy of Sciences in 2008. From July 2008 to May 2010, he was a postdoctoral fellow in the Key Laboratory of Systems Control, Chinese Academy of Sciences. He currently is a professor with the Academy of Mathematics and Systems Science, Chinese Academy of Sciences. His research interests include logical dynamic systems, game theory, quantum networks, etc. He was a recipient of "Automatica" 2008-2011 Theory/Methodology Best Paper Prize in 2011 and a recipient of a second National Natural Science Award of China in 2014.



Title: A Fully Actuated System Approach to Underactuated Systems Control—The Example of Cubli

Abstract: The Cubli is an interesting underactuated mechatronics system with reaction wheels mounted on its three faces. It can balance on one of its corners or edges by applying torques to the reaction wheels. Existing methods use linearization-based LQR or backstepping methods for its attitude control. In this talk, we will discuss our attempts on adopting the fully actuated system (FAS) approach to attitude control of Cubli, touching on aspects of model transformation, disturbance rejection, and closed-loop control.

He Kong received the Bachelor's degree in Electrical Engineering from China University of Mining and Technology, Xuzhou, China, Master's degree in Control Science and Engineering from Harbin Institute of Technology, Harbin, China, and the Ph.D. degree in Electrical Engineering from the University of Newcastle, Australia, respectively. He was a Research Fellow at the Australian Centre for Field Robotics, the University of Sydney, Australia, during 2016–2021. In early 2022, he joined the Southern University of Science and Technology, Shenzhen, China, where he is currently an Associate Professor. His research interests include active multi-modal perception, robot audition, state estimation, control applications. He is currently serving on the editorial board of IEEE Robotics and Automation Letters, IEEE Robotics and Automation Magazine, IEEE Sensors Letters, International Journal of Adaptive Control and Signal Processing, Proceedings of the IMechE-Part I: Journal of Systems and Control Engineering, Journal of Climbing and Walking Robots. He has also served as an Associate Editor on the IEEE CSS Conference Editorial Board and for the IEEE RAS flagship conferences such as the IEEE ICRA, IEEE/RSJ IROS, IEEE CASE, etc. As a co-recipient, he has received several awards, including the Best Paper Award at the 14-th International Conference on Indoor Positioning and Indoor Navigation in 2024, the Outstanding Poster Prize at the 5th Annual Conference of China Robotics Society in 2024, a Finalist for the Young Author Award at the 1st IFAC Workshop on Robot Control in 2019.

会场交通及周边

南京青旅宾馆坐落于南京紫金山南麓、月牙湖畔，距南京南站、新街口商圈仅十余分钟车程，酒店周围景点众多、环境优美、交通便利。

详细地址：南京市秦淮区后标营路 101 号。

抵达方式：

地点	直线距离/公里（大约）
南京禄口国际机场	43公里
南京站	8.7公里
南京南站	11公里

➡ 南京禄口国际机场至南京青旅宾馆

- 1. 出租车：车程约 43 分钟，费用约 69 元。
- 2. 公交：约 1 小时 34 分钟：

南京禄口机场 T1 航站楼上车→乘机场巴士 1 号线（南京火车站东广场方向）→七里街站换乘 87 路（上坊保障房总站方向）→苜蓿园大街站下车→步行 697 米到达青旅宾馆。

➡ 南京站至南京青旅宾馆

- 1. 出租车：车程约 23 分钟，费用约 19 元。
- 2. 公交：约 1 小时 3 分钟。

南京站·南广场东边上车→乘公交 59 路（杨庄方向）→苜蓿园大街站下车→步行 697 米到达青旅宾馆。

➡ 南京南站至南京青旅宾馆

- 1. 出租车：车程约 18 分钟，费用约 21 元。
- 2. 地铁公交：约 55 分钟。

南京南站上车→乘地铁 3 号线（林场方向）→大明路 4 号口换乘公交 99 路（银城东苑方向）→后标营路·童卫路站下车→步行 175 米到达青旅宾馆。

会场环境：



● 钟山厅



● 紫金厅



● 金陵厅



● 第一会议室



● 第二、三会议室



● 第五、六、七、八会议室



● 第一教室



● 第二教室



● 第三教室

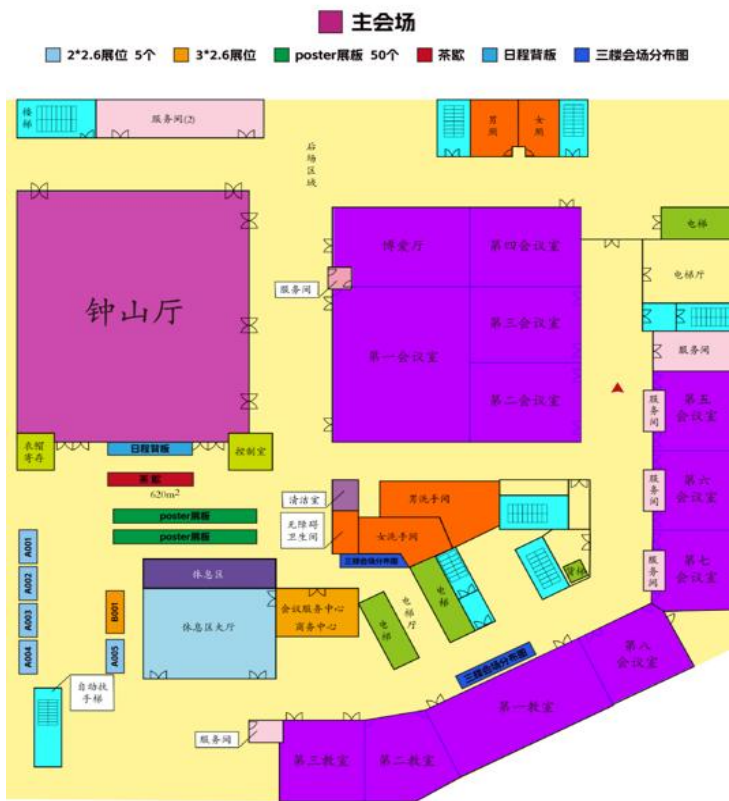


● 友谊厅

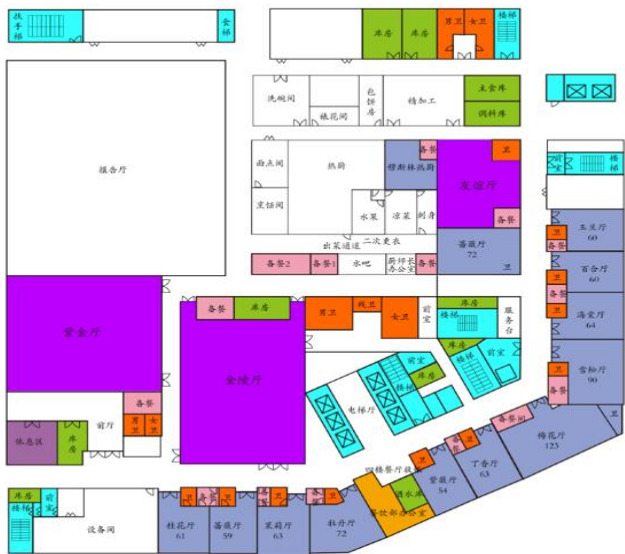


会场平面图：

第四届全驱系统理论与应用会议 三楼平面图

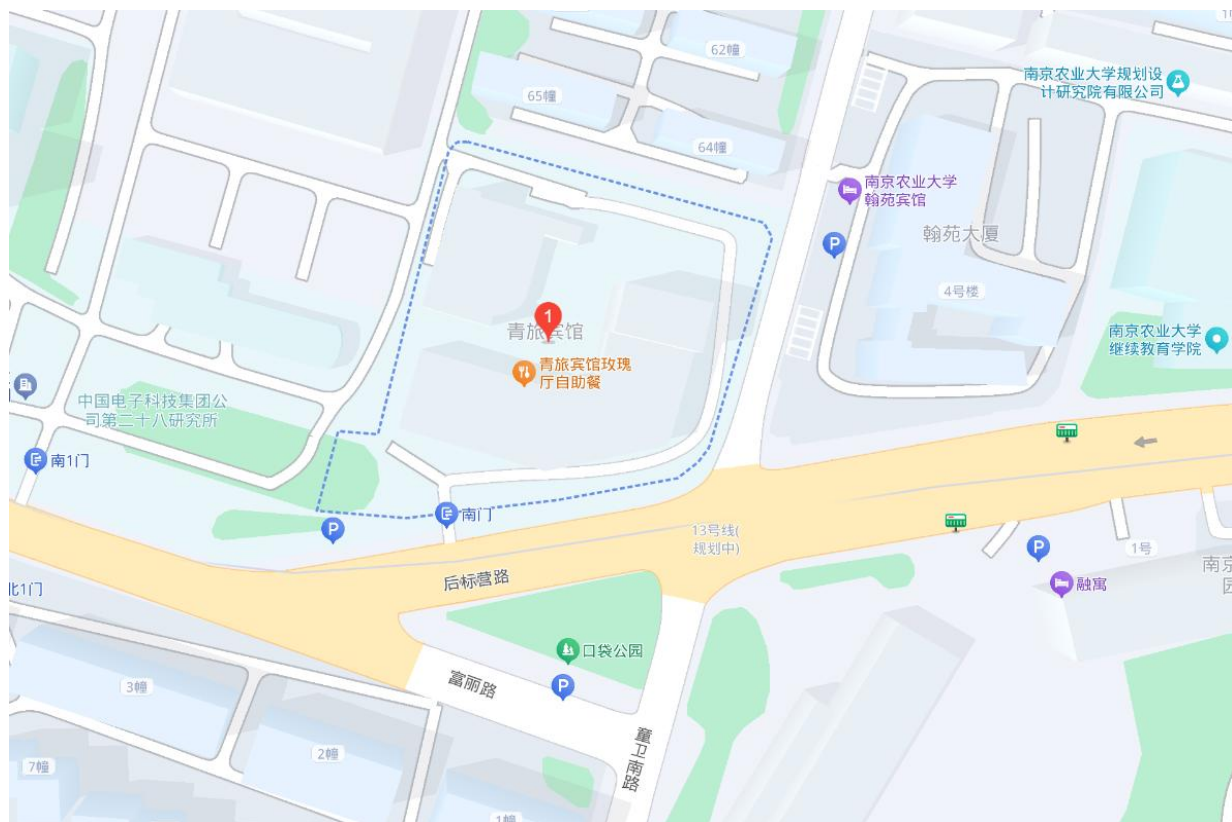


- 会议室
- 服务间
- 楼梯
- 卫生间
- 库房
- 休息区
- 清洁室
- 办公室



四楼

会场交通周边：



南京青旅宾馆位于南京紫金山南麓、月牙湖畔。

12分钟 到达明故宫/南京博物院地区商业区

38分钟 连通南京禄口国际机场

55分钟 连通南京南站

地铁：3号线大明路4号口换乘公交99路到后标营路·童卫路站

公交：后标营路·童卫路站

南京理工大学简介

南京理工大学是隶属于工业和信息化部的全国重点大学，学校由创建于 1953 年的新中国军工科技最高学府中国人民解放军军事工程学院（简称“哈军工”）分建而成，历经中国人民解放军炮兵工程学院、华东工程学院、华东工学院等发展阶段，1993 年更名为南京理工大学。1995 年，学校成为国家“211 工程”重点建设高校；2000 年，获批成立研究生院；2011 年，获批建设“985 工程优势学科创新平台”；2017 年，学校入选“双一流”建设高校，“兵器科学与技术”学科入选“双一流”建设学科；2018 年，学校王泽山院士获得国家最高科学技术奖，同年，学校成为工信部、教育部、江苏省共建高校。进入新时代、开启新征程，学校坚持“以人为本，厚德博学”的办学理念，秉持“进德修业，志道鼎新”的校训，弘扬“团结、献身、求是、创新”的校风，以服务国家战略需求、推动社会进步为使命，为党育英才、为国铸利器，围绕陆海空天信融合发展，加快建设特色鲜明世界一流大学。

南京理工大学自动化学院简介

南京理工大学自动化学院前身是中国人民解放军军事工程学院（简称“哈军工”）炮兵工程系指挥仪科，经过不断调整与发展，2005 年更名为南京理工大学自动化学院。学院获批第三批全国党建工作标杆院系，黄大年式教师团队党支部获批第四批全国高校党建工作样板支部，自动控制系博士生第三党支部获第三批全国高校“百个研究生样板党支部”建设单位。

学院拥有“控制科学与工程”“电气工程”“智能科学与技术”3 个一级学科，其中“控制科学与工程”为江苏省一级重点学科，拥有博士学位授予权（含“控制理论与控制工程”“系统工程”等 5 个二级学科博士点）、博士后流动站和硕士学位授予权。学院设有“自动化”“电气工程及其自动化”“轨道交通信号与控制”“智能电网信息工程”4 个本科专业。

学院现有教职工 182 人，其中全时院士 1 人、国家级教学名师 2 人、国家级领军人才 7 人、国家级青年人才 10 人、“全国创新争先奖”获得者 1 人、“国家百千万人才工程”获评者 2 人。拥有全国高校黄大年式教师团队 1 个、教育部创新团队 2 个、江苏省青蓝工程科技创新团队 1 个、江苏省“六大人才高峰”创新人才团队 1 个、教育部虚拟教研室建设试点 1 个、江苏省创新团队 2 个。

学院现有在校本科生 1584 人，硕士研究生 1697 人，博士研究生 276 人。学院坚持以学科竞赛为牵引，提升学生创新实践能力，每年获省部级以上竞赛奖励学生人次占比超过 20%。近几年，获中国国际大学生创新大赛金奖 1 项、银奖 1 项，全国大学生机器人大赛一等奖 1 项，全国“挑战杯”大学生科技作品竞赛特等奖 2 项，“互联网+”大学生创新创业大赛全国金奖 1 项、银奖 3 项、铜奖 3 项，“创青春”全国大学生创业计划大赛金奖 1 项。

学院坚持“四个面向”，锚定自主创新，经过几代人的不懈努力，形成了智能导航与火力控制、智能网信与指挥控制、智能检测与运动控制、复杂系统智能控制理论、新能源发电控制及并网技术、军事智能交通等优势特色研究方向。“十三五”以来，获国家科技进步一等奖、国家技术发明二等奖、国家自然科学基金二等奖等省部级及以上科技荣誉和奖励近 20 项。近年来，承担了国家自然科学基金创新研究群体、国家重大仪器专项、中央军委科技委基础加强计划项目等一大批国家级重大项目。

学院与国（境）外多所高校保持着良好的学术交流和科研合作关系，聘请了包括中科院院士、IFAC Fellow、IEEE Fellow 等在内的近二十名国内外知名学者任我学院的兼职教授和客座教授。近年来承办了第三届国际自主无人系统大会（2023 年）、国际信息物理社会智能会议（2022 年）、第三届应用超导学术年会（2020 年）、江苏省自动化学会伺服与运动控制专委会会议（2020 年）等多个国际国内会议，极大地提高了学院的学术水平和国内外的知名度。

中国自动化学会全驱系统理论与应用专业委员会简介

中国自动化学会全驱系统理论与应用专业委员会(Technical Committee on Fully Actuated System Theory and Applications, Chinese Association of Automation)于2023年11月得到中国自动化学会的创建批复,依托单位为南方科技大学。专委会主任由段广仁院士担任,副主任由燕山大学华长春教授,深圳市中科欧鹏智能科技有限公司董事长秦志强,中国自动化学会副理事长、清华大学周东华教授,南京理工大学邹云教授担任,专委会秘书长由哈尔滨工业大学(深圳)张颖教授担任。该委员会旨在促进全驱系统领域内的学术交流、技术发展和人才培养,推动全驱系统在国防、工业、农业等领域的应用和发展。

物理上的全驱系统指的是有效控制输入数量等于受控自由度数量的一类控制系统。对这一物理概念进行数学层面的推广而得到的全驱系统模型与方法为控制系统的建模与设计提供了一条更加简单、有效的途径。全驱系统理论与应用的内容主要包括全驱系统的系统建模、控制、优化、学习、决策等系统理论与方法,在控制工程领域,特别是在航空、航天控制领域,全驱系统具有广泛的代表性。比如,航天器的轨道/姿态动力学系统经牛顿运动定律建模后天然地具备二阶全驱系统形式。随着世界航空、航天科技的快速发展,航空、航天飞行器结构日趋先进和复杂,由此带来了强耦合、强非线性和大不确定性等问题,同时对飞行器的性能也提出了越来越高的要求。航空、航天飞行器的性能不仅取决于系统的硬件配置,也取决于控制算法的优劣。在这种情形下,如何结合全驱系统理论与方法的优越性,针对航空、航天领域的迫切需求,提出先进且行之有效的飞行器控制方法,是一个具有挑战性的问题,也具有重要的实际参考价值。

全驱系统理论与应用会议是全驱系统理论与应用专业委员会主办的系列学术年会。2022年8月5日,国家自然科学基金委全驱系统理论与航天器控制技术基础科学中心启动仪式暨中国自动化学会全驱系统理论与应用专业委员会第一届学术研讨会在黑龙江哈尔滨华旗饭店隆重举行,吸引了来自哈尔滨工业大学、国家自然科学基金委、中国自动化学会的领导和全国100余专家参加会议。

2023年全驱系统理论与应用会议于2023年7月14-16日在山东省青岛市西海岸国家新区召开。会议旨在为从事相关领域和研究的国内外专家、学者及工程技术人员提供一个学术交流平台,展示最新的理论与技术成果。今后专业委员会将扩大该学术会议的规模,力争打造国际化的学术交流平台,增进国内学者与国际同行的交流,促进中国全驱系统理论与应用的发展。2023年全驱系统理论与应用会议的会议主题范围涵盖全驱系统控制理论、基于全驱系统理论的鲁棒控制、非线性控制、故障诊断与容错控制、航空航天飞行器控制等多个热门

研究领域。会议共收到来自中国、加拿大、澳大利亚、新加坡等 9 个国家和地区的投稿论文 267 篇，经过评审专家和会议程序委员会严格、认真的评审，最后共录用论文 231 篇（包括长摘要 35 篇）。最终有 190 篇收入会议论文集。

2024 年全驱系统理论与应用会议于 2024 年 5 月 10-12 日在深圳召开，由南方科技大学、中国自动化学会全驱系统理论与应用专业委员会主办，南方科技大学系统设计与智能制造学院承办。此次会议将采用大会报告、半大会报告、分组报告和张贴论文等形式进行交流。

在新的世纪，国家航空航天、工业等领域对控制科学与工程提出了更高的要求，全驱系统理论将在更加广阔的领域显示其巨大的活力，这也为全驱系统理论与应用专业委员会的发展提供了更广阔的天地。作为中国自动化学会诸多专业委员会中唯一一个以中国学者原创性方法命名的专委会，我们将团结奋进、开拓创新，在中国自动化学会的领导下迅速发展壮大，谱写全驱系统理论与应用专业委员会的新篇章。

Technical Program

Technical Program

PL1 **July 5, 9:00-9:45**

大会报告 1

Plenary Lecture 1

Chair: James Lam The University of Hong Kong

^{PL1} Dynamic linearizability implies static stabilizability and related results

Speaker: Alessandro Astolfi Imperial College London, U.K.

PL2 **July 5, 9:45-10:30**

大会报告 2

Plenary Lecture 2

Chair: Huanshui Zhang Shandong University of Science and Technology

^{PL2} Synchronization of Heterogeneous Multi-agent Systems through Singular Perturbation

Speaker: Hyungbo Shim Seoul National University, Korea

PL3 **July 5, 11:00-11:45**

大会报告 3

Plenary Lecture 3

Chair: Guoxiang Gu Louisiana State University

^{PL3} Fault Tolerant Control of High-Order Fully Actuated Systems

Speaker: Donghua Zhou Southeast University, China

Parallel Session 1 **July 6, 8:15-10:15**

分会场报告 1

▶ PS1-1 8:15-8:45

Chair:

^{PS1} Optimal Fully Actuated System Approach (FASA) Based Control Theory and Applications

Speaker: Bin Li Sichuan University, China

▶ PS1-2 8:30-9:00

Chair:

^{PS2} Distributed online resource allocation with free-in and free-out nodes

Speaker: Maojiao Ye Nanjing University of Science and Technology, China

▶ PS1-3 9:00-9:30

Chair:

^{PS3} Motion control of underactuated robots based on the fully actuated system approach and related applications

Speaker: Ning Sun Nankai University, China

▶ PS1-4 9:30-10:00

Chair:

^{PS4} Lightweight learning model for industrial intelligent computing: Taking the energy industry as an example

Speaker: Wei Dai China University of Mining and Technology, China

Parallel Session 2 **July 6, 8:15-10:15**

分会场报告 2

▶ PS2-1 8:00-8:30

Chair:

^{PS1} Intelligent Perception and Control for Spacecraft Proximity Operations with Non-Cooperative Targets

Speaker: Qinglei Hu Beihang University, China

▶ PS2-2 8:30-9:00

Chair:

^{PS2} Constrained Control of High-Order Fully Actuated Systems

Speaker: Yuanlong Li Shanghai Jiao Tong University, China

▶ PS2-3 9:00-9:30

Chair:

^{PS3} Feedback Shaping for Logical Dynamic Systems

Speaker: Hongsheng Qi Chinese Academy of Sciences, China

▶ PS2-4 9:30-10:00

Chair:

^{PS4} A Fully Actuated System Approach to Underactuated Systems Control—The Example of Cubli

Speaker: He Kong Southern University of Science and Technology, China

Saturday, July 05, 2025 下午第一场

SaA01

13:30–15:30

Fasta Outstanding Youth Paper Award

- ISaA01-1 13:30-13:50
038 Tracking Control for Nonlinear Fully Actuated Systems with Multiple Disturbances Using Dual-Disturbance Observer
Da-Wei Zhang Southern University of Science and Technology
Guoping Liu Southern University of Science and Technology
- ISaA01-2 13:50-14:10
0521 High-Order Fully Actuated Voltage Control for DC Microgrids With Constant Power Loads
Yi Yu The Hong Kong Polytechnic University
Guoping Liu Southern University of Science and Technology
Peng Shi University of Adelaide
Chi-yung Chung The Hong Kong Polytechnic University
- ISaA01-3 14:10-14:30
0249 Dynamic event-triggered mechanism for networked nonlinear systems via output-feedback control
Wenhui Liu Nanjing University of Science and Technology
Qian Ma Nanjing University of Science and Technology
Shengyuan Xu Nanjing University of Science and Technology
- ISaA01-4 14:30-14:50
0155 Fault-Tolerant Control for High-Order Fully Actuated Systems With Dead-Zone Observers
Miao Cai Southeast University
Donghua Zhou Tsinghua University
- ISaA01-5 14:50-15:10
0596 Bias-Policy Iteration Based Adaptive Dynamic Programming for Nonlinear Fully Actuated Systems
Huaiyuan Jiang Harbin Institute of Technology
Ruiqing Zhang Harbin Institute of Technology
Bin Zhou Harbin Institute of Technology

SaA02

13:30–15:30

Invited Session: Fully Actuated System Theory and Applications Research Fund for Young Scholars Nanjing University of Aeronautics and Astronautics)

- Chair: Ke Zhang Nanjing University of Aeronautics and Astronautics
Co-Chair: Kenan Yong Nanjing University of Aeronautics and Astronautics (NUAA)
- ISaA02-1 13:30-13:45
091 Incremental Fully Actuated System Approach Based Fault-Tolerant Control Design and Flight Implementation of Unmanned Helicopters
Guangrun Liu Nanjing University of Aeronautics and Astronautics
Qiyang Miao Nanjing University of Aeronautics and Astronautics
Jingping Xia Nanjing University of Aeronautics and Astronautics
Bin Jiang Nanjing University of Aeronautics and Astronautics
Ke Zhang Nanjing University of Aeronautics and Astronautics
- ISaA02-2 13:45-14:00
0101 Re-planning of Reconnaissance Missions for Multi-UAV Systems Under Potential Faults
Lintao Xu Nanjing University of Aeronautics and Astronautics
Ke Zhang Nanjing University of Aeronautics and Astronautics
Bin Jiang Nanjing University of Aeronautics and Astronautics
- ISaA02-3 14:00-14:15
0326 Adaptive trajectory tracking for nonminimum phase HSVs based on HOFA system approaches
Yirong Zhou Nanjing University of Aeronautics and Astronautics
Ruiyun Qi Nanjing University of Aeronautics and Astronautics)

ISaA02-4 14:15-14:30
0400 Adaptive Trajectory Tracking Control of Quadrotor UAV under Turbulent Winds via Fully Actuated System Approach
Aize Li Nanjing University of Aeronautics and Astronautics
Liyan Wen NanJing Universty of Aeronautics and Astronautics
Liu Sirui Nanjing University of Aeronautics and Astronautics

ISaA02-5 14:30-14:45
0461 Formation Control of Multi-UAV Based on High-Order Fully Actuated System Approaches
Zibei Zhang Nanjing University of Aeronautics and Astronautics
Jing Zhu Nanjing University of Aeronautics and Astronautics
Hongyuan Zheng Nanjing University of Aeronautics and Astronautics

ISaA02-6 14:45-15:00
0482 Flexible Performance-based Fully Actuated Control for Mechanical System under Input Saturation
Kenan Yong Nanjing University of Aeronautics and Astronautics

ISaA02-7 15:00-15:15
0598 Stabilization and Tracking Control of Underactuated Unmanned Surface Vessel with High-Order Fully Actuated System Approach in GPS-Denied Environments
Qi Pan Nanjing University of Aeronautics and Astronautics
Tengteng Zeng Nanjing University of Aeronautics and Astronautics
Xiuhui Peng Nanjing University of Aeronautics and Astronautics

ISaA02-8 15:15-15:30
0604 Discrete-time fractional-order cooperative control of multi-spacecraft based on fully actuated system theory and disturbance observer
Yiqi Chen Nanjing University of Aeronautics and Astronautics
shuyi Shao Nanjing University of Aeronautics and Astronautics

SaA03 13:30-15:30 Invited Session: Recent Developments on Control and Optimization based on Fully Actuated System Theory

Chair: Da-Wei Zhang Southern University of Science and Technology
Co-Chair: Xiubo Wang Northeastern University at Qinhuangdao

ISaA03-1 13:30-13:45
037 Adaptive Fully Actuated Prescribed Performance Control for Combined Spacecraft with Unknown Inertial Parameters
Guangquan Duan Harbin Institute of Technology,
Xiaoguang Wang NORINCO GROUP Aviation Ammunition Research Institute Co., Ltd.
Yuxin Liang harbin institute of technology
Qi Wang Norinco Group Air Ammunition Research Institute
bowen yu China Ordnance Industry Group Aviation Ammunition Research Institute Co., Ltd
Xianglei Meng AAI

ISaA03-2 13:45-14:00
0591 Predictive Control for A Type of UASs with Unmatched Disturbances based on FAS Approaches
Xiubo Wang Northeastern University at Qinhuangdao
Lixue Xu Harbin Institute of Technology

ISaA03-3 14:00-14:15
0103 Low-complexity Prescribed Performance Control for Perturbed Robotic Manipulators: A Fully Actuated System Approach
Yi Ding Harbin Institute of Technology
Guangren Duan Harbin Institute of Technology

ISaA03-4 14:15-14:30
0116 Predictive Control for Networked Buck Converter Systems with Time Delays Based on Fully Actuated System Theory
Xiaoran Dai Wuhan University
Guoping Liu Southern University of Science and Technology
Zhongcheng Lei Wuhan University
Wenshan Hu Wuhan University
Hong Zhou Wuhan University

Jun Zhang	Wuhan University
ISaA03-5	14:30-14:45
0312 Noncertainty-Equivalent Adaptive Control for Submarines Using SDU Decomposition: A FAS Approach	
Zhijun Chen	Harbin Institute of Technology
Guangren Duan	Harbin Institute of Technology
ISaA03-6	14:45-15:00
0381 High-gain Observer-based Output Feedback Stabilization for Nonlinear Systems with Quantized Input Signal: A Fully Actuated System Approach	
Lin Liu	Harbin Institute of Technology
Guangren Duan	Harbin Institute of Technology
ISaA03-7	15:00-15:15
0525 Anti-disturbance and fault tolerance control for discrete systems based on interval observers	
QuanZhi Liu	Jilin University
Jia-Kun Zhang	Shanghai Institute of Spaceflight Control Technology
Li-Song Sun	Northeastern University
Yang Xiao	Jilin University
Guowei Fan	Jilin University
Liu Zhang	Jilin University
ISaA03-8	15:15-15:30
0665 Inverter Impedance Modelling and Stability Analysis Based on Virtual Synchronous Generator Control	
Ruitong Zhang	Nanjing University of Science and Technology
Puyu Wang	Nanjing University of Science and Technology
Dengpan Sun	Nanjing University of Science and Technology
Linpei Hu	Nanjing University of Science and Technology
<div> <div> SaA04 13:30-15:30 </div> <div> Invited Session: Fully Actuated System, Intelligent Perception and Control; 新能源电力系统控制-全驱系统方法;Recent Developments in Fully Actuated System Approach with System Uncertainties </div> </div>	
Chair: Lingling Lv	North China University of Water Conservancy and Electric Power
Co-Chair: Yang Liu	Beihang University (BUAA),
ISaA04-1	13:30-13:45
021 Prescribed-time control for nonholonomic systems: A fully actuated systems method	
Jiaming Zhang	Beihang University
Yang Liu	Beihang University
Ben Niu	Shandong Normal University
ISaA04-2	13:45-14:00
0235 Online Federated Reproduced Gradient Descent with Time-varying Global Optima	
Wenling Li	Beihang University
Yifu Lin	Beihang University
ISaA04-3	14:00-14:15
0310 Evolutionary dynamics of cooperation in structured public goods game with a generalized interaction mode	
Ju Han	University of Electronic Science and Technology of China
Xiaojie Chen	University of Electronic Science and Technology of China
ISaA04-4	14:15-14:30
0616 Research on multi-agent obstacle avoidance navigation based on hierarchical deep reinforcement learning	
Hanqi Sun	University of Electronic Science and Technology of China
Rui Li	University of Electronic Science and Technology of China
Tian Min	University of Electronic Science and Technology of China
Ying Jing Shi	University of Electronic Science and Technology of China
ISaA04-5	14:30-14:45
0628 固定拓扑下一阶线性多智能体系统周期一致性控制	
吕灵灵	华北水利水电学院
李罡	华北水利水电大学

ISaA04-6 14:45-15:00
0782 Fully actuated system approach of prescribed-time spacecraft elliptical orbital rendezvous
Xiangyu Gao Guangxi Normal University
Mengjie Chen Guangxi Normal University
Lingling Lv North China University of Water Conservancy and Electric Power

ISaA04-7 15:00-15:15
0669 Interaction of Active Power Control Channels in a PMSG Grid-Integrated System Based on Grid-Forming Control
Xin Wang Nanjing University of Science and Technology
Puyu Wang Nanjing University of Science and Technology
Tianming Gu Nanjing University of Science and Technology
Linpei Hu Nanjing University of Science and Technology
Yu Sheng Nanjing University of Science and Technology

ISaA04-8 15:15-15:30
0311 Fault Detection Set-Valued Observer Design for Discrete-Time Nonlinear Systems Based on Fully Actuated System Approach
Weijie Ren Southern University of Science and Technology
He Kong Southern University of Science and Technology
Guangren Duan Harbin Institute of Technology

SaA05 13:30-15:30

Invited Session: 全驱系统理论及其在航空航天领域的应用;
Autonomous sensing and collaborative control of multi-agent systems

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

ISaA05-1 13:30-13:45
0180 Sliding Mode Control-based Prescribed Performance Fault-Tolerant Tracking Control for Morphing Aircraft
Ziqi Ye Rocket Force University of Engineering
Hui Xu Rocket Force University of Engineering
Xuen Fan Rocket Force University of Engineering
Encheng Dai Rocket Force University of Engineering
Guang-Bin Cai Xi'an Research Institute of High-Tech

ISaA05-2 13:45-14:00
0181 Fault-Tolerant H_∞ Control for a Linear Parameter-Varying Model of Morphing Aircraft
Xuen Fan Rocket Force University of Engineering
Tong Wu Rocket Force University of Engineering
Guang-Bin Cai Xi'an Research Institute of High-Tech

ISaA05-3 14:00-14:15
0189 Data Fusion Algorithm for Redundant Gyroscope System Based on Differential Layout Array
Jixiang Lu Rocket Force University of Engineering
Liang Xue Rocket Force University of Engineering
Guang-Bin Cai Xi'an Research Institute of High-Tech
Guoyuan He Northwestern Polytechnical University

ISaA05-4 14:15-14:30
0566 Fixed-time Incremental Sliding Mode Control of Aircraft with Actuator Faults
Jiayu Liu Harbin Institute of Technology
Shuyu Zhang Harbin Institute of Technology
yan zhen The third general design department of China aerospace science and industry corporation
Mingzhe Hou Harbin Institute of Technology

ISaA05-5 14:30-14:45
0567 A Novel Dynamic Periodic Event-Triggered Prescribed Performance Control of Uncertain Semi-Strict Feedback Systems With Application
xindi xu Harbin Institute of Technology
Mingzhe Hou Harbin Institute of Technology

Feng Tan	Harbin Institute of Technology
ISaA05-6	14:45-15:00
0345 Adaptive Kalman Filter for Dynamic Systems Localization with Skewed Heavy-tailed Noise	
Zihao Zhang	China University of Mining and Technology
Guoqing Wang	China University of Mining and Technology
Chunyu Yang	China University of Mining and Technology
Lei Ma	China University of Mining and Technology
ISaA05-7	15:00-15:15
0346 Data-Driven Controllability and Observability of Probabilistic Logical Control Networks	
Lin Lin	The University of Hong Kong
James Lam	The University of Hong Kong
ISaA05-8	15:15-15:30
0353 Non-Overshooting Position Tracking Control for Permanent Magnet Synchronous Motor Servo Systems via High-Order Fully-Actuated Modeling	
Chunyu Yang	China University of Mining and Technology
Mingjun Ji	China University of Mining and Technology
Lei Ma	China University of Mining and Technology
SaA06	13:30-15:30
Invited Session: Analysis and optimization design for complex dynamical systems subject to communication constraints; Recent Advances on Nonlinear Dynamic Systems Based on Fully Actuated System Theory	
Chair: Jun Hu	Harbin University of Science and Technology
Co-Chair: Lei Zou	Brunel University London
ISaA06-1	13:30-13:45
031 Sliding Mode Control for Discrete Uncertain T-S Fuzzy Delayed Systems: Attack Detection Scheme	
Zhiyuan Zuo	Harbin University of Science and Technology
Na Lin	Harbin University of Science and Technology
Hongxu Zhang	Harbin University of Science and Technology
Liu Hao	Harbin University of Science and Technology
Jun Hu	Harbin University of Science and Technology
ISaA06-2	13:45-14:00
070 Lead-Time Affine Formation Control of Multi-agent Systems under Actuator Faults	
Jiawei Pi	Harbin University of Science and Technology
Chong Tan	Harbin University of Science and Technology
Yanjiang Li	Harbin University of Science and Technology
ISaA06-3	14:00-14:15
083 Fault Detection for Markov Jump Systems Against Deception Attacks Under Critical-Information Protection Mechanism	
Siteng Ma	Harbin University of Science and Technology
Weilu Chen	Harbin University of Science and Technology
Xiaolong Yang	Harbin University of Science and Technology
Zhihui Wu	Harbin University of Science and Technology
Jun Hu	Harbin University of Science and Technology
ISaA06-4	14:15-14:30
087 Fault Diagnosis for Gearbox of Wind Turbine Based on Transfer Learning and Improved Res2Net	
Ke Chen	China University of Petroleum (East China)
Ming Gao	China University of Petroleum (East China)
Li Sheng	China University of Petroleum (East China)
Xiaopeng Xi	Universidad Técnica Federico Santa María
ISaA06-5	14:30-14:45
088 Quadratic Filtering Based with Random Access Protocol and Probabilistic Quantization	
yang zhou	Donghua University
Na Li	Qingdao University of Science and Technology
Wen Chen	Harbin University of Science and Technology
Lei Zou	Brunel University London

ISaA06-6 14:45-15:00
0562 Free Final-Time Trajectory Optimization for Ramjet Mode of ATR Aircraft by Successive
Difference-of-Convex Programming
邓泽晓 哈尔滨工业大学 (深圳)
王雁 哈尔滨工业大学 (深圳)
刘鲁华 中山大学

ISaA06-7 15:00-15:15
0446 FMS of Centralized and Distributed Affine Nonlinear Systems and Observer Design Based on FMCF
Yuyan Li Shandong University
Jinjin Zhang Shandong University
Shuai Liu Shandong University

ISaA06-8 15:15-15:30
0501 Trajectory Tracking of Robotic Manipulator Based on High-Order Fully Actuated System Approach
Jinjin Zhang Shandong University
Yuyan Li Shandong University
Shuai Liu Shandong University

SaA07 13:30-15:30 Invited Session: Fully actuated system theory and its application in robot control; Intelligent control and estimation in engineering field
--

Chair: Ling Huang Harbin University of Science and Technology
Co-Chair: jun wang Nanjing University of Science and Technology

ISaA07-1 13:30-13:45
0111 Robust Trajectory Tracking for UVMS via Fully Actuated System Theory and Liquid Neural Networks
Jiawei Wu Harbin Engineering University
Bing Li Harbin Engineering University
Ling Huang Harbin University of Science and Technology
Jiashuai Li Northeast Forestry University
Mingze Li Harbin Engineering University

ISaA07-2 13:45-14:00
0225 Event-triggered synchronization control complex semiconductor laser network with bit-rate constraint
Jing Guo Harbin University of Science and Technology
Ling Huang Harbin University of Science and Technology

ISaA07-3 14:00-14:15
0370 An Unscented Kalman Filter Algorithm for Rebar Signal Processing Based on an Adaptive Forgetting Factor
Jianwei Fan Harbin University of Science and Technology
Ling Huang Harbin University of Science and Technology
Baoluo Li Harbin University of Science and Technology

ISaA07-4 14:15-14:30
0449 A Network Communication Time Delay Compensation Strategy Based on High Order Predictive Control
Yi Zhou Wuhan Institute of Technology
jiali ding Wuhan Institute of Technology
Xuhuan Xie Wuhan Institute of Technology
Hao Liu Wuhan Institute of Technology
Zixin Huang Wuhan Institute of Technology

ISaA07-5 14:30-14:45
0626 An Adaptive Control Method for Humanoid Robots Based on Fully-actuated Systems
Hao Sun Northwestern Polytechnical University
Liang He Northwestern Polytechnical University
Ling Huang Harbin University of Science and Technology

ISaA07-6 14:45-15:00
0670 Multi-agent Cooperative Pursuit Algorithm for UGVs Based on MASAC
Min Fang Nanjing University of Science and Technology
Jun Wang Nanjing University of Science and Technology

ISaA07-7 15:00-15:15
0671 Disturbance Rejection Control of Flying Rifle Based on Adaptive Prescribed Performance
Chichen Zhang Nanjing University of Science and Technology
Jun Wang Nanjing University of Science and Technology
Fan Cao Nanjing University of Science and Technology
Yuming Bo Nanjing University of Science and Technology

ISaA07-8 15:15-15:30
0681 Prescribed Performance-Based Recoil Compensation Control for Flying Rifle Systems
Fan Cao Nanjing University of Science and Technology
Jun Wang Nanjing University of Science and Technology
Chichen Zhang Nanjing University of Science and Technology

SaA08 13:30-15:30 Invited Session: Renewable Energy Power System Control - A Fully Actuated System Approach

Chair: Yi Yu The Hong Kong Polytechnic University
Co-Chair: Hao Quan Nanjing University of Science and Technology

ISaA08-1 13:30-13:45
0264 Digital Twin-Based Monitoring and Networked Tolerant Control for Cyber-Physical Systems
ShiYu Chen Southern University of Science and Technology
Guoping Liu Southern University of Science and Technology
Yi Yu The Hong Kong Polytechnic University

ISaA08-2 13:45-14:00
0666 Analysis of Short Circuit Ratio Stability Domain of Direct-Drive Wind Farm with Hybrid-Synchronous Control Under Different Input Proportional Coefficients
Linpei Hu Nanjing University of Science and Technology
Puyu Wang Nanjing University of Science and Technology
Xin Wang Nanjing University of Science and Technology
Shijie Fu Nanjing University of Science and Technology
Ruitong Zhang Nanjing University of Science and Technology

ISaA08-3 14:00-14:15
0667 Small-signal Modelling of Hybrid Bipolar HVDC Transmission Systems
Yu Sheng Nanjing University of Science and Technology
Puyu Wang Nanjing University of Science and Technology
Yanyu Zhu Nanjing University of Science and Technology
Dengpan Sun Nanjing University of Science and Technology
Bin Wu Nanjing University of Science and Technology

ISaA08-4 14:15-14:30
0668 Active Support Performance Analysis of Photovoltaic Inverter Based on DC Voltage Inertia Control
Xujie Tang Nanjing University of Science and Technology
Puyu Wang Nanjing University of Science and Technology
Dengpan Sun Nanjing University of Science and Technology
Tianwei Li Nanjing University of Science and Technology
Yu Sheng Nanjing University of Science and Technology

ISaA08-5 14:30-14:45
0344 An Effective Model Based on STmixing-LSTM for Short Term Wind Power Prediction
Tianci Li Nanjing University of Science and Technology
Fuming Peng Nanjing University of Science and Technology
Hao Quan Nanjing University of Science and Technology
Xiang Ma SINTEF

ISaA08-6 14:45-15:00
0535 A Comprehensive Analysis of Electric Vehicle Charging Patterns Using Hybrid BIRCH-K-MEANS Clustering Algorithm
Zixu Wang Nanjing University of Science and Technology
Hao Quan Nanjing University of Science and Technology
Xiang Ma SINTEF
yingxiang Zhao High North Quality AS

ISaA08-7 15:00-15:15
0612 Power System Region Partition Method with High-Penetration of Renewable Energy Considering Frequency Temporal-spatial Distribution Characteristics

Tao Zhou	Nanjing University of Science and Technology
Jian Wu	Nanjing University of Technology
Yong Qiao	Southeast University
Meng Dai	Nanjing University of Science and Technology
Wenke Gu	Nanjing University of Science and Technology
Zhong Chen	Southeast University

ISaA08-8 15:15-15:30
0615 Synthetic Inertial Control for Fast Frequency Response of Photovoltaic Power Generation Based on Load Shedding

Tao Zhou	Nanjing University of Science and Technology
Yulu Wang	Nanjing University of Science and Technology
Jun Ni	State Grid Wuxi Power Supply Company
Chao Xu	State Grid Wuxi Power Supply Company
Yan Xu	Jiangsu Frontier Electric Technology Co., Ltd)

SaA09 13:30-15:30 Invited Session: Cooperative Control Technologies for Large-Scale Renewable Energy Integration; Operation and Control Technologies for High Penetration Renewable Energy Power Systems

Chair: Minghui Yin	Nanjing university of Science and Technology
Co-Chair: Zaiyu Chen	Nanjing University of Science and Technology

ISaA09-1 13:30-13:45
0476 Dual-Mode UAV Collaboration in Unknown Environments: A Frontier-Integrated MASAC Approach with Dynamic Role Specialization

Chanjuan He	Nanjing University of Science and Technology
Guanqi Wang	Nanjing University of Science and Technology
Chenxiao Cai	Nanjing University of Science and Technology

ISaA09-2 13:45-14:00
0551 A Fast Power Sharing Method for Wind Farms Participating in Primary Frequency Regulation

Zemiao Ge	Nanjing University of Science and Technology
Ze Sun	Nanjing University of Science and Technology
Zaiyu Chen	Nanjing University of Science and Technology

ISaA09-3 14:00-14:15
0570 Research on Smooth Wind Power Control Strategy for Hybrid Energy Storage Based on MPC

PengFei Ma	Nanjing University of Science and Technology
Jing Bu	Nanjing University of Science and Technology
Boyang Sun	Nanjing University of Science and Technology

ISaA09-4 14:15-14:30
0592 Frequency Support Method for Offshore Wind Power VSC-HVDC System Based on Dual-Terminal Symmetric Coordinated Inertial Synchronization Control

Jie Wang	Nanjing University of Science and Technology
Tianyi Xu	Nanjing University of Science and Technology
Zaiyu Chen	Nanjing University of Science and Technology

ISaA09-5 14:30-14:45
0799 Observer-based Prescribed Finite-time Control for Singularly Perturbed Systems

Zheng Li	Nanjing University of Science and Technology
Chenxiao Cai	Nanjing University of Science and Technology

ISaA09-6 14:45-15:00
0575 Frequency Support Control of Wind Turbines Based on Frequency Response Analysis

Ze Sun	Nanjing University of Science and Technology
Jie Wang	Nanjing University of Science and Technology

Zaiyu Chen	Nanjing University of Science and Technology
ISaA09-7	15:00-15:15
0590 Active Power Optimization Dispatch Strategy of Wind Farm Considering Maximum Reactive Power Support Capability	
Xiaoya Wang	Nanjing University of Science and Technology
Jin Ju	Nanjing University of Science and Technology
Chang Xu	Nanjing University of Science and Technology
ISaA09-8	15:15-15:30
0593 Small-Signal Stability Analysis and Parameter Optimization of Grid-Forming Wind Turbine	
Boyang Sun	Nanjing University of Science and Technology
Xiaoya Wang	Nanjing University of Science and Technology
Kunlong Liu	Nanjing University of Science and Technology
SaA10	13:30-15:30
Invited Session: Resilient Control of Networked Nonlinear Systems; Complex Fully Actuated Systems Analysis and Control	
Chair: Qian Ma	Nanjing University of Science and Technology
Co-Chair: Liwei An	Northeastern University
ISaA10-1	13:30-13:45
0278 Neural Adaptive Control for Nonlinear Cyber-Physical Systems Under Random False Data Injection Attacks	
Qiang Zhang	Northeastern University
Xingling Shao	North University of China
Jin Chen	School of Electrical and Control Engineering
ISaA10-2	13:45-14:00
0477 Research on Path Planning for Mobile Robots Based on Optimized Ant Colony Algorithm	
Qingchao Tian	Nanjing University of Science and Technology
Qian Ma	Nanjing University of Science and Technology
Peng Jin	Wuhan Textile University
ISaA10-3	14:00-14:15
0478 D_ORB: A robust visual SLAM system based on deep feature extraction	
Zijie Xie	Nanjing University of Science and Technology
Qian Ma	Nanjing University of Science and Technology
Peng Jin	Wuhan Textile University
ISaA10-4	14:15-14:30
0509 Homology Analysis for Positioning Offsets Caused by Malicious Attacks	
Xiaolei li	Beijing University of Chemical Technology
Xuzheng Chen	Beijing University of Chemical Technology
Wan Li che	Beijing University of Chemical Technology
Yukun Shi	Beijing University of Chemical Technology
Youqing Wang	Beijing University of Chemical Technology
ISaA10-5	14:30-14:45
0563 Adaptive Prescribed-Performance Control of Nonlinear Strict-Feedback Systems Based on State-Triggered Mechanism	
Tong Jia	Northeastern University
Liwei An	Northeastern University
ISaA10-6	14:45-15:00
0599 Extended State Observer Based Fully Actuated Sliding Mode Trajectory Tracking Control of Space Manipulator	
Weiwei Wei	Harbin Institute of Technology
Xiaolong Ma	Aerospace System Engineering Shanghai
Yue Zhao	Harbin institute of technology
CHEN Meng	Institute of Aerospace System Engineering Shanghai
Ouyang Zhang	Harbin Institute of Technology
Zhuang Liu	Harbin Institute of Technology

ISaA10-7

15:00-15:15

0643 Fixed Time Disturbance Observer based Adaptive Fuzzy Control for QUAV with State Constraints

Runze Chen

Nanjing University of Science and Technology

Qian Ma

Nanjing University of Science and Technology

ISaA10-8

15:15-15:30

0337 Finite-time Formation Control for Fixed-Wing UAVs Based on Fully Actuated System Approach

Zhengyuan Li

Nanjing University of Science and Technology

Chen Chen

Nanjing University of Science and Technology

Jian Guo

Nanjing University of Science and Technology

SaA11

13:30-15:30

Invited Session: Intelligent navigation and decision-making algorithms and applications

Chair: Xiang Wu

Nanjing University of Science and Technology

Co-Chair: ChangHui Jiang

Nanjing University of Aeronautics and Astronautics

IsaA11-1

13:30-13:45

0314 USV Swarm Defense Optimization for Island Protection Based on Enhanced IDQ

Xingchen Zhuo

Nanjing University of Science and Technology

Zhixian Tang

The 28th research institute of china electronics technology group corporation

YongHao Cheng

Nanjing University of Science and Technology

Qilong Huang

Nanjing University of Science and Technology

IsaA11-2

13:30-13:45

0315 Motion Trend Prediction of Unmanned Surface Vessels Based on Physics-Informed Neural Network

YongHao Cheng

Nanjing University of Science and Technology

Jian Yu

China Ship Development and Design Center

Fan Huili

China Ship Development and Design Center

Feiyang He

China Ship Development and Design Center

Qihang Li

Nanjing University of Science and Technology

Qilong Huang

Nanjing University of Science and Technology

IsaA11-3

13:30-13:45

0316 Lightweight RT-DETR with Dynamic Optimization and Multi-Scale Attention for Real-Time Traffic Object Detection

Hengwei Xu

Nanjing University of Science and Technology

Yuan Li

Nanjing University of Science and Technology

Zhaolei Li

Nanjing University of Science and Technology

Rui Zhang

Nanjing University of Science and Technology

Xiang Wu

Nanjing University of Science and Technology

IsaA11-4

13:30-13:45

0317 Coordination Optimization of Air-sea Confrontation Force Based on Enhanced MDPLO

Qihang Li

Nanjing University of Science and Technology

Fan Huili

China Ship Development and Design Center

Jian Yu

China Ship Development and Design Center

Chen Junyu

China Ship Development and Design Center

Xingchen Zhuo

Nanjing University of Science and Technology

Qilong Huang

Nanjing University of Science and Technology

Li Yang

Nanjing University of Science and Technology

IsaA11-5

13:30-13:45

0338 ChanCrossFormer: A Ballistic Trajectory Prediction Model Integrating Channel Attention and Cross-Attention Mechanisms

Jun Zhong

Nanjing University of Science and Technology

Yuhang Zhou

Nanjing University of Science and Technology

Yukuang Shen

School of Automation, Nanjing University of Science and Technology

Jiamei Yuan

Nanjing University of Science and Technology

Xiang Wu

Nanjing University of Science and Technology

IsaA11-6 13:30-13:45
0422 Research on Pursuit-Evasion Strategies for GEO Satellites Using PD-DDPG
Gang Shen Nanjing University of Science and Technology
Zhi Hang Ren Shanghai Institute of Aerospace Systems Engineering
Jun Zhong Nanjing University of Science and Technology
Gaopeng Zhao Nanjing University of Science and Technology
Xiang Wu Nanjing University of Science and Technology

IsaA11-7 13:30-13:45
0528 Time Series Forecasting with Multi-Scale Feature Extraction and Explicit Periodic Modeling
Jiamei Yuan Nanjing University of Science and Technology
Gang Shen Nanjing University of Science and Technology
Zhipeng Cheng Nanjing University of Science and Technology
Jun Zhong Nanjing University of Science and Technology
Xiang Wu Nanjing University of Science and Technology

IsaA11-8 13:30-13:45
0553 Two-stage Multi-UAV path planning based on MAPPO
Yudie Wang Nanjing University of Science and Technology
Qingzhong Yan Nanjing University of Science and Technology
Zhi Hang Ren Shanghai Institute of Aerospace Systems Engineering
Gaopeng Zhao Nanjing University of Science and Technology
Xiang Wu Nanjing University of Science and Technology

SaA12	13:30-15:30
Invited Session: Autonomous sensing and collaborative control of multi-agent systems	

Chair: Lei Ma China University of Mining and Technology
Co-Chair: Chenxiao Cai nanjing university of science and technology

IsaA12-1 13:30-13:45
0129 Distributed H_{∞} Sliding Mode Functional Filtering for a class of Nonlinear Systems
Xiaotian Shi Nanjing University of Science and Technology
Chenxiao Cai Nanjing university of science and technology

IsaA12-2 13:30-13:45
0359 Asynchronous Event-Triggered-Based Security Control for Two-Time-Scale CPSs under Asynchronous DoS Attacks
Ying Zhang China University of Mining and Technology
Lei Ma China University of Mining and Technology

IsaA12-3 13:30-13:45
0500 Controllability of Discrete-Time Linear Positive Multi-agent Systems
Bohao Zhu The University of Hong Kong
James Lam The University of Hong Kong
Chengyan Zhao Ritsumeikan University
Ka-Wai Kwok The Chinese University of Hong Kong

IsaA12-4 13:30-13:45
0147 Fuzzy \mathcal{H}_{∞} Filtering for Singularly Perturbed Jumping Systems Based on HMM Method
Guanqi Wang Nanjing university of science and technology
Chenxiao Cai Nanjing university of science and technology

IsaA12-5 13:30-13:45
0202 Event-triggered Consensus Control for Multi-agent Systems with Cyber-attacks and Saturation
Yifang Zhang Zhejiang University
James Lam The University of Hong Kong
Ka-Wai Kwok The Chinese University of Hong Kong

IsaA12-6 13:30-13:45
0204 Intelligent Fault Detection and Diagnosis of Circuit Systems Based on A Mixed Feature Extractor
Min Xue The university of Hong Kong
James Lam The University of Hong Kong
Ka-Wai Kwok The Chinese University of Hong Kong

IsaA12-7 13:30-13:45
0269 Adaptive Event-Triggered Affine Formation Control for Communication-Constrained Linear Multi-Agent Systems
Chenjun Liu University of Macau
Jason Jinrong Liu University of Macau
James Lam The University of Hong Kong

IsaA12-8 13:30-13:45
0341 Fully Actuated System-Based Control for Precise Trajectory Tracking of Quadrotor UAVs
Aqeel- Ur-Rehman Nanjing University of Science and Technology
Chenxiao Cai Nanjing university of science and technology

SaA13 13:30-15:30 Invited Session: 无人集群与智能系统的自主控制与辨识; Operation and Control Technologies for High Penetration Renewable Energy Power Systems

Chair: 李芃 哈尔滨工业大学(深圳)
Co-Chair: 陆文杰 哈尔滨工业大学 (深圳)

IsaA13-1 13:30-13:45
079 Resilient Estimation for Linear and Adaptive Distributed Observer Based on Redundant Information Flow
Jingjian Mo Harbin Institute of Technology (Shenzhen)
Xiaobo Zhang Harbin Institute of Technology Shenzhen
Yangkun Zhang Harbin Institute of Technology (Shenzhen)
Wenjie Lu Harbin Institute of Technology (Shenzhen)
Peng Li Harbin Institution of Technology (Shenzhen)

IsaA13-2 13:30-13:45
0169 A Unified Representation of Different Dynamics Using Deep Koopman Operator
Rong Chen Harbin institute of technology (Shenzhen)
Duofeng Pan Harbin institute of technology (Shenzhen)
Peng Li Harbin Institution of Technology (Shenzhen)
Wenjie Lu Harbin Institute of Technology (Shenzhen))

IsaA13-3 13:30-13:45
0170 Reinforcement Learning with Guaranteed Robustness under Dynamics Modeling Uncertainties
Duofeng Pan Harbin institute of technology (Shenzhen)
Rong Chen Harbin institute of technology (Shenzhen)
Peng Li Harbin Institution of Technology (Shenzhen)
Wenjie Lu Harbin Institute of Technology (Shenzhen)

IsaA13-4 13:30-13:45
0445 A Lightweight Transformer for PCB Defects Detection
Yuanchen Niu Harbin Institute of Technology
Rui Wang Harbin Institute of Technology
Peng Li Harbin Institution of Technology (Shenzhen)
Yangkun Zhang Harbin Institute of Technology (Shenzhen)

IsaA13-5 13:30-13:45
0451 Quality Prediction in Multi-Stage Manufacturing with Hybrid TCN-Transformer
Peng Siwei Harbin Institute of Technology
Rui Wang Harbin Institute of Technology
Peng Li Harbin Institution of Technology (Shenzhen)
Yangkun Zhang Harbin Institute of Technology (Shenzhen)

IsaA13-6 13:30-13:45
0511 ESO-based Iterative Learning Control for Robotic Manipulators with Disturbances: A High-order Fully Actuated Approach
Yanjing Chen Sun Yat-Sen University
Qiqi Xing Sun Yat-Sen University
Junkai Wang Sun Yat-Sen University
Xuefang Li Sun Yat-sen University

IsaA13-7 13:30-13:45
0595 Damping control of offshore wind power grid-forming flexible HVDC grid-connected system considering the

influence of measurement delay

Jin Ju	Nanjing University of Science and Technology
Boyang Sun	Nanjing University of Science and Technology
Kunlong Liu	Nanjing University of Science and Technology

IsaA13-8

13:30-13:45

0762 Primary Frequency Control of Deloaded Wind Turbines Considering the Pitch Angle Dynamic Process

Xinchen Zhang	Nanjing University of Science and Technology
Wei Gu	Nanjing University of Science and Technology

Saturday, July 05, 2025 下午第二场

SaB01	16:00-18:00
FASTA Best Student Paper Award	

ISaB01-1

16:00-16:20

0232 Adaptive Prescribed Performance Control for Variable-Sweep Aircraft Based on Fully-Actuated System Approach

Baisen Wang	National University of Defense Technology
Peng wang	National University of Defense Technology

ISaB01-2

16:20-16:40

0798 Optimal Control of Nonlinear Singular Systems based on Fully Actuated System Theory

Yufa Sun	Harbin Engineering University
Zhiguang Feng	Harbin Engineering University

ISaB01-3

16:40-17:00

0215 Prescribed Performance Tracking Control for Uncertain Strict-Feedback Systems Using Fully Actuated System Approach

Yu Lin Duan	Southern University of Science and Technology
Jiaming Zhang	Beihang University
junxiang zhang	Southern University of Science and Technology
Guang-Ren Duan	Harbin Institute of Technology

ISaB01-4

17:00-17:20

0533 On the perfect output regulation of high-order fully actuated systems with invariant zeroes

Shunli Li	Harbin Institute of Technology
Guangren Duan	Harbin Institute of Technology
Bin Zhou	Harbin Institute of Technology

ISaB01-5

17:20-17:40

0333 Adaptive Control of Nonlinear Systems with Parameter Uncertainty Based on the Fully Actuated System Approaches

Liji Wang	Nanjing University of Science and Technology
Zhicheng Wei	Nanjing University of Science and Technology
Huifang Min	Nanjing University of Science and Technology

ISuB01-6

17:40-18:00

0522 FAS-Based Attitude Tracking Control with Prespecified-Time Sliding Mode for Rigid Spacecraft

Yan Jia	China University of Geosciences, Wuhan
Yi-Fan Li	China University of Geosciences
Qian Chen	China University of Geosciences
Teng-Fei Ding	China University of Geosciences
Ming-Feng Ge	China University of Geosciences

SaB02	16:00-18:00
Invited Session: Fully Actuated System Theory and Applications Research Fund for Young Scholars (Harbin Institute of Technology)	

Chair: Yan Wang	Harbin Institute of Technology Shenzhen
Co-Chair: Zibo MIAO	Harbin Institute of Technology, Shenzhen

ISaB02-1	16:00-16:15
0410 Vision-Based Cooperative Transport for Two Mobile Robots in Communication-free Mapless Environments with Guaranteed Payload Safety	
Renhe Guan	Harbin Institute of Technology, Shenzhen
Yan Wang	Harbin Institute of Technology Shenzhen
ISaB02-2	16:15-16:30
0480 Distributed Optimal Control of Large-scale Higher-order Fully Actuated Systems	
Ziming Ding	Harbin Institute of Technology, Shenzhen
Yan Wang	Harbin Institute of Technology Shenzhen
ISaB02-3	16:30-16:45
0601 Population Transfer in Quantum Systems Based on Fully Actuated System Approach	
Jia xiang Li	Harbin Institute of Technonlogy
Huilong Xu	School of Robotics and Advanced Manufacturing
Zibo MIAO	Harbin Institute of Technology, Shenzhen
ISaB02-4	16:45-17:00
0224 Prescribed-Time Control for a Class of Fully Actuated Rigid-Body Systems	
Yingqi Zhu	Harbin Institute of Technology (Shenzhen)
Zhiyuan Dong	Harbin Institute of Technology, Shenzhen
ISaB02-5	17:00-17:15
0548 Predictor feedback control of linear time-invariant systems with distinct input delays	
Shi-Long Shen	Harbin Institute of Technology (Shenzhen)
Yu Wang	Harbin Institute of Technology (Shenzhen)
ISaB02-6	17:15-17:30
064 Flexible Formation and Obstacle Avoidance for multi-UAV system via Nutcracker Optimization and Trajectory Control	
Zhihao Liu	Harbin Institute of Technology (Shenzhen)
Peng Li	Harbin Institution of Technology, Shenzhen
Yangkun Zhang	Harbin Institute of Technology (Shenzhen)
ISaB02-7	17:30-17:45
0171 Nonlinear Control of a Fully Actuated Robotic Hand Using High-Order Sliding-Mode Controller for Prosthetic Applications	
ASRA SARWAT	Harbin Institute of Technology Shenzhen
Wenjie Lu	Harbin Institute of Technology (Shenzhen)
Jiaole Wang	Harbin institute of technonlogy, Shenzhen
Peng Li	Harbin Institution of Technology, Shenzhen
ISaB02-8	17:45-18:00
0803 Prescribed-time Trajectory Tracking Controller for Flexible-joint Manipulators: A High-order Fully Actuated System Approach	
Hanbin Qiu	Harbin Institute of Technology, Shenzhen
Jiahao Zhang	Harbin Institute of Technology, Shenzhen
Ying Zhang	Harbin Institute of Technology,Shenzhen

SaB03	16:00-18:00
Invited Session: Recent Developments in Fully Actuated System Approach with System Uncertainties	

Chair: Weizhen Liu Harbin Institute of Technology
Co-Chair: Menghua ZHANG Shandong University

ISaB03-1	16:00-16:15
07 Inverse Reinforcement Learning for Optimal Control of Discrete-Time Fully Actuated System	
Jinna Li	Liaoning Petrochemical University
Mingwei Yang	Liaoning Petrochemical University

ISaB03-2	16:15-16:30
0639 First-Order Nonaffine SFSs: A FAS Approach Treatment	

Guangren Duan	Harbin Institute of Technology
Weizhen Liu	Harbin Institute of Technology

ISaB03-3 16:30-16:45
 09 Inverse Optimal Control for high-order Nonlinear Systems in a Fully Actuated System
 Xin Zhou Liaoning Petrochemical University
 Jinna Li Liaoning Petrochemical University

ISaB03-4 16:45-17:00
 012 Fully Actuated System Approach to Adaptive Control for Underactuated Tower Crane Systems
 Menghua Zhang Shandong University
 Jing Zhao University of Macau
 Weizhen Liu Harbin Institute of Technology

ISaB03-5 17:00-17:15
 065 Finite-time Sliding Mode Control of Uncertain Hydraulic Manipulator via High-Order Fully Actuated System Approach
 Zhengsheng Chen China University of Mining and Technology
 Mengyang Zhou China University of Mining and Technology
 Weihao Dou China University of Mining and Technology
 Honglei Che China Academy of Safety Science and Technology
 Jiayin Liu China Academy of Safety Science and Technology;
 China University of Mining and Technology Beijing
 Yang Tian Liyang 28th Institute System Equipment Co., Ltd

ISaB03-6 17:15-17:30
 0270 Improved Observer-based Fully Actuated System Approach to 3-DOF Quadrotor Control
 Jianpeng Zou Southern University of Science and Technology
 Weijie Ren Southern University of Science and Technology
 Guangren Duan Harbin Institute of Technology

ISaB03-7 17:30-17:45
 0284 A FAS Approach for Robust Trajectory Tracking Control of a 3-DOF Quadrotor
 Junxiang Zhang Southern University of Science and Technology
 Weijie Ren Southern University of Science and Technology
 Yulin Duan Southern University of Science and Technology
 Guangren Duan Harbin Institute of Technology

ISaB03-8 17:45-18:00
 0300 Adaptive Neural Control for Flexible Joint Manipulators with Uncertainties: A Fully Actuated System Approach
 Jinpeng Fan Southern University of Science and Technology
 Guangren Duan Harbin Institute of Technology
 Weijie Ren Southern University of Science and Technology

SaB04 16:00-18:00 Invited Session: Estimation and Control of Complex Systems with Periodic or Switched Time-Varying Characteristics; Control and Operation of Smart Grid
--

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

ISaB04-1 16:00-16:15
 094 Reachable Set Estimation and Control Problems for Switched Singular Systems with Time Delays
 Xinyue Zhang Dalian University of Technology

ISaB04-2 16:15-16:30
 0114 A Fourier-based Approach to Estimating Reachable Set for Periodic Time-varying Systems
 Zhaoji Ling Harbin Institute of Technology (Shenzhen)
 Xiaochen Xie Harbin Institute of Technology (Shenzhen)
 James Lam The University of Hong Kong
 Ka-Wai Kwok The Chinese University of Hong Kong

ISaB04-3	16:30-16:45
0166 Robust Stabilization of Almost Periodically Switched Systems with Dwell Time Uncertainty	
Chenchen Fan	The Hong Kong Polytechnic University
Xiaochen Xie	Harbin Institute of Technology, Shenzhen
ISaB04-4	16:45-17:00
0350 Leveraging Data Structure Storage for Optimal Triggering Control Design in Logical Dynamic Systems	
Lin Lin	The University of Hong Kong
Zhiyi Zhong	The University of Hong Kong
James Lam	The University of Hong Kong
ISaB04-5	17:00-17:15
0362 Event-triggered control of periodic piecewise system subject to DoS attack	
Daiyan Wu	Guangdong University of Technology
Panshuo Li	Guangdong University of Technology
Liheng Wan	Guangdong University of Technology
ISaB04-6	17:15-17:30
0409 Polynomial Interpolation-based Smooth Switching Control of Positive Switched Systems	
Xiaoqi Song	The University of Hong Kong
James Lam	The University of Hong Kong
ISaB04-7	17:30-17:45
0703 Disturbance Rejection Observer Parametric Design for Quadrotor with Suspended Payload via Fully Actuated System Approach	
Bing Yan	Nanjing University of Science and Technology
Yun Zou	Nanjing University of Science and Technology, China
ISaB04-8	17:45-18:00
0375 Trigger Criterion for Emergency Adjustment in Distribution Network Repair under Sudden Risks	
Xinming Wang	Nanjing University of Science and Technology
Sheng Cai	Nanjing University of Science and Technology
Yunyun Xie	Nanjing University of Science and Technology
Chen Yu	NARI Group Corporation (State Grid Electric Power Research Institute)
Kang Chang	NARI Group Corporation (SGRPRI)
SaB05	16:00-18:00
Invited Session: Advanced Fault Diagnosis and Fault Tolerant Control Technology for Electric Machine Systems; 复杂动态系统鲁棒控制	
Chair: Wenlong Li	Nanjing University of Science and Technology
Co-Chair: 宋晓娜	河南科技大学
ISaB05-1	16:00-16:15
0395 High-performance IPMSM Servo Drive using STSM Speed Control and Iterative MTPA Current Control	
Wenlong Li	Nanjing University of Science and Technology
Guodong Feng	SUN YAT-SEN UNIVERSITY
Haoyue Tang	China University of Mining and Technology
ISaB05-2	16:15-16:30
0401 Decoupled Estimation of Resistance and Permanent Magnet Temperature of Permanent Magnet Synchronous Motor Based on Current Angle Injection	
Chengtao Shi	Sun Yat-sen University
Yuting Lu	Sun Yat-sen University
Beichen Ding	Sun Yat-sen University
Guodong Feng	Sun Yat-sen University
ISaB05-3	16:30-16:45
0452 Vector Space Decoupling and Negative-Sequence Component-Based Fault-Tolerant MPC for DTP- PMSMS	
Haoran Liu	Nanjing University of Science and Technology
Wenlong Li	Nanjing University of Science and Technology

ISaB05-4	16:45-17:00
----------	-------------

0516 Adaptive-Voltage-Vector-Selection Based Model Predictive Current Control for eVTOL Propulsion

Jingheng Zhu	Nanjing University of Science and Technology
Wenlong Li	Nanjing University of Science and Technology
Weiwei Geng	Nanjing University of Science and Technology

ISaB05-5	17:00-17:15
----------	-------------

0578 Research on Fault Diagnosis Method Based on Probe Coil for Inter-Turn Short Circuit and Rotor Eccentricity

Baowang Huang	Beijing Jiaotong University
Haoyue Tang	China University of Mining and Technology
Shifan Luo	Beijing Jiaotong University
Weili Li	Beijing Jiaotong University
Haibin Wang	Jing-Jin Electric Technologies Co., Ltd
Wenmao Liu	Tsinghua University

ISaB05-6	17:15-17:30
----------	-------------

0833 An intelligent multi-fault diagnosis method for Asynchronous Motors based on Depth-Wise Convolutions Enhanced Transformer

Yutao Jiang	Nanjing University of Science and Technology
Wenlong Li	Nanjing University of Science and Technology
Qingling Zhao	Nanjing University of Science and Technology
Qingyue Wu	Nanjing University of Science and Technology

ISaB05-7	17:30-17:45
----------	-------------

0848 Adaptive Intermittent Control for Output Synchronization of Reaction-diffusion Neural Networks

Kaiwen Wang	Henan University of Science and Technology
Xiaona Song	Henan University of Science and Technology
Danqing Zheng	Henan University of Science and Technology
Xubo Wang	Henan University of Science and Technology

ISaB05-8	17:45-18:00
----------	-------------

0853 Quasi-Synchronization of Generalized Inertial Neural Networks Based on Adaptive Event-Triggered Control

Xubo Wang	Henan University of Science and Technology
Xiaona Song	Henan University of Science and Technology
Danqing Zheng	Henan University of Science and Technology
Kaiwen Wang	Henan University of Science and Technology

SaB06	16:00-18:00
Invited Session: Distributed Estimation and Safety Control of Networked Systems; Control and Operation of Smart Grid	

Chair: Lifeng Ma	Nanjing University of Science and Technology
Co-Chair: Yunyun Xie	Nanjing University of Science and Technology

ISaB06-1	16:00-16:15
----------	-------------

0174 Encoding-Based Fault-Tolerant Tracking for Distributed Multi-Agent Systems

Xi Wang	University of Shanghai for Science and Technology
---------	---

ISaB06-2	16:15-16:30
----------	-------------

0178 State Estimation of Complex-Valued Neural Networks with Leakage Delay: A Dynamic Event-triggered Approach

Bing Li	Chongqing Jiaotong University
---------	-------------------------------

ISaB06-3	16:30-16:45
----------	-------------

0306 Model-Free Adaptive Tracking Control Under Homomorphic Encryption Mechanism

Dewei Wang	University of Shanghai for Science and Technology
Shuai Liu	University of Shanghai for Science and Technology
Yong Zhang	Wuhan University of Science and Technology

ISaB06-4	16:45-17:00
----------	-------------

0394 A Dual-Channel Decision Fusion Framework Integrating Swin Transformer and ResNet for Multi-Speed Gearbox Fault Diagnosis

Hanyang Dou	Nanjing University of Science and Technology
-------------	--

Lifeng Ma	Nanjing University of Science and Technology
Chen Gao	Nanjing University of Science and Technology
Yong Zhang	Wuhan University of Science and Technology
ISaB06-5	17:00-17:15
0456 Distributed Sequential Balance Control for Modular Multilevel Converter-Based Battery Energy Storage System	
Zhichao Zhao	Shanghai University of Electric Power
Licheng Wang 48	Shanghai University of Electric Power
Zahoor Ahmed	Shanghai University of Electric Power
Yong Zhang	Wuhan University of Science and Technology
ISaB06-6	17:15-17:30
0439 State Estimation With Location Privacy Protection	
Shijie Yin	Nanjing University of Science and Technology
Yulong Wang	Kunming University of Science and Technology
Chenxiao Cai	Nanjing University of Science and Technology
Hong Lin	Zhejiang University
ISaB06-7	17:30-17:45
0675 Research on AVC Performance Assessment of Power Grid under High Renewable Penetration	
Zhaiqi Zhu	Nanjing University of Science and Technology
Yunyun Xie	Nanjing University of Science and Technology
Sheng Cai	Nanjing University of Science and Technology
Yuping Zhang	Nanjing University of Science and Technology
Dandan Zhu	State Grid Jiangsu Electric Power Co Ltd. Electric Power Science Research institute
Qian Zhou	State Grid Jiangsu Electric Power Co Ltd. Electric Power Science Research Institute
ISaB06-8	17:45-18:00
0723 Operational Dispatch Strategy for Multi-energy Microgrid Considering Pulsed Load Characteristics	
Jiahao Zhang	Nanjing University of Science and Technology
Sheng Cai	Nanjing University of Science and Technology
Xudong Wang	Academy of Military Sciences
Xing Su	Academy of Military Sciences
Yunyun Xie	Nanjing University of Science and Technology
SaB07	16:00-18:00
Invited Session: Fault Diagnosis and Fault-Tolerant Control of Fully Actuated Systems; Motor drive control, motion control, and servo control	
Chair: Miao Cai	Southeast University
Co-Chair: SUN LE	Nanjing University of Science and Technology
ISaB07-1	16:00-16:15
0104 High-Gain Observer-Based Fault-Tolerant Stabilisation for High-Order Sub-Fully Actuated Systems	
Mengtong Gong	Tsinghua University
Li Sheng	China University of Petroleum (East China)
Donghua Zhou	Tsinghua University
ISaB07-2	16:15-16:30
0108 Optimal Allocation of Fully Actuated Energy Systems in Gas-to-methanol Processes	
Xueteng Wang	Shandong University of Science and Technology
Mengyao Wei	Shandong University of Science and Technology
Jiandong Wang	Shandong University of Science and Technology
ISaB07-3	16:30-16:45
0110 Fault-Avoidant Control for Stochastic Fully Actuated Systems With Local Faults	
Xueqing Liu	Tsinghua University
Li Sheng	China University of Petroleum (East China)
Donghua Zhou	Tsinghua University
ISaB07-4	16:45-17:00
0383 A New Ultrasonic Phased Array Scanning Method for Internal Inspection of Gas Pipelines	

XuDong Yang	China University of Petroleum (East China)
MingYan LIAO	China University of Petroleum (East China)
Ming Gao	China University of Petroleum (East China))
Zhongyu Chen	China University of Petroleum (East China)
Li Sheng	China University of Petroleum (East China))
ISaB07-5	17:00-17:15
0295 Vibration Suppression of Flexible Manipulator Driven by PMLM Based on SO-LADRC	
Sheng Tong	Nanjing University of Science and Technology
Jianhu Yan	Nanjing University of Science and Technology
Zhiyong Duan	Nanjing University of Science and Technology
Yuanjun Song	Nanjing university of science and technology
ISaB07-6	17:15-17:30
0336 Multi-Objective Optimal Design and Fault-Tolerant Control of a Five-Phase Permanent Magnet Motor	
Jing Xu	Nanjing University of Science and Technology
Xuefeng Jiang	Nanjing University of Science and Technology
Wangyang Zhou	Nanjing University of Science and Technology
Huixin Luo	Nanjing University of Science and Technology
Zhao Zhao	CHONGQING TIEMA INDUSTRIES GROUP CO.,LTD.
ISaB07-7	17:30-17:45
0352 Position Identification of PMSM Based on Second-Order Generalized Integrator under Hall Sensors Fault	
Yuanjun Song	Nanjing University of Science and Technology
Jianhu Yan	Nanjing University of Science and Technology
Zhiyong Duan	Nanjing University of Science and Technology
Long Zhang	Nanjing University of Science and Technology
ISaB07-8	17:45-18:00
0674 Position Control of Maglev Permanent Magnet Linear Motor Based on Adaptive Fast Terminal Sliding Mode	
Long Zhang	Nanjing University of Science and Technology
Jianhu Yan	Nanjing University of Science and Technology
Yixing Wang	Nanjing University of Science and Technology
SaB08	16:00-18:00
Invited Session: Complex Fully Actuated Systems Analysis and Control	
Chair: Zhengrong Xiang	Nanjing University of Science and Technology
Co-Chair: Feng Shu	Southwest Minzu University
ISaB08-1	16:00-16:15
0134 Output-Feedback-Based Prescribed-Time Adaptive Vehicle Tracking Control	
Rui Meng	Henan University of Science and Technology
Linlin Li	Henan University of Science and Technology
Yifan Zhao	Henan University of Science and Technology
Fazhan Tao	Longmen Laboratory
Nan Wang	Henan University of Science and Technology
ISaB08-2	16:15-16:30
0365 Sliding-mode Predefined-time Control for Full-drive Rigid Spacecraft with Unmodeled Dynamics	
Jiaqi Xu	China Jiliang University
Qiang Li	China Jiliang University
Jun Mao	China Jiliang University
ISaB08-3	16:30-16:45
0386 Sampled-data control of a class of high-order fully actuated systems	
Min Li	Southwest Minzu University
Feng Shu	Southwest Minzu University
ISaB08-4	16:45-17:00
0454 MLP-based Fixed-time Neural Network Formation Control for Uncertain Multi-USVs with Nonsymmetric Dead Zone	
Wei Cai	Nantong University

Chang He	Nantong University
Siyu Tang	Nantong University
Xingyu Zhou	Nantong University
ISaB08-5	17:00-17:15
0507 Variable Convergence Rate Control of High-Order Nonlinear Impulsive Systems: A Fully Actuated System Approach	
Yuanen Li	Sun Yat-sen University
Xuefang Li	Sun Yat-sen University
Wanquan Liu	Curtin University
ISaB08-6	17:15-17:30
0576 Asynchronous quantized H_∞ filtering of singular nonhomogeneous Markov jump systems	
Xinrui Li g	Hohai University
Mingang Hua g	Hohai University
ISaB08-7	17:30-17:45
0661 Position Control of Artillery Shell Chain Rammer Based on Observer and Fully Actuated System Method	
Jibin Dong	Nanjing University of Science and Technology
Baolin Hou	Nanjing University of Science and Technology
Zhao Wei	Nanjing university od science and technology
Zhengrong Xiang	Nanjing University of Science and Technology
Yuhang Meng	Nanjing University of Science and Technology
ISaB08-8	17:45-18:00
0674 Fault Diagnosis for Distributed Grids and Frontier Exploration of Machine Learning Methods	
Wei Xu	Shanghai Maritime University
Fuxiao Tan	Shanghai Maritime University
SaB09	16:00-18:00
Invited Session: Complex Fully Actuated Systems Analysis and Control	
Chair: Zhaoxia Duan	Hohai University
Co-Chair: Shengquan Li	Yangzhou University
ISaB09-1	16:00-16:15
0138 Sliding-Mode-Based Active Disturbance Rejection Control for Self-Balancing Transport Vehicle	
Jianchao Zhao	Qufu Normal University
Yunlong Liu	Qufu Normal University
Xinyu Liu	Qufu Normal University
ChaoXin Liang	Qufu Normal University
ISaB09-2	16:15-16:30
0778 Intersection-Level Turning Movement Flow Prediction Using An Adaptive Spatiotemporal Feature Fusion Network	
Shuangshuang Li	Linyi University
Yancheng Gong	Linyi University
Chunhao Liu	Nanjing University of Science and Technology
Zhaodong liu	Linyi University
Guangyuan Pan	Linyi University
ISaB09-3	16:30-16:45
0214 Observer-Based Robust Control for Flexible Robotic Manipulators with Model Uncertainties via Fully Actuated System Approaches	
Yuzhu Xiang	Nanjing University of Science and Technology
Weiwei Yi	Nanjing University of Science and Technology
Jian Guo	Nanjing University of science and technology
ISaB09-4	16:45-17:00
0243 Finite-Time Control of Amphibious Unmanned Surface Vehicles: Fully Actuated System Approach	
Haoran Tang	Nanjing University of science and technology
Yuhang Meng	Nanjing University of Science and Technology

Zhengrong Xiang	Nanjing University of Science and Technology
ISaB09-5	17:00-17:15
0244 Predefined-Time Control for Unmanned Surface Vehicles with Actuator Attacks Based on Fully Actuated System Approaches	
Wangchong Peng	University of Science and Technology Liaoning
Yang Cui	University of Science and Technology Liaoning
ISaB09-6	17:15-17:30
0245 Full-actuated system approach for an amphibious unmanned surface vehicle based on fixed-time trajectory tracking controller	
Yuhang Meng	Nanjing University of Science and Technology
Haoran Tang	Nanjing University of Science and Technology
Dong Wu	Nanjing University of Science and Technology
Zhengrong Xiang	Nanjing University of Science and Technology
ISaB09-7	17:30-17:45
0305 Real-Time Object Grasping and Placement in Dynamic Environments via Model-Based Policy Gradient	
Yujing Li	Nanjing University of Science and Technology
Shihong Yin	Nanjing University of Science and Technology
Xizhe Chen	Nanjing University of Science and Technology
Zhengrong Xiang	Nanjing University of Science and Technology
ISaB09-8	17:45-18:00
0330 Extended State Observer-based Hierarchical Objective Optimization Model-free Predictive Control for Three-level NPC Inverter	
Ziyuan Yang	Yangzhou University
Shengquan Li	Yangzhou University
Shiqi Kan	Yangzhou University
Kaiwen Cao	Yangzhou University
Juan Li	Southeast University
SaB10	16:00-18:00
Invited Session: 多智能体系统协同控制与优化; Artificial Intelligence for Smart Manufacturing and Industrial Control	
Chair: 宋程	南京理工大学
Co-Chair: 樊渊	安徽大学
ISaB10-1	16:00-16:15
0201 Fully Actuated System Approach to Trajectory Tracking Control of Robot Manipulator with Disturbance	
Huanhuan Zhao	Anhui University
Yuchao Guo	Anhui University
Yuan Fan	Anhui University
ISaB10-2	16:15-16:30
0207 带未知有界测量误差的多智能体动态最大一致性	
袁雨菲	南京理工大学
陶雨瑶	南京理工大学
宋程	南京理工大学
ISaB10-3	16:30-16:45
0208 带未知有界扰动和速度约束的二阶多智能体环形编队控制	
陶雨瑶	南京理工大学
袁雨菲	南京理工大学
宋程	南京理工大学
ISaB10-4	16:45-17:00
0210 边界区域上带位置和速度约束的多智能体编队控制	
贺勇钦	南京理工大学
宋程	南京理工大学
ISaB10-5	17:00-17:15

Zepei Zhang	Anhui University
Yuan Fan	Anhui University
Huyong Kuang	Anhui University

马屈超	南京理工大学
宋程	南京理工大学

Yinya Li	Nanjing University of Science and Technology
Xin Wang	Nanjing University of Science and Technology
Guoqing Qi	Nanjing University of Science and Technology
Baoxing Zhu	Nanjing University of Science and Technology

JieFei Qin	Henan University of Science and Technology
Lin Wang	Henan university of science and technology
Xuhui Zhao	Henan University of Science and Technology
Wang Feng	CITIC Heavy Industries Co.,Ltd
Liu Muhua	Henan University of Science and Technology
Zhihang Ji	Henan University of Science and Technology

Shuzhen Diao	Nankai University
Gendi Liu	Nankai University
Xinlin Zhang	Nankai University
Tong Yang	Nankai University
Qingxiang Wu	Nankai University
Ning Sun	Nankai University

Tianjiao An	Changchun University of Technology
HaoXuan Jing	Changchun University of Technology
Bing Ma	Changchun University of Technology
Hongbo Dong	Changchun University of Technology
Bo Dong	Changchun University of Technology
Zhenguo Zhang	Changchun University of Technology

Huarong Yue	Liaocheng University
Jianwei Xia	Liaocheng University

Mengjuan Hao	Liaocheng University
Yanran Fu	Liaocheng University
Yanan Meng	Liaocheng University
Zhihao Wang	Liaocheng University
Zihan Zhao	Liaocheng University

Xuetong Zhang	Liaocheng University
Guangming Zhuang	Liaocheng University
ISaB11-5	17:00-17:15
0192 Tracking Control of Strict-Feedback System Based on Fully Actuated System Approach	
Wenhui Ning	Qufu Normal University
Zhongcai Zhang	Qufu Normal University
ISaB11-6	17:15-17:30
0230 Adaptive Self-triggered Prescribed-time Tracking Control for Underactuated Surface Vessels	
Huixuan Dong	Liaocheng University
Wei Sun	Liaocheng University
Wenxing Yuan	Liaocheng University
ISaB11-7	17:30-17:45
0231 Prescribed-Time Tracking for Second-order CPSs Against Deception Attacks via Fully Actuated System Approach	
Yifan Wang	Liaocheng University
Wei Sun	Liaocheng University
ISaB11-8	17:45-18:00
0203 A YOLO-based algorithm for detecting key components on subway train roof	
Ning Liu	Nanjing University of Science and Technology
Juhui Zhang	Nanjing University of Science and Technology
Zongyi Xing	Nanjing University of Science and Technology
Peng Zhou	Nanjing University of Science and Technology
Hui Fei Zhang	Guangzhou Engineering Branch China Railway Signal&Communication Cor
SaB12	16:00-18:00
Invited Session: Recent Advances on Nonlinear Dynamic Systems Based on Fully Actuated System Theory	
Chair: Yongyuan Yu	Shandong University
Co-Chair: Shuai Liu	Shandong University
ISaB12-1	16:00-16:15
022 Event-triggered control for large-scale systems with unknown coefficients and actuator faults: A fully actuated system approach	
Yueyao Ye	Shandong University
Yiyu Feng	Shandong University
Xianfu Zhang	Shandong University
ISaB12-2	16:15-16:30
0791 Networked Adaptive Backstepping Control for A Class of Strict-Feedback Nonlinear Systems Using Event-Triggered Output and Control Signals	
Xinmi Liu	Shandong University
Tingting Cheng	Shandong University
Dawei Zhang	Shandong University
ISaB12-3	16:30-16:45
0817 Stochastic Event-Triggered Fault-Tolerant Control of Linear Systems Against Multi-Channel Stochastic Actuator Faults	
Xuan Yang	ShangDong University
Na Pang	Shandong University
Dawei Zhang	Shandong University
ISaB12-4	16:45-17:00
034 Further Results on Full-Actuation of Linear Boolean Control Networks	
Yuanpeng Ding	Shandong University
Yunsi Yang	Shandong University
Jun-e Feng	Shandong University
Yongyuan Yu	Shandong University
ISaB12-5	17:00-17:15

049 Fully-actuated System Approach Based Trajectory Tracking Control of Wheeled Mobile Robots

Yao-Wei Wang	Wuhan University of Science and Technology
DuFei Zhang	Wuhan University of Science and Technology
Qi Wu	Zhejiang University of Technology
Xiang Wu	Zhejiang University of Technology
Cao-Yuan Gu	Zhejiang University of Technology

ISaB12-6 17:15-17:30

085 On Fully Actuated Boolean Control Networks

Zewei Li	Shandong University
Yongyuan Yu	Shandong University

ISaB12-7 17:30-17:45

0133 Improved Terminal Sliding Mode Control with Voltage-Current Dual-Loop Regulation on Dual Active Bridge Converter

Sen Yang	Shandong university
Xi Wen	Shandong University
Mengmeng Jing	Shandong university
Xiangyang Xing	Shandong University

ISaB12-8 17:45-18:00

0356 Event-Triggered Control for High-Order Fully Actuated Strict-Feedback Nonlinear Systems

zifan liu	Shandong University
Lantao Xing	Shandong University

Sunday, July 06, 2025 上午

SuA01	10:45-12:15
Invited Session: Fully Actuated System Theory and Applications Research Fund for Young Scholars	

Chair: Xiang Yin	Shanghai Jiao Tong University
Co-Chair: Ziwen Yang	Shanghai Jiao Tong University

ISuA01-1 10:45-11:00

0165 Adaptive Bearing-based Target Entrapping Control of Autonomous Underwater Vehicles Using Fully Actuated System Approach

Haifan Su	Shanghai Jiao Tong University
Ziwen Yang	Shanghai Jiao Tong University
Shanying Zhu	Shanghai Jiao Tong University
Cailian Chen	Shanghai Jiao Tong University

ISuA01-2 11:00-11:15

0179 Bearing-Only Circumnavigation of a Varying Velocity Target for AUV Based on Fully Actuated System Approach

Zhaoming Zhang	Shanghai Jiao Tong University
Haifan Su	Shanghai Jiao Tong University
Ziwen Yang	Shanghai Jiao Tong University
Shanying Zhu	Shanghai Jiao Tong University)

ISuA01-3 11:15-11:30

0260 Tracking Control of Quadrotors Based on a High-Order Fully Actuated System Approach

Zeyuan Zhao	Shanghai Jiao Tong University
Xianwei Li	Shanghai Jiao Tong University

ISuA01-4 11:30-11:45

0364 High-Order Fully Actuated System Approaches: Trajectory Tracking of AGVs Based on Model Predictive Control

Tailai Cao	Shanghai Jiao Tong University
Zhaoming Zhang	Shanghai Jiao Tong University
Ziwen Yang	Shanghai Jiao Tong University
Shanying Zhu	Shanghai Jiao Tong University

ISuA01-5 11:45-12:00
0492 Fully Actuated Approach for Safety-Critical Control of Underactuated Systems via Differential Flatness
Xiang Jia Central South University
Bochen Li Shanghai Jiao Tong University
Chenggang Wang Shanghai Jiao Tong University
Lei Song Shanghai Jiao Tong University
Dan Huang Shanghai Jiao Tong University
Xuanmin Du HanJiang Laboratory

ISuA01-6 12:00-12:15
0704 Dynamic Anti-windup Design for Nonlinear High-order Fully Actuated Systems with Actuator Saturation
Lin Yang Shanghai Jiao Tong University
Yuanlong Li Shanghai Jiao Tong University

ISuA01-7 12:15-12:30
0829 Prescribed Performance-Based Anti-windup Design for Nonlinear Fully Actuated Systems with Actuator Saturation
Lin Yang Shanghai Jiao Tong University
Yuanlong Li Shanghai Jiao Tong University

SuA02 10:45-12:15 Invited Session: Optimization and Learning Control of Networked Systems based on Fully Actuated System Theory

Chair: Guanglei Zhao Yanshan University
Co-Chair:

ISuA02-1 10:45-11:00
0367 Predictive control of underdriven gantry cranes based on High-order Fully Actuated system
Zhang Heng Yanshan University
Weili Ding Yanshan University
Changchun Hua Yanshan University
Biao Lu Nankai University

ISuA02-2 11:00-11:15
0414 Intelligent Control of Hydraulic Excavators Based on Data-Driven GPC and High-Order Fully Actuated Systems
Xin Wen Yanshan University
Zhe Guan Yanshan University
Kuo Chen Yanshan University
Changchun Hua Yanshan University

ISuA02-3 11:15-11:30
0627 Design of a PPO-PID Controller based on Reinforcement Learning
Lingyun Zhou School of Electrical Engineering
Zhe Guan Yanshan University
Changchun Hua Yanshan University
Yafeng Li Institute of Electrical Engineering, Yanshan University

ISuA02-4 11:30-11:45
0702 Adaptive Fixed-time Control of High-order Fully Actuated Systems Using Dynamic Regressor Extension and Mixing Estimators
Yu Zhang Yanshan university
Yixu Cai Yanshan University
Keli Pang Yanshan University
Licui Zhao Yanshan University
Changchun Hua Yanshan University

ISuA02-5 11:45-12:00

0752 Distributed Self-Triggered Formation Control for Fixed-Wing UAVs with Velocity and Overload Limits

Mingyang Wei	Yancheng Normal University
Yuheng Wei	Yancheng Teachers University
Jiayi Chen	Yancheng Teachers College Tongyu Campus
Yong Chen	Yancheng Normal University
Wei Guo	Yancheng Normal University
Jin Zhenghong	Nanyang Technological University
Zhanxiu Wang	Northeastern University

ISuA02-6 12:00-12:15

0577 Containment Control of Linear Heterogeneous Multi-agent Systems with Time Delay

ShuQi Chen	Shenyang University of Technology
Adiya Bao	Northeastern University
Zhanxiu Wang	Northeastern University
Xiaoming Su	Shenyang University of Technology

SuA03	10:45-12:15
Invited Session: New	Development on Nonlinear Systems
and Its Applications	

Chair: Ping Li	Southern University of Science and Technology
Co-Chair: Ping Wang	Southern University of Science and Technology

ISuA03-1 10:45-11:00

0280 Tracking Control for Cart-pole Pendulum System Based on Fully Actuated System Theory

Haowen Liu	Southern University of Science and Technology
Weijie Ren	Southern University of Science and Technology
Ping Li	Southern University of Science and Technology
Guangren Duan	Harbin Institute of Technology

ISuA03-2 11:00-11:15

0640 Second-Order Nonaffine SFSs: A FAS Approach Treatment

Guang-Ren Duan	Harbin Institute of Technology
Ping Wang	Southern University of Science and Technology

ISuA03-3 11:15-11:30

0693 Event-Triggered Cooperative Output Regulation for MASs with Prescribed Time Constraints

Qinghua Hou	Dalian Maritime University
Xudong Zhao	Dalian University of Technology

ISuA03-4 11:30-11:45

0694 Controller synthesis for T-S fuzzy systems based on premise variable-dependent H_∞ performance

Qinghua Hou	Dalian Maritime University
Xudong Zhao	Dalian University of Technology

ISuA03-5 11:45-12:00

0296 Parametric Design of Controller for Cube Robot Based on Fully Actuated System Approach

Zixun Wang	Southern University of Science and Technology
Guangren Duan	Harbin Institute of Technology
Ping Li	Southern University of Science and Technology

ISuA03-6 12:00-12:15

0320 Predictor Design and Delay Robustness Analysis for LTI Systems with State and Input Delays: A Fully Actuated System Approach

Xujie Zhang	Harbin Institute of Technology (Shenzhen)
Guangren Duan	Harbin Institute of Technology

SuA04	10:45-12:15
Invited Session: 面向高端智能装备的感知、控制与优化	

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

ISuA04-1 10:45-11:00
0357 Model-Free Output Regulation of Unknown Systems Under Denial-of-Service, Replay, and Deception Attacks

Xiran Cui	Tongji University
Yi Dong	Tongji University

ISuA04-2 11:00-11:15
0390 Event-Based Prescribed Performance Control for Thermoacoustic Systems with Unknown Flame Response: A Fully Actuated System Approach

Yuzhuo Zhao	Northeastern University
Dan Ma	Northeastern University
Yuzhong Wang	Northeastern University

ISuA04-3 11:15-11:30
0391 Output Tracking Control of Mobile Wheeled Inverted Pendulum with State Estimation via Fully Actuated System Approach

Shengjia Chen	Southern University of Science and Technology
Haowen Liu	Southern University of Science and Technology
Ping Li	Southern University of Science and Technology

ISuA04-4 11:30-11:45
0399 Adaptive Fuzzy Tracking Control for a Single-Link Flexible Joint Manipulator System Based on the Fully Actuated System Approaches

Zhu meng	Bohai University
Wen Bai	Bohai University
Huanqing Wang	Bohai University

ISuA04-5 11:45-12:00
0453 A Fully Actuated System Approach to Adaptive Control for Half-Car Active Suspension Systems

Tan Wang	Southern University of Science and Technology of China
He Kong	Southern University of Science and Technology
Ping Li	Southern University of Science and Technology
Guangren Duan	Harbin Institute of Technology

ISuA04-6 12:00-12:15
0609 Mixed-Order Nonaffine Strict-Feedback Systems: A FAS Approach Treatment

Guang-Ren Duan	Harbin Institute of Technology
Ping Li	Southern University of Science and Technology

SuA05 10:45-12:15 Invited Session: 面向高端智能装备的感知、控制与优化

Chair: 孙维超	哈尔滨工业大学
Co-Chair: 李湛	哈尔滨工业大学

ISuA05-1 10:45-11:00
0431 A PCB SMD Solder Quality Inspection Method Based on Dual-Path Region Segmentation and Color Clustering

Yang Cheng	Harbin Institute of Technology
Jinyong Yu	Harbin Institute of Technology
Weihua Liu	Yongjiang Laboratory

ISuA05-2 11:00-11:15
0515 Subpixel Measurement Method for Surface Mount Devices Based on Edge Tracing

Weihua Liu Yongjiang Laboratory
Yi Peng Liu Harbin Institute of Technology
Chungang Han Harbin Institute Of Technology

ISuA05-3 11:15-11:30
0776 Robust Identification of Linear Dynamical Systems with Skew-Heavy-Tailed Mixture

Kaihang Yu Harbin Institute of Technology
Sen Li Harbin Institute of Technology
Xinpeng Liu Dalian University of Technology
Xianqiang Yang Harbin Institute of Technology

ISuA05-4 11:30-11:45
0122 Dynamic Temperature Simulated Annealing Algorithm for the PCB Assembly Process

Lilong Yang Harbin Institute of Technology
Yuhang Bi Harbin Institute of Technology
Zhitai Liu Harbin Institute of Technology
Zhan Li Harbin Institute of Technology
Weichao Sun Harbin Institute of Technology

ISuA05-5 11:45-12:00
0212 Cooperative Output Feedback Tracking Control of Heterogeneous Multi-Agent Systems under Markovian Switching Topologies and Multiple Measurement Noises

Wenjing Wan Harbin Institute of Technology
Zhao-Yan Li Harbin Institute of Technology

ISuA05-6 12:00-12:15
0123 Event-triggered Adaptive Robust Fault-tolerant Control for Interconnected Systems with Flexible Prescribed Performance

Jingbo Yang Harbin Institute of Technology
Shenglin Hu Harbin Institute of Technology
Zhitai Liu Harbin Institute of Technology
Zhan Li Harbin Institute of Technology
Weichao Sun Harbin Institute of Technology

SuA06 10:45-12:15 Invited Session: 基于全驱系统方法的约束控制、自适应控制及其应用

Chair: 王茜 杭州电子科技大学
Co-Chair: 黄秀韦 广东工业大学

ISuA06-1 10:45-11:00
0028 Discrete-Time HOFA Adaptive Control for A Type of Combined Spacecraft with Unknown Parameters and State Delays

Kaixin Cui Taiyuan University of Technology
Hao Lu Harbin Institute of Technology

ISuA06-2 11:00-11:15
0035 Fully Actuated System Models for Systems in System Upper Hessenberg Form

Shiyu Zhang Harbin Institute of Technology
Guangren Duan Harbin Institute of Technology

ISuA06-3 11:15-11:30
0046 Robust Adaptive Guaranteed Cost Tracking Control for Flexible Joint Robot Based on FAS approach

Liyao Hu	Anhui University of Science and Technology
Yajun Gao	Beijing Institute of Control and Electric Technology

ISuA06-4	11:30-11:45
0048 Adaptive backstepping tracking control of space manipulator based on neural network	

Qin Zhao	Ningbo University of Technology
Guang-Ren Duan	Harbin Institute of Technology

ISuA06-5	11:45-12:00
0052 Predefined-time sliding mode control for robotic arm based on fully actuated system approaches	

Qian Wang	Hangzhou Dianzi University
Jiahao Shi	Hangzhou Dianzi University
Zhaoyang Leng	Hangzhou Dianzi University

ISuA06-6	12:00-12:15
0485 Event-Triggered Prescribed-Time Non-adaptive Control for Uncertain Fully Actuated Nonlinear Systems	

Wenlong Pan	Yanshan University
Changchun Hua	Yanshan University
Pengju Ning	Yanshan University

SuA07	10:45-12:15
Invited Session: 基于全驱系统理论的航天器姿态与轨道控制	

Chair: 钱震婧	北京工业大学
Co-Chair: 陈立群	北京工业大学

ISuA07-1	10:45-11:00
0149 Unwinding-Free Performance of a Sliding-Mode Spacecraft Pose Controller Designed by Fully Actuated System Approaches	

Fuzheng Xiao	Harbin Institute of Technology (Shenzhen)
Yongheng Yu	Harbin Institute of Technology
Liquan Chen	Harbin Institute of Technology (Shenzhen)

ISuA07-2	11:00-11:15
0329 Attitude-orbit Coupling Control Based on the Fully-actuated Systems Approach Utilizing Dual Quaternion	

Xuesong Li	Beijing University of Technology
Yingjing Qian	Beijing University of Technology

ISuA07-3	11:15-11:30
0470 基于二阶锥规划的环火轨道仅测角自主交会制导方法	

胡楚逸	南京航空航天大学
龚柏春	南京航空航天大学
马艳红	北京控制工程研究所
杨思亮	深空探测实验室

ISuA07-4	11:30-11:45
0587 基于状态扩展的非仿射欠驱动系统高阶全驱动建模与控制方法	

邢桂君	南京航空航天大学
陈提	南京航空航天大学

ISuA07-5	11:45-12:00
----------	-------------

Rongqing Yu Harbin Institute of Technology
Yan Xiao Harbin Institute of Technology
Dong Ye Harbin Institute of Technology

ISuA07-6 12:00-12:15
0617 Research on Chance-Constrained Robust MPC Method for Rendezvous with Space Tumbling Targets

Mingliang Wang Shenyang Aerospace University
Kaikai Dong Shenyang Aerospace University
Yuxi Zhang Shenyang Aerospace University

SuA08	10:45-12:15
Invited	Session: Stochastic Control with Constraints

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

ISuA08-1 10:45-11:00
0168 Nash Equilibrium of Two-player Stochastic Difference Game with Given Terminal State

Qiangqiang Zhu Shandong University
Juanjuan Xu Shandong University

ISuA08-2 11:00-11:15
0216 Exact Controllability of Discrete-Time Rational Expectations Model

Wenjing Wang Shandong University
Wei Wang Shandong University
Juanjuan Xu Shandong University

ISuA08-3 11:15-11:30
0227 Optimal Control for Networked Systems with Multiple Delays and Packet Losses

Xinyu Jiang Linyi University
Xincheng Liu Linyi University
Xianggang Zhao Linyi University
Jingmei Liu Linyi University
Xiao Ma Linyi University
Xiao Liang Linyi University

ISuA08-4 11:30-11:45
0242 The Linear Quadratic Difference Nash Game under d-Step-Delay Information Sharing Pattern

Wenyu Xu Linyi University
Xiao Liang Linyi University
Fengzeng Zhu Linyi University
Nana Jin University of Jinan
Jingmei Liu Linyi University

ISuA08-5 11:45-12:00
0532 An Encoding-Decoding-Based State Estimation Scheme Considering Time Delay in Time-Correlated Fading Channels

Qiaoyu Yin School of Electrical Engineering University of Jinan
Guiru Wang School of Electrical Engineering University of Jinan
Chunyan Han University of Jinan
Wei Wang Shandong University

ISuA08-6 12:00-12:15
0546 Mean-square Bounded Consensus for Multiple Underwater Biomimetic Vehicle-Manipulators with Packet Losses and Additive Noise

Hongyu Ma Shandong University
Wei Wang Shandong University
Chunyan Han University of Jinan

SuA09 10:45-12:15 Invited Session: Theory and Application of Multimodal Control for Nonlinear Robotic Systems

Chair: Lu Minghao The University of Hong Kong
Co-Chair: Yihang Ding Harbin Institute of Technology

ISuA09-1 10:45-11:00
0205 Bumpless Transfer Switching Model Predictive Control for Switched Linear Systems with Average Dwell Time

Yunpeng Li Harbin Institute of Technology
Lixian Zhang Harbin Institute of Technology
Yuejiang Han Harbin Institute of Technology
Tong Wu Harbin Institute of Technology
Yuting Ma Harbin Institute of Technology
Shengao Lu Harbin Institute of Technology

ISuA09-2 11:00-11:15
0282 Stability Analysis and Fuzzy Control for Singular Switched Systems with Nonlinear Dynamics

Yuting Ma Harbin Institute of Technology
Jianan Yang Harbin Institute of Technology
Xiyang Zhi Harbin Institute of Technology
Jian Chen Harbin Institute of Technology
Lixian Zhang Harbin Institute of Technology

ISuA09-3 11:15-11:30
0323 A Multimodal Optimal Control Approach for Fast Obstacle Avoidance of UAVs

Minghao Lu The University of Hong Kong

ISuA09-4 11:30-11:45
0256 One-Step Ahead Optimal Strategy for Opinion Dynamic Games among Competitive Groups

Guoqing Cai Wuhan University of Science and Technology
Qingsong Liu Wuhan University of Science and Technology

ISuA09-5 11:45-12:00
0428 A Study on Fuzzy Sliding Mode Control of PMSM Based on Fractional-Order Extended State Observer

Fangchao Wang Northeast Forestry University
Baolong Chen Northeast Forestry University
Haocheng Wang Northeast Forestry University
Yu Zhang Harbin Engineering University

ISuA09-6 12:00-12:15
0475 Bumpless transfer control of Asynchronously Switched Linear Systems with Stochastic Mode-Dependent Sojourn-Time

Yihang Ding Harbin Institute of Technology
Ye Liang Northeast Forestry University
Jianan Yang Harbin Institute of Technology
Yifei Dong Harbin Institute of Technology

SuA10 10:45-12:15
Invited Session: Game theory, fully actuated system and
intelligent control

Chair: Rui Li University of Electronics Science and Technology of China
Co-chair: Xiaojie Chen University of Electronics Science and Technology of China
ISuA10-1 10:45-11:00
0148 Finite-Time Substabilization for Nonholonomic Systems with Time Delay: A Fully Actuated System
Approach

Xue Zhang Harbin Institute of Technology
Guangren Duan Harbin Institute of Technology

ISuA10-2 11:00-11:15
0157 Robust Control Based on Unknown Input Disturbance Observer for Fully Actuated Systems

Hong Jiang Harbin Institute of Technology
Guangren Duan Harbin Institute of Technology

ISuA10-3 11:15-11:30
0276 Trajectory Tracking Control of Lunar Explorer Operation Robotic Manipulator Based on Fully Actuated
System Approach

Jing Xu Sichuan University
Kai Zhang Sichuan University
Yue Wu Southwest Jiaotong University
Zhaoke Ning Sichuan University

ISuA10-4 11:30-11:45
0286 Fully Actuated System with an Unknown State: A Bearing-only Circumnavigation Case

Shida Cao Harbin Institute of Technology
Guangren Duan Harbin Institute of Technology

ISuA10-5 11:45-12:00
0308 Impact of state feedback on evolution of cooperation in infinite and finite populations

Qiushuang Wang University of Electronic Science and Technology of China
Xiaojie Chen University of Electronic Science and Technology of China

ISuA10-6 12:00-12:15
0684 Distributed Optimization of High-Order Multi-Agents Based on Activatable Event-Triggering Mechanisms

Lihui Qian Huazhong University of Science and Technology
Yong Wang Huazhong University of Science and Technology
Yu Xu Huazhong University of Science and Technology
Housheng Su Huazhong University of Science and Technology

SuA11 10:45-12:15
Invited Session: Networked Nonlinear System Control and
Application Based on Fully Actuated System

Chair: Cuihua Zhang Yanshan University

Co-chair: Zhengyan Qin	Northeastern University
ISuA11-1	10:45-11:00
0275 3D Reconstruction of Cables for Live-Working Robots in Distribution Networks	
Jingtao Yan	Nanjing University of Science and Technology
Liaoxue Liu	Nanjing University of Science and Technology
Jian Guo	Nanjing University of Science and Technology
Yu Guo	Nanjing University of Science and Technology
ISuA11-2	11:00-11:15
0281 Local Input-to-State Lyapunov Function Based Small-Gain Theorem for Nonlinear Systems	
Sijia Wang	Shenyang University of Technology
Adiya Bao	Northeastern University
Zhanxiu Wang	Northeastern University
Xiaoming Su	Shenyang University of Technology
ISuA11-3	11:15-11:30
0351 Event-Triggered Robust Control Combined With High-Order Backstepping for Pure Feedback Nonlinear Systems with Uncertainty	
Yi Liang	Yanshan University
Luhan Zhang	Yanshan University
Cuihua Zhang	Yanshan University
Ying Zhang	Yanshan University
Changchun Hua	Yanshan University
ISuA11-4	11:30-11:45
0372 Adaptive Fixed-Time Switching Threshold Control for Uncertain Nonlinear Systems with Unknown Control Coefficients	
Yuxuan Liu	Yanshan University
Zeyun Hu	Yanshan University
Cuihua Zhang	Yanshan University
Ying Zhang	Yanshan University
Changchun Hua	Yanshan University
ISuA11-5	11:45-12:00
0462 Design of a Data-Driven Adaptive Controller based on FF-ITDL for High-Order Fully Actuated Systems	
Yonghe Fu	Yanshan University
Zhe Guan	Yanshan University
Hao Yu	Beijing Institute of Technology
Changchun Hua	Yanshan University
ISuA11-6	12:00-12:15
0479 3D Reconstruction and Pose Estimation of Non-cooperative Objects Based on Structure from Motion	
Xinrui Huang	Nanjing University of Science and Technology
Yiman Zhu	Nanjing University of Science and Technology
Lu Wang	Nanjing University of Science and Technology
Liaoxue Liu	Nanjing University of Science and Technology
Yu Guo	Nanjing University of Science and Technology

SuA12	10:45-12:15
Invited	Session: Interval Estimation of Complex Systems

Chair: Xiaoling Wang	Shanghai Jiao Tong University
Co-chair: Housheng Su	Huazhong University of Science and Technology

ISuA12-1	10:45-11:00
----------	-------------

0648 Hybrid Dynamic Event-Triggered State Observer for Nonlinear Systems Satisfying Incremental Quadratic Constraints

Tao Su	Soochow University
Yuan Sun	Soochow University
Jun Huang	Soochow University
Keya Huang	Soochow University

ISuA12-2 11:00-11:15

0649 Finite-Time Interval Observer Design for Four-Mecanum-Wheeled Mobile Vehicle

Jingyi Wu	Soochow University
Jun Huang	Soochow University
Yueyuan Zhang	Soochow University

ISuA12-3 11:15-11:30

0651 Nonblocking Supervisory Control with Finite-step Constraints in Agent-Task Systems

Kaifeng Li	Nanjing University of Posts and Telecommunications
Xiaoling Wang	Shanghai Jiao Tong University
Miaohong Luo	Huazhong University of Science and Technology
Yali Wu	Huazhong University of Science and Technology
Housheng Su	Huazhong University of Science and Technology

ISuA12-4 11:30-11:45

0679 Distributed Interval Observer Design over Directed Switching Topologies

Ning Cao	Nanjing University of Posts and Telecommunications
Xiaoling Wang	Shanghai Jiao Tong University

ISuA12-5 11:45-12:00

0680 On distributed observer design of a descriptor system

Feixiong Li	Nanjing University of Posts and Telecommunications
Xiaoling Wang	Shanghai Jiao Tong University

ISuA12-6 12:00-12:15

0683A Fixed-Time Distributed Optimization Algorithm Based on Dynamic Event-Triggered Strategy

Yu Xu	Huazhong University of Science and Technology
Yong Wang	Huazhong University of Science and Technology
Lihui Qian	Huazhong University of Science and Technology
Housheng Su	Huazhong University of Science and Technology

SuA13	10:45-12:15
Invited Session:	Intelligent Perception, Decision and Autonomous Control in Aerospace

Chair: Jianbin Qiu	Harbin Institute of Technology
Co-Chair: Min Li	Harbin Institute of Technology
ISuA13-1	10:45-11:00
0113 Predefined-Time Adaptive Sliding Mode Control for Multi-Agent Systems	
Shida Xun	Hebei University of Technology
Jiayou Guan	Hebei University of Technology
Zuojun Liu	Hebei University of Technology
Wei Zhang	Hebei University of Technology
Wenqiang Ji	Hebei University of Technology
Qifu Qu	China Aerospace Academy of Systems Science and Engineering

ISuA13-2 11:00-11:15

0217 DDPRU: Enhancing DDGP with a GRU-Based Actor Network for Capturing Temporal Dependencies in State Dynamics

Yi Zhou	Harbin Institute of Technology
Chuanjun Guo	Harbin Institute of Technology

Tianhao Zhang	Harbin Institute of Technology
Zijing Li	Harbin Institute of Technology
Jianbin Qiu	Harbin Institute of Technology
ISuA13-3	11:15-11:30
0218 Prescribed Performance Control for Attitude Tracking of Spacecraft via High-Order Fully Actuated System Approach and Extended State Observer	
Dongyan Jin	Harbin Institute of Technology
Tianhao Zhang	Harbin Institute of Technology
Yichuan Fu	Harbin Institute of Technology
Jianbin Qiu	Harbin Institute of Technology
ISuA13-4	11:30-11:45
0366 Turn-based Sequential Game under Impulsive Control with Perceptual Delay	
Wanying Gao	Beijing Institute of Control Engineering
Jianfa Wu	Beijing Institute of Control Engineering
Chunling Wei	Beijing Institute of Control Engineering
ISuA13-5	11:45-12:00
0455 Lane-changing and Overtaking Trajectory Planning for Autonomous Vehicles Based on Control Barrier Functions	
Jinfei Hu	Shanghai Normal University, Tianhua College
Wenjie Mao	Tongji University
Yiqun Liu	Tongji University
Lifei Dai	Tongji university
Changzhu Zhang	Tongji University
ISuA13-6	12:00-12:15
0796 Optimal Quantized Feedback Control for the Linear-Quadratic-Gaussian System with Input Delay	
Xinyu Jiang	Linyi University
Xincheng Liu	Linyi University
Boqun Tan	School of Automation and Electrical Engineering,Linyi University
Xianggang Zhao	Linyi university
Huiling Chen	Shandong university of Science and Technology
Xiao Liang	Linyi University

Sunday, July 06, 2025 下午

SuB01	13:30-15:30
Invited Session: Fully Actuated System Theory and Applications Research Fund for Young Scholars	

Chair: Guopin Liu	Electrical engineering
Co-Chair: Yafeng Li	Institute of Electrical Engineering, Yanshan University

ISuB01-1	13:30-13:45
0290 Stabilization of a fractional-order chaotic system based on fully actuated system approach	
Yan-Qiao WEI	Yanshan University
Fu Biao Sun	School of Electrical Engineering, Yanshan University
Da-Yan LIU	INSA Centre Val de Loire
Changchun Hua	yanshan university
ISuB01-2	13:45-14:00
0435 Adaptive Task-space Robust Control for Hydraulic Excavators: A High-Order Fully Actuated System Approach	
Bo Zhang	Yanshan University
Changchun Hua	yanshan university
Jiafeng Zhou	Yanshan University
Rui Meng	Yanshan University
Yafeng Li	Institute of Electrical Engineering, Yanshan University
ISuB01-3	14:00-14:15
0436 Adaptive tracking control for hydraulic actuators Based on the Fully Actuated System Approaches	
Jiafeng Zhou	Yanshan University
Changchun Hua	yanshan university

Bo Zhang	Yanshan University
Rui Meng	Yanshan University
Yafeng Li	Institute of Electrical Engineering, Yanshan University
ISuB01-4	14:15-14:30
0538 Leader-Following Output Consensus for A Class of Lower-Triangular Multi-Agent Systems with Small Transmission Delays Based on Fully Actuated Approach	
Shuaigang Feng	Yanshan University
Yafeng Li	Institute of Electrical Engineering, Yanshan University
Bo Zhang	Yanshan University
Jiafeng Zhou	Yanshan University
ISuB01-5	14:30-14:45
0564 Prescribed Performance Control for Nonlinear Systems with Input Quantization: A Fully Actuated System Approach	
Zihao Li	Yanshan University
Guopin Liu	Electrical engineering
Yu Zhang	Yanshan university
Changchun Hua	yanshan university
ISuB01-6	14:45-15:00
0700 Composite Learning-based Adaptive Finite-time Parameters Estimation and Control for High-order Fully Actuated Systems	
Yu Zhang	Yanshan university
Yixu Cai	Yanshan University
Keli Pang	Yanshan University
Guopin Liu	Electrical engineering
Changchun Hua	yanshan university
ISuB01-7	15:00-15:15
0368 Nonlinear Extended State Observer-based Closed-loop Control for Underactuated USV: High-order Fully Actuated System Approach	
YanaYang	Institute of Electrical Engineering
Long Chen	Yanshan University
iaoshuang Zhou	yanshan university
Shu-zong Chen	Yanshan University
Changchun Hua	yanshan university
ISuB01-8	15:15-15:30
0560 Adaptive Variable-Period Event-Triggered Control for High-Order Fully Actuated Nonlinear Multi-Agent Systems	
Hailong Cui	Yanshan University
guanglei zhao	Yanshan University
Weili Ding	Yanshan University
SuB02	13:30-15:30
Application of Fully Actuated System Control and Optimization	Theory in Motor
Chair: Li Qiu	Shenzhen University
Co-Chair: Ying Zhang	Harbin Institute of Technology,Shenzhen
ISuB02-1	13:30-13:45
0163 A Fully Actuated System Approach based Attitude Control for 3-DOF Helicopter	
jing zhang	Shandong University of Science and Technology
ruijia yang	Shandong University of Science and Technology
wendong gai	Shandong University of Science and Technology
gang jing	ShanDong University of Science and Technology
ISuB02-2	13:45-14:00
0340 Predictive Observer-Compensated High-Order Fully Actuated Tracking Control for Linear Switched Reluctance Machine	
Yiyang Liu	Shenzhen University
Yiting Ma	Shenzhen university
Shishuo Chen	Shenzhen University

Yucheng Wang	Shenzhen University
Chenmei Song	Shenzhen University
Li Qiu	Shenzhen University
Feiqi Deng	South China University of Technology
ISuB02-3	14:00-14:15
0750 High-Order Fully Actuated Strict-Feedback System-Based Approach for Modeling and Tracking Control of Linear Switched Reluctance Machine	
Yiting Ma	Shenzhen university
Yiyang Liu	Shenzhen University
Yucheng Wang	Shenzhen University
Shishuo Chen	Shenzhen University
Li Qiu	Shenzhen University
Jun Wu	Foshan University
Feiqi Deng	South China University of Technology
ISuB02-4	14:15-14:30
0804 Adaptive Prescribed-Time Force/Position Tracking Control for Flexible-Joint Robotic Manipulators	
Zengwei Zheng	Harbin Institute of Technology, Shenzhen
Jiahao Zhang	Harbin Institute of Technology, Shenzhen
Ying Zhang	Harbin Institute of Technology, Shenzhen
ISuB02-5	14:30-14:45
0050 An Improved ADC Effectiveness Evaluation Method for On-Orbit Spacecraft Based on Anomaly Information	
Zelong Yang	China Academy of Space Technology (CAST)
Xiangyan Zhang	China Academy of Space Technology (CAST)
Hongfei Li	China Academy of Space Technology (CAST)
Peng Liu	China Academy of Space Technology (CAST)
Hongbo Han	China Academy of Space Technology (CAST)
Wei Qin	China Academy of Space Technology (CAST)
Yunxiang Zhang	China Academy of Space Technology (CAST)
ISuB02-6	14:45-15:00
0220 Sensor Fault Diagnosis for Satellite Attitude Control System Based on WPE and OOA-BP Neural Network	
Xin Yuan	Sun Yat-sen University
Fangzhou Fu	Sun Yat-sen University
Muye Yu	Sun Yat-sen University
Zhen Qian	Sun Yat-sen University
ISuB02-7	15:00-15:15
0327 The switching control method of tandem dual-rotor cross-medium unmanned aerial vehicles based on the FAS method	
张柏嘉	中山大学深圳校区
张锦绣	中山大学
孙慧杰	中山大学
ISuB02-8	15:15-15:30
0448 A Comprehensive Comparison of Global Space Situational Awareness Data and Information Sharing Systems	
Zelong Yang	China Academy of Space Technology (CAST)
Xiangyan Zhang	China Academy of Space Technology (CAST)
Hongfei Li	China Academy of Space Technology (CAST)
Xiaochen Wang	China Academy of Space Technology (CAST)
Mingjiang Zhang	China Academy of Space Technology (CAST)
Hongbo Han	China Academy of Space Technology (CAST)
Xi Chen	China Academy of Space Technology (CAST)
SuB03	13:30-15:30
Fully Actuated Theory-Based Control and its Application in Industrial Systems	
Chair: Jianxing Liu	Harbin Institute of Technology
Co-Chair: Xiaoning Shen	Harbin Institute of Technology
ISuB03-1	13:30-13:45
0152 Fixed-time adaptive sliding mode control based on super-twisting disturbance observer for uncertain nonlinear systems	

Shouzhen Luan	Shandong University of Science and Technology
Bo Meng	Shandong University of Science and Technology
Wang Zhen	Shandong University of Science and Technology
ISuB03-2	13:45-14:00
0197 State-of-Health Estimation of Lithium Battery Based on PKO-Bagging-AdaBoost Ensemble Learning Algorithm	
zhipeng Han	Jiangnan University
ZeYang Chen	Jiangnan University
Tinglong Pan	Jiangnan University
Weilin Yang	Jiangnan University
Dezhi Xu	Jiangnan University
Yan Wang	Jiangnan University
ISuB03-3	14:00-14:15
0222 Fixed-time consensus control strategy for a class of nonlinear MAS	
Ziqi Bai	Qufu normal university
Wenhai Qi	Qufu Normal University
ISuB03-4	14:15-14:30
0325 Designated-time stabilization of double-tank liquid level system	
Mingxue Xu	Qufu Normal University
Zong-Yao Sun	Qufu Normal University
Jiaojiao Li	Qufu Normal University
Qinghua Meng	Hangzhou Dianzi University
ISuB03-5	14:30-14:45
0358 Optimal Consensus for High-order Nonlinear Multi-agent Systems Based on Event-triggered PI Regulation	
Junru Zhu	Southeast University
Wenqiang Wu	Southeast University
Qingling Wang	Southeast University
ISuB03-6	14:45-15:00
0541 Obstacle Avoidance Formation Strategy for Unmanned Vehicles via Improved Grey Wolf Optimizer and Artificial Potential Field Method	
Haoyi Zhang	Chongqing Technology and Business University
Huiyan Zhang	Chongqing Technology and Business University
Wenting He	Chongqing Technology and Business University
Xiaoli Chen	Chongqing Technology and Business University
ISuB03-7	15:00-15:15
0542 Optimal Tracking Control for Wheeled Mobile Robot via Adaptive Dynamic Programming With Concurrent Learning	
Jun Gou	Chongqing Technology and Business University
Pengda Liu	Chongqing Technology and Business University
Huichao Wang	Chongqing Technology and Business University
Ju Chen	Chongqing Technology and Business University
ISuB03-8	15:15-15:30
0172 High Order Fully Actuated Modelling and Control of an Unmanned Vehicle	
Jiamin Liu	Shenzhen Technology University
Xiaoxu Liu	Shenzhen Technology University
Tan Zhang	Shenzhen Technology University
SuB04	13:30-15:30
全驱系统理论在制导飞行器中的应用	
Chair: Jun-fang Fan	Beijing Information Science & Technology University
Co-Chair: Wei Wang	Beijing Institute of Technology
ISuB04-1	13:30-13:45
0251 Robust Optimal Control for Roll Angle Based on Fully Actuated System Approach	
Shiwei Chen	Beijing Institute of Technology
Wei Wang	Beijing Institute of Technology
Zejun Zhu	Beijing Institute of Technology
Jun-fang FAN	Beijing Information Science & Technology University

ISuB04-2 13:45-14:00
0285 Analytical Trajectory Prediction for Intercepting Aerial Vehicles Using Proportional Navigation Guidance Law
Xin Zhao Beijing Institute of Technology
Jiang WANG Beijing Institute of Technology
Yaning Wang Institute of Electronics and System engineering
Zichao Liu Beijing Institute of Technology
Hongyan Li Beijing Institute of Technology
yinhan wang Beijing institute of technology

ISuB04-3 14:00-14:15
0348 Adaptive Second-Order Disturbance Observer-Based 3D Integrated Guidance and Control Design Using Fully Actuated System Approach
Hongyan Zhang Beijing institute of technology
Wei Wang Beijing Institute of Technology
Shiwei Chen Beijing Institute of Technology

ISuB04-4 14:15-14:30
0387 Adaptive Sliding Mode Guidance Law with Three-Dimensional Terminal Line-of-Sight Angle Constraint
Yuguang Ji School of Automation
Yi Ji Beijing Institute of Technology
Jun-fang FAN Beijing Information Science & Technology University
Yafeng Li Beijing Information Science and Technology University
Sixing Zhang Beijing Information Science & Technology University

ISuB04-5 14:30-14:45
0397 Three Dimensional Adaptive Sliding Mode Guidance Law Based On Finite Time Prescribed Performance
Hongyu Wang Beijing Information Science and Technology University
Yi Ji Beijing Institute of Technology
Jun-fang FAN Beijing Information Science & Technology University

ISuB04-6 14:45-15:00
0416 轻量化地图引导的三维实时路径规划方法研究
顾程毓 北京信息科技大学
徐小斌 北京信息科技大学
范军芳 北京信息科技大学
高志浩 北京信息科技大学

ISuB04-7 15:00-15:15
0433 Roll-Stabilized Fully Actuated Control of Guided Projectiles with Practical Actuator Constraints
Binyuan Wang Beijing Information Science and Technology University
Jun-fang FAN Beijing Information Science and Technology University
Fangyi Quan Beijing Information Science and Technology University

ISuB04-8 15:15-15:30
0473 JKAN-YOLO:一种无人机航拍小目标检测方法
李倩倩 北京信息科技大学
范军芳 北京信息科技大学
李鑫茹 北京信息科技大学

SuB05 13:30-15:30 全驱系统理论视角下的大数据分析

Chair: 杨懿 北京航空航天大学/鹏城实验室
Co-Chair: 赵亮 大连理工大学

ISuB05-1 13:30-13:45
0234 Feature Clustering and Fault-Tolerant Control of Multimodal Missing Data in a Fully Actuated System
Lishan Ye Tsinghua University
Shubin Ma Dalian University of Technology
Yifan Guo Dalian technology of university
Liang Zhao Dalian University of Technology
Yi Yang Beihang University

ISuB05-2	13:45-14:00
0339 Fully Actuated System-Based Deep Learning Method for Blast Furnace Fault Diagnosis	
杨懿	Beihang University
王铭浩	Beihang University
李燕京	Beihang University
岑寒玉	Beihang University
赵亮	Dalian University of Technology
ISuB05-3	14:00-14:15
0407 基于多频域全驱系统的时间序列预测	
刘致远	大连理工大学
姚天宇	大连理工大学
林睿	大连理工大学
严凯宸	大连理工大学
王铭浩	北京航空航天大学
杨懿	北京航空航天大学
赵亮	大连理工大学
ISuB05-4	14:15-14:30
0418 Big Data Analysis from the Perspective of Fully Actuated System	
Liang Zhao	Dalian University of Technology
Yifan Guo	Dalian technology of university
Rui Lin	Dalian University of Technology
Yi Yang	Beihang University
ISuB05-5	14:30-14:45
0425 FAME: A Multi-Encoder Time Series Forecasting Model Based on Fully Actuated System Theory	
Chengzhan Sui	Dalian University of Technology
Rui Lin	Dalian University of Technology
Jiaoyuan Liang	Dalian University of Technology
Jie Liu	Dalian University of Technology
Liang Zhao	Dalian University of Technology
ISuB05-6	14:45-15:00
0450 Incomplete Multiview Clustering Based on Fully Actuated System Theory	
Yangqianhui Zhang	Zhejiang University
Kexuan Wang	Dalian University of Technology
Ziyue Wang	Dalian University of Technology
Tianqi Yue	Dalian University of Technology
Dong Han	Zhejiang University
Liang Zhao	Dalian University of Technology
ISuB05-7	15:00-15:15
0175 Sliding Mode-Based Control for Autonomous Vehicles Subject to Bandwidth-Limited Encoding-Decoding Protocols	
Mingming Zhang	University of Shanghai for Science and Technology
ISuB05-8	15:15-15:30
0195 Fault Diagnosis of Lithium Battery Packs Based on Hybrid Attention-Enhanced CNN-GRU Model	
Lingzhi Wang	Jiangnan University
ZeYang Chen	Jiangnan University
Tinglong Pan	Jiangnan University
Weilin Yang	Jiangnan University
Dezhi Xu	Southeast University
Dongnian Jiang	Lanzhou University of Technology
SuB06	13:30-15:30
Distributed Parameter Systems: Theory and Applications	
Chair: Xiang Xu	Southern University of Science and Technology
Co-Chair: Ji Wang	Xiamen University
ISuB06-1	13:30-13:45
0228 State feedback stabilization for a class of nonlinear PDE–ODE cascade systems	

Xiang Xu	Southern University of Science and Technology
Tao Wu	Southern University of Science and Technology
ISuB06-2	13:45-14:00
0266 Output regulation for an unstable wave equation with output delay and one measurement only	
Shen Wang	Tianjin University
Zhong-Jie Han	Tianjin University
Shuangxi Huang	Shandong Normal University
Zhi-Xue Zhao	Tianjin Normal University
ISuB06-3	14:00-14:15
0321 Event-triggered delay-compensated boundary control of reaction-diffusion PDEs with actuator dynamics	
Hongpeng Yuan	Xiamen University
Ji Wang	Xiamen University
ISuB06-4	14:15-14:30
0508 Distributed Secondary Control for Multi-Bus DC Microgrids via a Fully Actuated System Approach	
Peng Li	Tianjin University
Sijie Zhang	Nantong University
Zhiqiang Zuo	Tianjin University
Yijing Wang	Tianjin University
ISuB06-5	14:30-14:45
0524 Finite-time stabilization for a chaos wave equation with disturbance	
MengYuan Lou	Central South University
Hua-Cheng Zhou	Central South University
ISuB06-6	14:45-15:00
0584 Extremum and Nash Equilibrium Seeking with Parabolic Reaction-Advection-Diffusion PDEs	
Zheng Yang	Southern University of Science and Technology
Xiang Xu	Southern University of Science and Technology
ISuB06-7	15:00-15:15
0689 Event-triggered Output-feedback Control of the 1-D Parabolic PDE Systems with Spatially-varying Coefficient	
Runsheng Guo	Jiangnan University
Junchen Bao	Harbin Institute of Technology
Bingke Zhou	Jiangnan University
ISuB06-8	15:15-15:30
0417 Robust Estimation of FDI Attacks in Cyber-Physical Systems: A Composite Hierarchical Approach	
Lewei Dong	Nanjing University of Science and Technology
Dan Zhang	Yanshan University
Zhengcai Li	Nanjing University of Chinese Medicine
Yuqing Chen	Nanjing University of Science and Technology
Xiaokai Zhai	Suzhou University of Science and Technology
SuB07	13:30-15:30
Intelligent Game-Theoretic Collaborative Planning, Decision-Making, and Control for Spacecraft Swarms in Complex Mission Environments	
Chair: Fei Han	Shanghai Aerospace Control Technology Research Institute
Co-Chair: Zhu Qinghua	Shanghai Aerospace Control Technology Institute
ISuB07-1	13:30-13:45
0322 Equivalent Dynamic Modeling of Super-Long Radar Antenna	
Xiaoxuan Yan	Shanghai Aerospace Control Technology Institute
lulu Tian	Shanghai Aerospace Control Technology Institute
Jing Huang	Shanghai aerospace control technology institute
Dongfang Zhu	Shanghai Aerospace Control Technology Institute
ISuB07-2	13:45-14:00
0571 Distributed optical frequency domain measurement system based on common single-mode optical fiber	
lulu Tian	Shanghai Aerospace Control Technology Institute

Xiaoxuan Yan	Shanghai Aerospace Control Technology Institute
ISuB07-3	14:00-14:15
0656 The Intelligent Decision-Making and Planning of Multi-Satellite Game under A Single Fault	
ShengYang Liu	Shanghai Aerospace Control Technology Institute
Fei Han	Shanghai Aerospace Control Technology Research Institute
Haolong Feng	Shanghai Aerospace Control Technology Institute
Ting Song	Shanghai Institute of Spaceflight Control Technology
ISuB07-4	14:15-14:30
0772 A Task Allocation Algorithm of Spacecraft Cluster Space Game	
Haolong Feng	Shanghai Aerospace Control Technology Institute
Fei Han	Shanghai Aerospace Control Technology Research Institute
ShengYang Liu	Shanghai Aerospace Control Technology Institute
Lei Ning	Shanghai Institute of Spaceflight Control Technology
Ting Song	Shanghai Institute of Spaceflight Control Technology
ISuB07-5	14:30-14:45
0361 Path Planning for Spacecraft Obstacle Avoidance Based on Improved Sparrow Search Algorithm	
Han Wu	Shanghai Aerospace Control Technology Research Institute
Fei Han	Shanghai Aerospace Control Technology Research Institute
ISuB07-6	14:45-15:00
0438 A Novel Multi- level Cooperative Control Method for Agile Satellite with Non-contact Actuation	
Jing Huang	Shanghai aerospace control technology institute
Xiaoxuan Yan	Shanghai Aerospace Control Technology Institute
Lujun Sun	Shanghai aerospace control technology institute
XiaoGuang Huangshanghaihangtiankongzhijishuyanjiusuo	
Dong Yuan Lv	Shanghai Aerospace Control Technology Institute
ISuB07-7	15:00-15:15
0443 Equivalent plate dynamic modeling and response analysis of truss structures for control-oriented applications	
Jie Sun	Shanghai Aerospace Control Technology Institute
Jun Sun	Shanghai Aerospace Control Technology Institute
Dongfang Zhu	Shanghai Institute of Spaceflight Control Technology
ISuB07-8	15:15-15:30
0490 Repetitive locking control and mechanical characteristics analysis of high-speed magnetically suspended rotor	
Qichao Lv	Shanghai Institute of Spaceflight Control Technology
Fei Ni	Tongji University
Dong Yuan Lv	Shanghai Aerospace Control Technology Institute
XiaoGuang Huangshanghaihangtiankongzhijishuyanjiusuo	
Chen Xi	Shanghai Aerospace Control Engineering Research Institute
SuB08	13:30-15:30
Intelligent Control Theory and Application in Fully Actuated Systems and Complex Systems	
Chair: Huanyu Zhao	Huaiyin Institute of Technology
Co-Chair: Wei Liu	Huaiyin Institute of Technology
ISuB08-1	13:30-13:45
0023 Adaptive Iteration Differential Private Federated Learning with Gradient-Guide Synthetic Data	
Chengzu Liu	Nanjing University of Science and Technology
XuYang Xing	Nanjing university of science and technology
Deming Yuan	Nanjing University of Science and Technology
ISuB08-2	13:45-14:00
0519 Intermediate-variable-based Non-fragile Estimation for Persistent Dwell-time Switched Systems	
Shiyu Jiao	Huaiyin Institute of Technology
Yifan Yang	Huaiyin Institute of Technology
Jiaheng Zhang	Huaiyin Institute of Technology
Huanyu Zhao	Huaiyin Institute of Technology
Wei Liu	Huaiyin insitute of Technology

Pengcheng Zhang	Huaiyin insitute of Technology
ISuB08-3	14:00-14:15
0527 Prescribed-time affine formation control for Nonholonomic constrained robots	
JiYe Tang	Jiangsu University of Science and Technology
Jianzhen Li	Jiangsu University of Science and Technology
Junyi Zhou	Jiangsu University of Science and Technology
Guicai Liu	Jiangsu University of Science and Technology
Ning Qiao	Jiangsu University of Science and Technology
ISuB08-4	14:15-14:30
0539 Consensus for Second-Order Integrator Agents with Switching Topologies and Delays	
Chang-jiang Li	Jiangsu University of Science and Technology
Zhaoping Du	Jiangsu University of Science and Technology
Jianzhen Li	Jiangsu University of Science and Technology
Shuxia Ye	Jiangsu University of science and technology
Xueying Sun	Jingsu University of Science and Technology
HengJie Xu	Jiangsu University of Science and Technology
Qi Fu	Jiangsu University of Science and Technology
ISuB08-5	14:30-14:45
0026 Event-Triggered Adaptive Tracking for Nonlinear Systems Based on Fully Actuated System Theory	
Yunfei Qiu	Jiangsu University
ISuB08-6	14:45-15:00
0051 Finite-Time Tracking Control for Wheeled Mobile Robots with Uncalibrated Parameter and Disturbances	
Guosheng Zhang	Hohai University
Zheyi Zhu	Huohai Universty
Md Mahmudul Hasan	Hohai University
Shang Shi	Nanjing University of Posts and Telecommunications
ISuB08-7	15:00-15:15
0120 Finite Time Preassigned Performance Control of Non-strict Feedback Systems with Asymmetric State Constraints	
Yifan Yang	Huaiyin Institute of Technology
Wei Tang	Huaiyin Institute of Technology
Wei Liu	Huaiyin insitute of Technology
Huanyu Zhao	Huaiyin Institute of Technology
ISuB08-8	15:15-15:30
0294 Fixed-Time Adaptive Neural Control for Constrained Stochastic Nonlinear Systems with Unknown Covariance Noise	
Zhicheng Wei	Nanjing University of Science and Technology
Huifang Min	Nanjing University of Science and Technology
SuB09	13:30-15:30
Unmanned System Control Based on High-Order Fully Actuated System Approaches	
Chair: Xuefei Yang	Harbin Institute of Technology
Co-Chair: Kai Zhang	Harbin Institute of Technology
ISuB09-1	13:30-13:45
0241 Event-triggered mechanism based finite-time and prescribed-time control	
Zhang Kai	Harbin Institute of Technology
ISuB09-2	13:45-14:00
0257 Analysis of Evolutionary Game Dynamics with Both Ally and Enemy Strategies	
Kefei Chen	wuhan university of science and technology
Qingsong Liu	Wuhan University of Science and Technology
ISuB09-3	14:00-14:15
0512 Fully Distributed Consensus of Discrete-time Periodic Linear Multi-agent Systems with Input Saturation	
Kai Zhang	Harbin Institute of Technology
Zhanpeng Feng	Harbin Institute of Technology

ISuB09-4	14:15-14:30
0529 Review and Frontier Exploration of Active SLAM	
Shoudu Du	Southeast University
Hongru Li	Southeast University
Xuefei Yang	Harbin Institute of Technology
Xin Gong	Southeast University
ISuB09-5	14:30-14:45
0530 Safe Reinforcement Learning with Constraints: A Survey	
Zhengyu Chen	Southeast University
Hongru Li	Southeast University
Xuefei Yang	Harbin Institute of Technology
Xin Gong	Southeast University
ISuB09-6	14:45-15:00
0580 Finite-Time Stabilization of Circular Orbit Rendezvous by Impulsive Control	
Wenbo Fu	China University of Mining and Technology
Weiwei Luo	Harbin Institute of Technology
Song Zhu China	University of Mining and Technology
Li Hongru	China Academy of Aerospace Standardization and Product Assurance
ISuB09-7	15:00-15:15
0603 Adaptive Control for High-Order Strict-Feedback System Based on Fully Actuated System Approach	
Wenhui Ning	Qufu Normal University
Zhongcai Zhang	Qufu Normal University
ISuB09-8	15:15-15:30
0687 Design of Strongly Stabilizing Controllers for Underactuated Systems: an Example of the Cart--Pendulum System	
Yuanbo Chen	Southeast University
Xin Xin	Southeast University
Ziyu Wang	Southeast University
SuB10	13:30-15:30
Advances in Control Design and Analysis of Underactuated Robotic Systems	
Chair: Xin Xin	Southeast University
Co-Chair: Xhongcai Zhang	Qufu Normal University
ISuB10-1	13:30-13:45
0261 Robust stabilizing control of underactuated cart-pendulum system using fixed-time hierarchical sliding mode method	
Junyao Yu	Linyi University
Shuli Gong	Linyi University
Ancai Zhang	Linyi University
Quan Yuan	Linyi University
Gui Xincheng	Company of Wuhan Zhixia Intelligent Technology
ISuB10-2	13:45-14:00
0821 Safe Tracking Control of an Underactuated Suspended Backpack via BLF-Based Backstepping and a Disturbance Observer	
Yuanyuan Yuan	Huazhong University of Science and Technology
Yu Cao	Huazhong University of Science and Technology
Yifei Guo	Huazhong university of science and technology
Jian Huang	Huazhong University of Science and Technology
ISuB10-3	14:00-14:15
0263 Coupled Sliding Mode Control of Autonomous Vehicle Platoons Based on Disturbance Observer and Modified Multi-Power Reaching Law	
Kangxin Sun	Qufu Normal University
Qiyi Xu	Qufu Normal University
Zhihua Wang	Qufu Normal University
ISuB10-4	14:15-14:30
0271 Event-Triggered Fault-Tolerant Control and Synchronous Disturbance Suppression For Multi-Agent Systems	

with Switching Topologies

Dongxin Ren	Linyi University
Guochen Pang	Linyi University
xiangyong chen	Linyi University
xiaojian mu	Linyi University
Jianlong Qiu	Linyi University
Jinde Cao	Southeast University

ISuB10-5 14:30-14:45

0319 Tracking Control for n-Link Flexible-Joint Robots with Output Constraints and Disturbances: An FAS Approach

Nan Jiang	Qufu Normal University
Zhongcai Zhang	Qufu Normal University
Yang Gao	Southeast University
Yuqiang Wu	Qufu Normal University

ISuB10-6 14:45-15:00

0408 Robot Path Optimization Based on Improved Ant Colony Optimization

Xu Guo	Nanjing Institute of Technology
Anqi Xu	Nanjing Institute of Technology
Wenlong Ji	Nanjing Institute of Technology
Siquan Li	Nanjing Institute of Engineering
Yanling Shang	Anyang Normal University
Fangzheng Gao	Nanjing Institute of Technology

ISuB10-7 15:00-15:15

0463 An Tightly-Coupled VIO Algorithm with Backend Pose Graph Optimization for Outdoor Applications

Wenlong Ji	Nanjing Institute of Technology
Xu Guo	Nanjing Institute of Technology
Anqi Xu	Nanjing Institute of Technology
Siquan Li	Nanjing Institute of Engineering
Yanling Shang	Anyang Normal University
Fangzheng Gao	Nanjing Institute of Technology

ISuB10-8 15:15-15:30

0481 Fixed-time robust stabilization control of underactuated bridge crane system with matched disturbance

Weicheng Lan	Linyi University
Ancai Zhang	Linyi University
Junyao Yu	Linyi University
Guochen Pang	Linyi University
Jianlong Qiu	Linyi University

SuB11	13:30-15:30
-------	-------------

Development on Industrial Artificial Intelligence and Intelligent Manufacturing

Chair: Da-Wei Zhang	Southern University of Science and Technology
Co-Chair: Xiubo Wang	Northeastern University at Qinhuangdao

ISuB11-1 13:30-13:45

0268 A Hybrid Transformer-BiLSTM-Att Framework for Dynamic Prediction of Thickness Deviation in Cold-Rolled Aluminum Plates

Yaning Xiao	Southern University of Science and Technology
Guoping Liu	Southern University of Science and Technology

ISuB11-2 13:45-14:00

0274 Fault Diagnosis of Motors via Multivariable Time Sequence Features Fusion of Electrical Signals

Xingguan Tan	Southern University of Science and Technology
Guoping Liu	Southern University of Science and Technology

ISuB11-3 14:00-14:15

0291 KC-BiGRUAtt: A Clustering-Enhanced Deep Framework for Machinery Remaining Useful Life Prediction

Xiangxian Wang	Southern University of Science and Technology
Guoping Liu	Southern University of Science and Technology

ISuB11-4	14:15-14:30
0297 FeatureFuser-LLM: Multi-Scale Feature Fusion with Adaptive Positional Encoding for LLM-Based Time Series Forecasting	
Yiping Gan	Southern University of Science and Technology
Guoping Liu	Southern University of Science and Technology
ISuB11-5	14:30-14:45
0309 Design and Implementation of An Interactive Monitoring System with Cloud-Edge Collaboration for Smart Manufacturing	
Bowei Zhang	Southern University of Science and Technology
Guoping Liu	Southern University of Science and Technology
Kunjie Li	none
ISuB11-6	14:45-15:00
0160 Ultra-High Frequency Localization Method for Transformer Partial Discharge Based on TDOA and WLS-FA	
Yunlong Du	North China Electric Power University
Xiuyu Duan	North China Electric Power University
Dai Jiahui	North China Electric Power University
Xingkai Yu	North China Electric Power University
ISuB11-7	15:00-15:15
0162 Coordinate-Free Distributed Localization and Circumnavigation for Nonholonomic Vehicles Without Position Information	
Yao Zou	University of Science and Technology Beijing
ISuB11-8	15:15-15:30
0664 Trigonometric-Type Sliding Mode Attitude Control for Rigid Spacecraft with Arbitrary Convergence Time	
Yu-Tian Xu	Harbin Institute of Technology, Shenzhen
Ai-Guo Wu	Harbin Institute of Technology (Shenzhen)
SuB12	13:30-15:30
New Developments in Robustness and Control of Unmanned Autonomous Systems	
Chair: Jian Hou	Zhejiang Sci-Tech University
Co-Chair: Lili Wang	Lili Wang Zhejiang University
ISuB12-1	13:30-13:45
0324 Energy-efficient Path Planning of Data Collection in Multi-UAV-assisted WSN	
Jing GUO	Foshan University
Binting Wei	Foshan University
Feihang QIU	Foshan University
Xu ZHANG	Southern University of Science and Technology
ISuB12-2	13:45-14:00
0380 GNN-based Distributed Consensus Control for Heterogeneous Multi-Agent Systems with Linear and Fully Actuated Nonlinear Model	
ZhiYu Wang	Southern University of Science and Technology
Zhiyun Lin	Southern University of Science and Technology
ISuB12-3	14:00-14:15
0581 An Efficient Algebraic Model Predictive Control (AMPC) for Unmanned Surface Vessels Path Following	
Wei Li	Hangzhou city university
Bai Jie	Zhejiang University of Technology
Han Zhou	Zhejiang University of Technology
Zhiyun Lin	Southern University of Science and Technology
ISuB12-4	14:15-14:30
0755 An Intelligent Cable Arrangement Detection Algorithm via Improved CNN Architecture and Edge Rectification Technology	
Mengdie Zhang	Hangzhou Applied Acoustics Research Institute
YanJun Lin	china State Shipbuilding Corporation
Junlei Wang	Hangzhou Applied Acoustics Research Institute
LinJie Ruan	Zhejiang Sci-Tech University
ISuB12-5	14:30-14:45

0537 Research on key-point detection of space target based on lightweight-HRNet
jinzhen mu Shanghai Aerospace Control Technology Institute

ISuB12-6 14:45-15:00
0543 Research on Control of Magnetic Suspension Rotor System under Moving Base Based on Disturbance Observer
XiaoGuang Huangshanghaihangtiankongzhijishuyanjisuo
Chen Xi Shanghai Aerospace Control Engineering Research Institute
Qichao Lv Shanghai Institute of Spaceflight Control Technology
Dong Yuan Lv Shanghai Aerospace Control Technology Institute

ISuB12-7 15:00-15:15
0545 A Knowledge-Driven Generation Method of Legged Control Strategy for Space Climbing Robots
Zhexuan Chen Shanghai Aerospace Control Technology Institute
Senchun Yao Shanghai Aerospace Control Technology Institute
Xuanhui Xu Shanghai Aerospace Control Technology Institute
Yuchao Yan Shanghai Aerospace Control Technology Institute
Xinpeng Di Shanghai Aerospace Control Technology Institute

ISuB12-8 15:15-15:30
0559 Multi-Constraint Trajectory Tracking Control for Spacecraft Based on an Integrated Decision-Control Architecture
Tan Longyu Shanghai Aerospace Control Technology Research Institute
Yizhen Meng Shanghai Institute of Aerospace Control Technology
Jing Huang Shanghai aerospace control technology institute
Liu Jingxi Shanghai Aerospace Control Technology Research Institute

SuB13	13:30-15:30
Robotic Actuation, Sensing, Control and Human-Robot Interaction	

Chair: Yang Yang Nanjing University of Information Science and Technology,
Co-Chair: Dapeng Chen School of automation

ISuB13-1 13:30-13:45
0158 Application of Fully-Actuated System Approach in Flexible-Joint Robot Systems and Active Suspension Systems
Chengyuan Yan Liaocheng University
Guoliang Chen Beijing Institute of Technology
Mengkai Zhu Liaocheng University
Mingyin Tang Liaocheng University
Tianjiao Liu Liaocheng University

ISuB13-2 13:45-14:00
0105 Malicious Covariance Regulation with Deception Attacks in Remote State Estimation
Jing Zhou University of Alberta
Lu Liu City University of Hong Kong

ISuB13-3 14:00-14:15
0183 Distributed Drive Electric Vehicles Lateral Stability Strategy
Yuxi Liu Southeast University
Che Su Southeast University
Ding Yueheng Southeast University
Xu Dezhi Southeast University
Hua Wei Southeast University
Wenfei Yu Southeast University

ISuB13-4 14:15-14:30
0841 A Flexible Job Shop Scheduling Method via a Hybrid Dual Attention Network and Mamba Approach
chenmeng Li Henan University Of Science And Technology
Xuhui Zhao Henan University Of Science And Technology
Jiamei Feng Henan University Of Science And Technology
Meiyi Yang Henan University of Science and Technology
Xinlu Wang Henan University of Science and Technology, Luoyang
Huimin Gao Henan University of Science and Technology

ISuB13-5

14:30-14:45

0834 Prediction of unmanned system pose based on VMD-WHHO-BLS

Zijian Xue

Nanjing University of Information Science and Technology

Quanbo Ge

Tongji University

ISuB13-6

14:45-15:00

0699 Adaptive Target Threat Assessment Algorithm Based on BLS and Variational Bayesian

Tao Lv

Nanjing University of Information Science and Technology

Yuhang Chen

Nanjing University of Information Science and Technology

Quanbo Ge

Tongji University

ISuB13-7

15:00-15:15

0842 An Intelligent Low-Power Water Quality Monitoring System with Dynamic Adaptation

Shifan Song

Nanjing University of Information Science and Technology

Lin Ding

Shanghai Jiao Tong University

Quanbo Ge

Tongji University

ISuB13-8

15:15-15:30

0602 Transformation of Multi-Input Linear Time-Varying Systems into High-Order Fully Actuated Systems

Jiacheng Dong

Harbin Institute of Technology

Bin Zhou

Harbin Institute of Technology

Ruiqing Zhang

Harbin Institute of Technology

张贴报告

July 5, Saturday

Poster Session 1:

0405 A Composite Adaptive Control Approach for a Class of Uncertain Fully Actuated Systems

Wushan Jia

Harbin Institute of Technology, Shenzhen

Xiaochen Xie

Harbin Institute of Technology, Shenzhen

Huijun Gao

Harbin Institute of Technology

0025 Weighted Multi-Game Approach to Multi-QUAV Formation Control

Fangyu Cai

Anhui Polytechnic University

Yiqing Huang

Anhui Polytechnic University

Heming Huang

Anhui Polytechnic University

0193 Distributed Secondary Frequency Control of Islanded Microgrid Considering Power Constraints

Jie Zhu

Nanjing University of Science and Technology

Yuping Zhang

Nanjing University of Science and Technology

Yunyun Xie

Nanjing University of Science and Technology

Sheng Cai

Nanjing University of Science and Technology

Jiahua Liu

Nanjing NARI Information and Communication Technology Co., Ltd.

Huizhong Shi

Nanjing NARI Information and Communication Technology Co., Ltd.

0136 Further results on the fully actuated system approach to control of overhead cranes

Fuxing Yao

Southern University of Science and Technology

Zhijie Liu

South University of Science and Technology

Liangming Chen

Southern University of Science and Technology

Tianqi Yue

Southern University of Science and Technology

He Kong

Southern University of Science and Technology

0493 Predefined-Time Tracking Control of Robotic Manipulator: A Fully Actuated System Approach

Ji-Hao Zhang

China University of Geosciences

Qian Chen

China University of Geosciences

Yi-Fan Li

China University of Geosciences

Ming-Feng Ge

China University of Geosciences

Zhi-Wei Liu

Huazhong University of Science and Technology

0498 A Predefined-Time Consensus Algorithm for Unmanned Vehicles Based on the Fully Actuated System Approach

Bingxin Qiu

China University of Geosciences

Yi-Fan Li	China University of Geosciences
Zhi-Wei Liu	Huazhong University of Science and Technology
Ming-Feng Ge	China University of Geosciences
0526 Tracking Control of Manipulators with Unknown Disturbances: A Novel Fully Actuated System Method	
Jiawei Gao	China University of Geosciences
Yi-Fan Li	China University of Geosciences
Qian Chen	China University of Geosciences
Ming-Feng Ge	China University of Geosciences
Zhi-Wei Liu	Huazhong University of Science and Technology
0611 An FASA-Based Predefined-Time Tracking Control for Marine Surface Vehicles	
Xing Zheng	China University of Geosciences
Yi-Fan Li	China University of Geosciences
Qian Chen	China University of Geosciences
Teng-Fei Ding	China University of Geosciences
Ming-Feng Ge	China University of Geosciences
0488 Nash Equilibrium Seeking for Networked Marine Surface Vehicles based on Fully Actuated System Approach	
Yi-Fan Li	China University of Geosciences
Zhi-Wei Liu	Huazhong University of Science and Technology
Ming-Feng Ge	China University of Geosciences
0732 基于有源阻尼的电流源型 PWM 整流器的控制策略研究	
陈思雨	南京理工大学
赵志宏	南京理工大学
董亮	南京理工大学
徐逸杨	南京理工大学
0486 STTransformer: A Physics-Informed Spatial-Temporal Transformer for Ship Trajectory Prediction	
Bingzhuo Liu	Nanjing University of Science and Technology
Panlong Wu	Nanjing University of Science and Technology
Chunhao Liu	Nanjing University of Science and Technology
Shan He	Nanjing University of Science and Technology
0221 Model reduction for fractional-order port-Hamiltonian systems in the Loewner framework	
Zixi Guan	Southeast University
Rui Chen	Southeast University
Jinhua Zhang	Southeast University
Yiheng Wei	Southeast University
0262 An Advanced Future Point Prediction Approach for Gliding Targets Leveraging Pose Estimation	
Shoufeng Wang	Jiangsu Automation Research Institute
Panlong Wu	Nanjing University of Science and Technology
Yue Zhao	Jiangsu Automation Research Institute
Baobao Wang	Jiangsu Automation Research Institute
0369 Exponential State Estimation of Delayed Fuzzy Quaternion-Valued Inertial Neural Networks	
Xufeng Gao	Shandong University of Science and Technology
Ziye Zhang	Shandong University of Science and Technology
0374 High-Performance Motion Control for Omnidirectional Assistive Wheelchairs Using Robust Fractional-Order Non-Singular Fast Terminal Sliding Mode Control to Enhance Riding Comfort	
Amar Mubarak	Nanjing University of Science and Technology
Yang Tian	Nanjing University of Science and Technology
Haoping Wang	Nanjing University of Science and Technology
Modawy Abdalla	Nyala University
0382 Discrete-time optimal disturbance rejection control for Buck converter	
Jinfeng Zou	Shandong University of Science and Technology
Junjie Han	Shandong University of Science and Technology
Youyi Wang	Nanyang Technological University
Huanshui Zhang	Shandong University/ Shandong University of Science and Technology

0384 Buck Converter Control based on Optimal Control Algorithm Model Predictive Control	
Junjie Han	Shandong University of Science and Technology
Jinfeng Zou	Shandong University of Science and Technology
Youyi Wang	Nanyang Technological University
Huanshui Zhang	Shandong University/ Shandong University of Science and Technology
0413 Nonovershooting tracking control for strict-feedback MIMO nonlinear systems	
Zhijia Zhu	Anhui university
Suyin Liao	Anhui University
Fujin Jia	Anhui University
0429 Non-Fragile Set-Membership Filtering Approach for Localization of Automatic Guided Vehicles with Control Input Constraint	
Zhengzhao Wang	Harbin University of Science and Technology
Ning Yang	Harbin University of Science and Technology
Yuhang Song	Harbin University of Science and Technology
Tianhao Lv	Harbin University of Science and Technology
0437 Research on Train Localization Method Enhanced by LiDAR and Visual Geometric Constraints	
Licong Fu	Nanjing University of Science and Technology
Xin Chen	Nanjing University of Science and Technology
0594 A Wheelset Size Measurement System Based on Multi-Line Structured Light	
Qiuyang Li	Nanjing University of Science and Technology
Yong Zhang	Nanjing University of Science and Technology
Chucheng Shi	Nanjing University of Science and Technology
Yihang Jian	Nanjing University of Science and Technology
Hui Wang	Nanjing University of Science and Technology
0607 Trajectory Tracking of AGV with Control Constraints Based on MPC and Optimal Control Algorithm	
Guosheng Zhao	Shandong University of Science and Technology
Chuanzhi Lv	Shandong University of Science and Technology
Hongxia Wang	Shandong University of Science and Technology
0619 Decentralized Event-Triggered Impulsive Control for a class of Graph-Interconnected Nonlinear Systems	
Xiaojuan Xue	Taiyuan University of Technology
Zhengtao Ding	University of Manchester
Dan Zhang	Yanshan University
0622 Numerical computation for Nabla fractional order systems via time-frequency domain joint technique	
Jinhua Zhang	Southeast University
Zixi Guan	Southeast University
Rui Chen	Southeast University
Yiheng Wei	Southeast University
0673 Sliding Mode Control of Three-Phase Voltage Inverter Based on Improved Generalized Proportional Integral Observer	
Xinyu Liu	Qufu Normal University
Jianchao Zhao	Qufu Normal University
ChengYong Ren	Qufu Normal University
YingXue Lai	Qufu Normal University
Yunlong Liu	Qufu Normal University
0810 Research on Multi-Constraint Cooperative Guidance Law Based on Sliding Mode Control	
Zhaoyuan Chen	Science and Technology on Complex System Control and Intelligent Agent Cooperation Laboratory
Mingrui Hao	Harbin Institute of Technology
Keyuan Yue	Beijing Institute of Mechanical and Electrical Engineering
0814 Model Free Extended State Observer Based Sliding Mode Prescribed Time Control for Series Elastic Actuator-Based Manipulator	
Huilin Dai	Nanjing University of Science and Technology
Haoping Wang	Nanjing University of Science and Technology
Yang Tian	Nanjing University of Science and Technology
Liuchang Zhang	Nanjing University of Science and Technology

0161 Attack-Resilient Control of False Data Injection Attacks Based on Virtual Layer Network	
Qiuzhen Jiang	Nanjing University of Science and Technology
Xiaoyu Wu	Nanjing University of Science and Technology
0186 Distributed Secondary Voltage Control Considering Reactive Power Constraints	
Dandan Zhu	State Grid Jiangsu Electric Power Co Ltd. Electric Power Science Research institute
Qian Zhou	State Grid Jiangsu Electric Power Co Ltd. Electric Power Science Research Institute
Xian Xu	State Grid Jiangsu Electric Power CO.LTD.
Yongyong Jia	State Grid Jiangsu Electric Power Co Ltd. Electric Power Science Research institute
0255 Multi-Agents Formation Obstacle Avoidance Control Based on Improved Artificial Potential Functions	
Jian Wang	Hohai University
Jun Zhou	Hohai University
0289 Adaptive Full Actuation Control for Autonomous Vehicle Platoons	
Tianqun Ren	Southwest Jiaotong University
Fei Yan	Southwest Jiaotong University
Guoxiang Gu	Louisiana State University
0544 Fixed-Time Projective Synchronization of Multi-layer Neural Networks in the Presence of Denial-of-Service Attacks	
Taifeng Zhan	Nanjing University of Science and Technology
Kun Ma	Liaocheng University
Yijun Zhang	Nanjing University of Science and Technology
0549 SNR-Adaptive Weighted Metropolis Consensus Filtering Algorithm for Distributed Target Tracking	
Lingqi Kong	Nanjing University of Science and Technology
Panlong Wu	Nanjing University of Science and Technology
Xingxiu Li	Nanjing University of Science and Technology
Shan He	Nanjing University of Science and Technology
Xiaolong Cui	Nanjing University of Science and Technology
0586 Sample-data output consensus for heterogeneous linear multi-agent systems with time-varying communication delays	
Haopeng Guo	Southern University of Science and Technology
Tao Wu	Southern University of Science and Technology
Xiang Xu	Southern University of Science and Technology
0652 Approximate Optimal Control for Nonlinear Multi-Agent Cooperative Pursuit-Evasion Games Using Single-Network ADP	
Zhongyu Zhang	Nanjing University of Science and Technology
Guoqing Qi	Nanjing University of Science and Technology
Yinya Li	Nanjing University of Science and Technology
Andong Sheng	Nanjing University of Science and Technology
0691 A Study of Multi-UAV Cooperative Pursuit Based on PointNet-MATD3	
Yijing Ding	Nanjing University of Science and Technology
Guoqing Qi	Nanjing University of Science and Technology
Yinya Li	Nanjing University of Science and Technology
Andong Sheng	Nanjing University of Science and Technology
0708 Adaptive Event-Triggered Consensus for Unknown Nonlinear Multi-agent Systems with Limited Bandwidth	
Ying Quan	Nanjing University of Science and Technology
Haoping Wang	Nanjing University of Science and Technology
Yang Tian	Nanjing University of Science and Technology
0742 Optimal Control Strategies in Multi-Pursuit-Multi-Evasion Differential Games with Communication Graphs	
Lin Chen	Nanjing University of Science and Technology
Guoqing Qi	Nanjing University of Science and Technology
Yinya Li	Nanjing University of Science and Technology
Andong Sheng	Nanjing University of Science and Technology
0811 Fixed-Time Quadrotors Formation Control via Dynamic Surface Control with Disturbance Observer and Neural Networks	

Dun Ao	Beijing University of Technology
Xin Zhang	Beijing University of Technology
Yao Xiao	Beijing University of Technology
0837 Fixed-Time Distributed Average-tracking of Second-order Multiagent Systems via Event-triggered Control	
Yuanjun Yu	Jiangnan University
Xin Huang	Jiangnan University
Cheng-Lin Liu	Jiangnan University
0465 Stability analysis of T-S fuzzy systems by using integral-type event-trigger scheme	
Zichen Guo	Shandong University of Science and Technology
Yingjie Fan	Shandong University of Science and Technology
Zhen Wang	Shandong University of Science and Technology
0033 Fully-actuated System Approaches based Fault-tolerant Attitude Control via Intermediate Variable Estimator	
Shiyu Han	Harbin Institute of Technology
Guangren Duan	Harbin Institute of Technology
0127 The Strategy of Master Controller Automatically Downloading three Slave Controller Software	
Yang Gao	Ningbo Geely Royal Engine Components Co.,Ltd
Zhengxing Dai	Zhejiang Geely Powertrain Research Institute
Ruiyue Zeng	Ningbo Geely Royal Engine Components Co.,Ltd
Huanhuan Gong	Ningbo Geely Royal Engine Components Co.,Ltd
Ribiao Liu	Ningbo Geely Royal Engine Components Co.,Ltd
Ruiguang Wang	Zhejiang Geely Powertrain Research Institute
Jiangfeng Liu	Ningbo Geely Royal Engine Components Co.,Ltd
Yiqiang Liu	Agricultural University of Hebei
0237 Robust Fault-Tolerant Attitude Control for Hypersonic Vehicles Based on Fast Terminal Sliding Mode	
Cheng Li	Nanjing University of Science and Technology
Chuan Zhou	Nanjing University of Science and Technology
Jian Guo	Nanjing University of Science and Technology
Yifei Wu	Nanjing University of Science and Technology
Zhiqiang Jia	Beijing Aerospace Automatic Control Institute
0258 Fault-Tolerant Formation Control for Stochastic Multi-agent Systems With Noise and Channel Interference	
Anning Liu	Nanjing Tech University
Jiantao Shi	Nanjing Tech University
0302 Fault-Tolerant Strategy for Excitation Windings in Hybrid Axial Field Flux-Switching Motor Based on Multi-Vector Model Predictive Current Control	
彭向前	南京理工大学
0403 Pantograph-Catenary Marginal Index Method Using ICEEMDAN-SPWVD for Railway Hard Spot Diagnosis	
Ga Ming	Nanjing University of Science and Technology
Yingshun Liu	Nanjing University of Science and Technology
Zhongxuan Xu	CRRC Qingdao
JiangLong Chen	Nanjing University of Science and Technology
Huichuan Jiang	Nanjing University of Science and Technology
Yunxiao Fu	CRRC Academy
0440 AHP-entropy Weight Based Railway Passenger Station Operation Safety Assessment Model	
Peiyu Xu	Nanjing University of Science and Technology
Yikai Wu	Nanjing University of Science and Technology
Aiguo Lei	Nanjing University of Science and Technology
0659 Electrical Performance Analysis and System Simulation of Multi-phase Permanent Magnet Synchronous Motor Fault-tolerant Control System	
Chunyu Hou	Nanjing University of Science and Technology
Yang Gao	Nanjing University of Science and Technology
0716 Research on Switch Machine Fault Diagnosis Based on VMD-1DCNN-BiLSTM	
XinYue Kong	Nanjing University of Science and Technology
Xin Chen	School of Automation, Nanjing University of Science and Technology

0749 H ∞ fault-tolerant tracking control of autonomous underwater vehicles based on HOFAS theory	
Shaoheng Wu	Guangzhou University
Limin Wang	Guangzhou University
Deyu Zeng	Hainan Normal University
0734 Free Piston Linear Generator Rectification Strategy Based on Active Disturbance Rejection Control and Sequential Model Predictive Control	
Haoyang Du	Beijing Institute of Technology
0164 Data-driven Finite-time Control for Discrete-time Nolinear Systems	
Zhiqing Liu	Qingdao University of Science and Technology
Ronghu Chi	Qingdao University of Science and Technology
Yang Liu	Qingdao University of Science and Technology
0318 P2P Trading of Multi-VPPs with Integrated PV Energy Storage Systems based on Multi-Agent Rollout	
Haoxiang Zou	Nanjing University of Science and Technology
Min Wang	Nanjing University of Science and Technology
Yong Qiu	Nanjing University of Science and Technology
Shu Zheng	Nari group corporation
Qilong Huang	Nanjing University of Science and Technology
Lizi Luo	Nanjing University of Science and Technology
0487 Generating Planar Multi-Scroll Attractors from a 3D Chaotic System via Switching Control	
Changchun Sun	Shenyang Jianzhu University
Hao Zhang	Shenyang Jianzhu University
0355 Design and Implementation of Distributed Radar Multi-Source Data Fusion Software Based on Qt	
张喆	南京理工大学
李银伢	南京理工大学自动化学院
戚国庆	南京理工大学自动化学院
0497 Resilience Assessment of Multimodal Transportation Networks: A Hypergraph-Based Modeling Framework	
Mengmeng Yin	Nanjing University of Science and Technology
Kun Tang	Nanjing University of Science and Technology
Jinhong Ding	Nanjing University of Science and Technology
Tangyi Guo	Nanjing University of Science and Technology
0696 BEVFusion-Based Multimodal Perception Optimization: Dynamic Spatial Adaptation and Edge-Aware Enhancement for Autonomous Driving	
Jiajun Guo	Nanjing University of Science and Technology
Liang Shan	Nanjing University of Science and Technology
Enhui Ma	Nanjing University of Science and Technology
Dongzhe Hu	Nanjing University of Science and Technology
Zhidong Qi	Nanjing University of Science and Technology
0717 Dynamic Decoupled Event-triggered Nonlinear State Estimation for Sensor Networks with Incomplete Measurements	
Yuan Liang	Nanjing Institute of Technology
Ye Chen	Nanjing Institute of Technology
Sujuan Chen	Nanjing Institute of Technology
Chunyan Zhang	Nanjing Institute of Technology
Yinya Li	Nanjing University of Science and Technology
Guoqing Qi	Nanjing University of Science and Technology
0783 Distributed IMU Pose Estimation of Hyper-Redundant Manipulator Based on ESKF	
Cheng Zhu	Nanjing University of Science and Technology
Liaoxue Liu	Nanjing University of Science and Technology
Lisong Xu	Nanjing University of Science and Technology
Jian Guo	Nanjing University of Science and Technology
0797 Sequential covariance intersection-based distributed nonlinear state estimation under denial of service	
Tianhong Huang	Southwest Jiaotong University
Yinping Ma	Nanjing University of Science and Technology

0118 Defective insulator detection algorithm based on improved YOLO v7 lightweight model	
Jinhui Han	Nanjing University of Science and Technology
Haifeng Jiang	Nanjing University of Science and Technology
Xiang Zhang	Nanjing University of Science and Technology
Weiwei Lv	Nanjing University of Science and Technology
0199 Research on Fish School Quantity Detection Algorithm Based on HyperC2Net+MANet Improved YOLO11	
Yaqing Li	Nanjing University of Science and Technology
Yun Zhu	Nanjing University of Science and Technology
Feng Zhou	Xiamen Ocean Vocational College
Maochun Wei	Xiamen Ocean Vocational College
Jialuo Chen	Nanjing University of Science and Technology
0206 Subway Pantograph Arcing Detection Based on YOLOv10-CSEC	
Peng Zhou	Nanjing University of Science and Technology
Yunxiao Fu	CRRAC Academy
Zongyi Xing	Nanjing University of Science and Technology
Sheng Li	Nanjing University of Science and Technology
Ning Liu	Nanjing University of Science and Technology
0219 MST-BILSTM: An improved Bi-LSTM method based on multi-scale Spatio-Temporal feature fusion and attention mechanism for ECG recognition	
Minghao Ma	Nanjing University of Science and Technology
Wang Lingling	Nanjing University of Science and Technology
Yanqi Zhao	Nanjing University of Science and Technology
Lili Wang	Nanjing University of Science and Technology
0250 Energy Management Strategy of PEMFC Hybrid Power Supply System Based on Q-Learning	
徐俊嵩	南京理工大学
戚志东	南京理工大学
周杰	南京理工大学
沈朝阳	南京理工大学
柏理音	南京理工大学
曹忠博	南京理工大学
0307 A traffic road small target detection algorithm based on improved YOLOv8n	
蔡奕暄	南京林业大学
林嗣茂	南京理工大学
范家瑞	南京理工大学
0347 End-to-end model for vision-language navigation based on pre-trained model	
Mingyi Wu	Nanjing University of Science and Technology
Bin Feng	Nanjing University of Science and Technology
Weihua Fan	Nanjing University of Science and Technology
Yifei Feng	Nanjing University of Science and Technology
0404 An Improved YOLOv8 Algorithm for Infrared Recognition of Train Running Gear Components	
Chucheng Shi	Nanjing University of Science and Technology
Yong Zhang	Nanjing University of Science and Technology
Qiuyang Li	Nanjing University of Science and Technology
Hui Wang	Nanjing University of Science and Technology
Yihang Jian	Nanjing University of Science and Technology
0432 Multi-Agent Deep Reinforcement Learning for Regional Traffic Signal Control: A Topology-Aware Approach	
Shan Wang	Nanjing University of Science and Technology
Zhuping Zhou	Nanjing University of Science and Technology
Zixu Wang	Nanjing university of science and technology
0467 Learning Higher-Order Migration Patterns: A Hypergraph Approach to Urban Mobility Prediction	
Jinhong Ding	Nanjing University of Science and Technology
Kun Tang	Nanjing University of Science and Technology
Mengmeng Yin	Nanjing University of Science and Technology
Tangyi Guo	Nanjing University of Science and Technology

0468 Fasteners Object Detection for Low-light Metro Undercarriage Environments

熊孜	南京理工大学
詹鸿运	南京理工大学
刘辽雪	南京理工大学
郭毓	南京理工大学

0472 Short-Term Passenger Flow Prediction for Subway Based on Bi-LSTM and Random Forest

Xinru Liu	Nanjing University of Science and Technology
Peiyu Xu	Nanjing University of Science and Technology

0491 Improved DQN path planning method based on Transformer

Yifei Feng	Nanjing University of Science and Technology
Bin Feng	Nanjing University of Science and Technology
Weihua Fan	Nanjing University of Science and Technology
Mingyi Wu	Nanjing University of Science and Technology

0536 Trajectory Prediction Algorithm for Multi-agent Systems Based on HOFA-Informed Neural Networks

Qinlong Du	Harbin Institute of Technology
Xin Huo	Harbin Institute of Technology
Qianning Liu	Harbin Institute of Technology
Baohan Mi	Harbin Institute of Technology

0606 Ghost-YOLO: A Lightweight Traffic Sign Detection Framework via GhostNetV3

Xiaosong Chu	Nanjing University of Science and Technology
Zhuping Zhou	Nanjing University of Science and Technology
Wangping Liao	Nanjing University of Science and Technology
Xianshi Pan	Nanjing University of Science and Technology

0610 Research on Laser Warning Angle Prediction Based on Deep Neural Networks

ChenLin Niu	North University of China
Xiao Li	North University of China
Xinwen Chen	North University of China
Yaqi Wang	North University of China
Shuai Yang	North University of China
Rui Zhang	North University of China
Zhibin Wang	North University of China
Shun Liu	North University of China

0690 Dual Cross-Lingual Alignment for Multilingual Dialogue Generation

Jining Huang	China Mobile Guangdong
Nanchang Lu	China Mobile Guangdong
Guangming Chen	China Mobile Guangdong
Dayang Liu	China Mobile Guangdong
Baodong Wu	China Mobile Guangdong
Xiaoming Liang	China Mobile Guangdong
Zebo Huang	China Mobile GBA (Greater Bay Area) Innovation Institute
Xiaoguang Jia	China Mobile Guangdong
Zihui Miao	China Mobile GBA (Greater Bay Area) Innovation Institute

0695 Excitation-Oriented Forgetting Recursive Least Squares

Lukai Bin	Harbin Institute of Technology, Shenzhen
Juncheng Xu	Harbin Institute of Technology, Shenzhen
Jiangang Li	Harbin Institute of Technology, Shenzhen

0714 Leveraging Knowledge Graph and Large Language Model Synergies for Intelligent Fault Analysis in Urban Rail Transit Signaling Systems

宿天丰	南京理工大学
马辰婧	南京理工大学
陈新	南京理工大学
王晓函	南京理工大学

0715 A Deep Learning Framework for Rail Station Passenger Flow Prediction with Temporal Knowledge Graph Embedding

Xiaohan Wang	Nanjing University of Science and Technology
Xin Chen	Nanjing University of Science and Technology

张贴报告

July 6, Sunday

Poster Session 2:

0754 Knowledge Graph and Deep Learning-based Fault Diagnosis for Urban Rail Signal Systems

Xinyi Nian Nanjing University of Science and Technology

Zhuping Zhou Nanjing University of Science and Technology

0765 SDMStega:Robust Steganography based on Stable Diffusion Model and Spread Spectrum Technology

Longlong Guo Nanjing University of Science and Technology

Yao-bin Mao Nanjing University of Science and Technology

0777 Risk Prediction of Traffic Accidents based on Temporal Knowledge Graphs and Enhanced Multi-Graph Attention Networks

Ruihao Liu Nanjing University of Science and Technology

Tangyi Guo Nanjing University of Science and Technology

Yifan Chen Nanjing University of Science and Technology

0793 Pedestrian Detection in Urban Rail Transit Based on Deep Learning

Shuaibo Yu Nanjing University of Science and Technology

Liu He Nanjing University of Science and Technology

Wei Zhou Nanjing University of Science and Technology

0032 Active Power Decoupling Control Based on Fully-Actuated System Approach For Single-Stage AC-DC Converters

Yadong Wei South China University of Technology

Bo Zhang South China University of Technolog

0495 A High-Order Fully Actuated System Approach to Control of the 2D Cubli

Zongbiao Weng Southern University of Science and Technology

He Kong Southern University of Science and Technology

0646 Adaptive Neural Heading Control for Roll Reduction of FLNG in Multi-directional Sea Conditions

Yueyi Chen Technology Center for Offshore and Marine Singapore

Xiaoling Liang National University of Singapore

Hongchao Wang University of Science and Technology

Xiangbo Liu Technology Center for Offshore

Ching Theng Liong Technology Center for Offshore and Marine Singapore

Bernard Voon Ee HOW Singapore Institute of Technology

Dan Bao Nanjing University of Science and Technology

Shuzhi Sam Ge National University of Singapore

0024 Solving Trajectory Tracking of High-Order Fully Actuated Systems by Iterative Learning Control

Zeyi Zhang Renmin University of China

Hao Jiang Renmin University of China

Dong Shen Renmin University of China

0047 Data-driven High-order Fully Actuated Iterative Learning Control for Unknown Nonaffine Nonlinear Systems

Na Lin Qingdao University of Science & Technology

Ronghu Chi Qingdao University of Science & Technology

0194 Anti-Disturbance Hierarchical Sliding Mode Controller for Deep-Sea Cranes with Adaptive Control and Neural Network Compensation

Qian Zuo Hebei University of Technology

Shujie Wu Hebei University of Technology

Yuzhe Qian Hebei University of Technology

0298 Efficient Federal Learning in USV-AUVs Collaborative Networks

Liang Gan Nanjing University of Science and Technology

Yanqi Zhao Nanjing University of Science and Technology

Minghao Ma Nanjing University of Science and Technology

Lili Wang	Nanjing University of Science and Technology
0328 Neural Network-Based Adaptive Control for Uncertain Nonlinear Systems with Input Quantization	
Shuo Wang	Southwest Jiaotong University
Yan Fei	Southwest Jiaotong University
Guoxiang Gu	Louisiana State University
0396 Adaptive Sliding Mode Control for Multi-Segment Cable-Driven Continuum Manipulators	
Yang Lu	Nanjing University of Science and Technology
Lu Wang	Nanjing University of Science and Technology
Jian Guo	Nanjing University of Science and Technology
0520 A PSO-Neural Network Hybrid Algorithm for Optimal Jamming Resource Allocation	
Xu Yu	Nanjing University of Science and Technology
Xingxiu Li	Nanjing University of Science and Technology
Shan He	Nanjing University of Science and Technology
Panlong Wu	Nanjing University of Science and Technology
0568 Collaborative Optimal Control Strategy for Complex Distribution Networks with Large-scale Wind and Solar Integration	
Kun Wang	Nanjing University of Science and Technology
Cheng Wang	Jiangsu Province Power Transmission and Transformation Co., Ltd
Hechun Pu	Nanjing University of Science and Technology
Shiqi Liu	Nanjing University of Science and Technology
Wei Liu	Nanjing University of Science and Technology
0569 Optimal Dispatch-control of an Integrated Energy System Based on Adaptive Model Predictive Control	
Hechun Pu	Nanjing University of Science and Technology
Zhenqiang Jin	Jiangsu Province Power Transmission and Transformation Co., Ltd
Kun Wang	Nanjing University of Science and Technology
Guangqiang Lv	Nanjing University of Science and Technology
Junfang Zhang	Nanjing University of Science and Technology
0621 Discrete-time optimal disturbance rejection control for Buck converter	
Wei Liu	Nanjing University Of Science And Technology
Peng Zhang	Nanjing University of Science and Technology
0623 Adaptive Clamping Force Control of Electromechanical Brake System Based on High-Order Fully Actuated System Approaches	
Wenzhuang Wang	Yanshan University
Jizhe Wang	Yanshan University
Yuchen Wang	Yanshan University
Wenhao Shi	Yanshan University
Yahui Zhang	Yanshan University
0698 Neural Network Learning Control for Friction Compensation with Enhanced Generalizability	
Yibin Huang	Harbin Institute of Technology (Shenzhen)
Wentao Xie	Harbin Institute of Technology (Shenzhen)
Jiangang Li	Harbin Institute of Technology (Shenzhen)
0787 Noncooperative Game Based on Iteration Learning for Nonlinear Optimal Regulation	
Yating Liu	Nanjing University of Science and Technology
Guoqing Qi	Nanjing University of Science and Technology
Yinya Li	Nanjing University of Science and Technology
Andong Sheng	Nanjing University of Science and Technology
0813 Model-free Adaptive Control Strategy for Three-phase Two-level Voltage Source Inverters	
Xuchao Hu	Jiangnan University
Cheng-Lin Liu	Jiangnan University
0041 Design of a New Pump-Suction Surface Cleaning Robot	
Yuyang Zhang	Nanjing University of Science and Technology
Wencheng Zou	Nanjing University of Science and Technology
Sheng Li	Nanjing University of Science and Technology

0081 Fully Actuated System Approach for Vehicle Lateral Control	
Ruihe Shi	Harbin Institute of Technology
Guangren Duan	Harbin Institute of Technology
0292 Motion Planning Method of Continuum Manipulator based on Multi Objective Optimization	
Zihe Wang	Nanjing University of Science and Technology
Liaoxue Liu	Nanjing University of Science and Technology
Lu Wang	Nanjing University of Science and Technology
Yu Guo	Nanjing University of Science and Technology
0434 Application of Fuzzy Adaptive High-Order Fully Actuated Control Strategy in SbW for Angle Tracking	
Zhenghui Geng	Yanshan University
Yuchen Wang	Yanshan University
Linghuan Zheng	YanShan university
Xin Ren	Yanshan University
Yahui Zhang	Yanshan University
0494 Teleoperation System Design for Live Working Robot Based on Position-Velocity Mapping	
Chenhao Wang	Nanjing University of Science and Technology
Zihe Wang	Nanjing University of Science and Technology
Liaoxue Liu	Nanjing University of Science and Technology
Yu Guo	Nanjing University of Science and Technology
0554 Sliding Mode Control for Flexible Joint Space Robot Via Nonlinear Integration	
Yongkang Zhang	Nanjing University of Science and Technology
Lu Wang	Nanjing University of Science and Technology
Liaoxue Liu	Nanjing University of Science and Technology
Yu Guo	Nanjing University of Science and Technology
0620 Attitude Control of Rigid Spacecraft Based on the Theory of Nonlinear Negative Imaginary Systems	
Wenqi Yu	Beijing Institute of Technology
Zhuoyue Song	Beijing Institute of Technology
Yijin Wang	Beijing Institute of Technology
Huifang Li	Beijing Institute of Technology
0624 Adaptive control for Active Rear-Wheel Steering System Based on High-order Fully Actuated System Coordinated with Fully Actuated Sliding Mode Control for Traction Control System	
Kaiyang Feng	Yanshan University
Zhaonan Li	Yanshan University
Jizhe Wang Feng	Yanshan University
Yuchen Wang	Yanshan University
Kun Ma	Yanshan University
Yahui Zhang	Yanshan University
0634 A DRL-based path following and obstacle avoidance method for USV in water areas with environmental disturbances	
Weilong Zhang	Nanjing University of Science and Technology
Liang Shan	Nanjing University of Science and Technology
Lu Chang	Nanjing University of Science and Technology
Jianhu Yan	Nanjing University of Science and Technology
Piaoyang Chen	Nanjing University of Science and Technology
Yuewei Dai	Nanjing University of Science and Technology
0709 Improved complete coverage path planning algorithm for Wall climbing robot	
Dongzhe Hu	Nanjing University of Science and Technology
Yi Qu	Nanjing University of Science and Technology
Piaoyang Chen	Nanjing University of Science and Technology
Jiajun Guo	Nanjing University of Science and Technology
Liang Shan	Nanjing University of Science and Technology
0748 Path planning based on Fusion of Improved A* and DWA Algorithm	
Piaoyang Chen	Nanjing University of Science and Technology
Liang Shan	Nanjing University of Science and Technology
Dongzhe Hu	Nanjing University of Science and Technology
Jinlong Zhang	Nanjing University of Science and Technology

Jun Li	Nanjing University of Science and Technology
0753 Research on the unmanned tank cooperative maneuvering strategy based on deep reinforcement learning	
Ye Wu	Nanjing University of Science and Technology
Xianchun Zhang	Nanjing University of Science and Technology
Xiufeng Chen	Nanjing University of Science and Technology
0795 Integrated Hierarchical Control for Quadrotor-Slung Payload System	
EnHui Ma	Nanjing University of Science and Technology
Liang Shan	Nanjing University of Science and Technology
Piaoyang Chen	Nanjing University of Science and Technology
Jinlong Zhang	Nanjing University of Science and Technology
Chenglin Liu	Nanjing University of Science and Technology
0826 NESO Based Ultra-Local Model Predictive Control for Autonomous Vehicle Path Tracking and Roll Stability	
Tianlin Ju	Nanjing University of Science and Technology
Haoping Wang	Nanjing University of Science and Technology
Yang Tian	Nanjing University of Science and Technology
Yixin Han	Nanjing University of Science and Technology
Sofiane Ahmed Ali	Evry Val-d'Essonne University, Universite Paris-Saclay
Vicenç Puig	Technical University of Catalonia
0832 Inverse Kinematics Solution for Rope-driven Continuum Robot Based on Gray Wolf Optimization Algorithm	
Yixuan Wang	Nanjing University of Science and Technology
Haoxuan Shi	Nanjing University of Science and Technology
Yu Xia	Nanjing University of Science and Technology
Songyu Wang	
Wenhao Zhu	Nanjing University of Science and Technology
Yu Guo	Nanjing University of Science and Technology
0847 Fixed-time feedback control design of input-delay spacecraft rendezvous system based on fully actuated system theory	
Baowen Zhang	Guangxi Normal University
Qianqian Lu	Guangxi Normal University
Mengjie Chen	Guangxi Normal University
0140 A Novel Seven-Level Inverter Based on Switching Capacitor	
Xinyu Zhang	Nanjing University of Science and Technology
Guangqiang Lv	Nanjing University of Science and Technology
Qianxi Yang	Nanjing University of Science and Technology
0265 QEMU-Based Simulation of On-Board GNC System	
Chen Gong	Shanghai Academy of Spaceflight Technology
Hao Yu	Shanghai Academy of Spaceflight Technology
0343 电网对称故障下构网型变流器自适应限流策略	
董亮	南京理工大学
赵志宏	南京理工大学
徐逸杨	南京理工大学
陈思雨	南京理工大学
0379 A High step-up Common ground Thirteen-Level Switched-Capacitor Inverter with Reduced Components Count	
Yicong Li	Nanjing University of Science and Technology
Jia Yao	Nanjing University of Science and Technology
0496 Research and Application of Software Reuse Technology in Satellite Control System	
Gengpai Hua	Shanghai Aerospace Control Technology Research Institute
Cheng Gong	Shanghai Aerospace Control Technology Institute
Yong Huang	Shanghai Aerospace Control Technology Institute
0547 IPSO-based Charging Price Optimization for Charging Stations with Cooperative and Competitive Relationship	
Min Wang	Nanjing University of Science and Technology
Haoxiang Zou	Nanjing University of Science and Technology

Yong Qiu	Nanjing University of Science and Technology
Qilong Huang	Nanjing University of Science and Technology
0574 A Hybrid-Modulated Switched-Capacitor Multilevel Inverter with ZVS for Reduced Switching Losses	
Ankai Liu	Nanjing University of Science and Technology
Jia Yao	Nanjing University of Science and Technology
0658 Motion Control of Complex Gantry Dual-Drive Platform Based on Fully Actuated System Theory	
Hao Fan	Shanghai Jiao Tong University
Guangyu Wei	Southeast University
Chaochen Gu	Shanghai Jiao Tong University
0733 考虑电流限幅的构网型变流器直流侧电压控制策略研究	
徐逸杨	南京理工大学
赵志宏	南京理工大学
陈思雨	南京理工大学
董亮	南京理工大学
0846 Design and Implementation of Oilfield Wireless Data Manager	
WenDian Zhang	Changchun Automobile Industry higher College
0406 Research on seat optimization strategy and passenger choice behavior of high-speed rail operators based on evolutionary game theory	
Xingzhao Li	Nanjing University of Science and Technology
Jiaqi Pan	Nanjing University of Science and Technology
0304 Modeling predictive control for the LCL grid-connected inverter fully- actuated system	
Yanyu Zhao	Harbin Institute of Technology
Xuemei Zheng	Harbin Institute of Technology
Xingyu Zhang	Harbin Institute of Techonlogy
0790 Manipulability-Guided MPC with Repulsive Potential Fields for Mobile Manipulator Whole-Body Control	
Jinlong Zhang	Nanjing University of Science and Technology
Liang Shan	Nanjing Univercity of Science and Technology
Enhui Ma	Nanjing Univercity of Science and Technology
Piaoyang Chen	Nanjing Univercity of Science and Technology
Weixi Wang	Nanjing Univercity of Science and Technology
0196 Zero-Velocity Detection Algorithm for Inertial Pedestrian Navigation Based on PSO-DBSCAN Clustering	
YeXin An	Nanjing University of Science and Technology
Lingke Zhou	Nanjing Univercity of Science and Technology
Sheng Li	Nanjing Univercity of Science and Technology
0247 Emergency Return Method of Lunar Rover Based on Rut Tracking	
Bo Zheng	Shanghai Aerospace Control Technology Institute
Tao Hu	Shanghai Aerospace Control Technology Institute
Fei Huang	Shanghai Aerospace Control Technology Institute
Zhouyuan Qian	Shanghai Aerospace Control Technology Institute
Hanmo Zhang	Shanghai Aerospace Control Technology Institute
Tao Cao	Shanghai Aerospace Control Technology Institute
0248 A System Ensuring the Effectiveness of Lunar Rover in Highly Bumpy Environments	
Tao Hu	Shanghai Aerospace Control Technology Institute
Bo Zheng	Shanghai Aerospace Control Technology Institute
Fei Huang	Shanghai Aerospace Control Technology Institute
Zhouyuan Qian	Shanghai Aerospace Control Technology Institute
Hanmo Zhang	Shanghai Aerospace Control Technology Institute
Tao Cao	Shanghai Aerospace Control Technology Institute
Liang He	Shanghai Aerospace Control Technology Institute
0412 Satellite Integrated Navigation Algorithm Based On AREKF	
Hao Yu	Shanghai Aerospace Control Technology Institute
Cheng Gong	Shanghai Aerospace Control Technology Institute

Chunyang Liu	Shanghai Aerospace Control Technology Institute
Yong Huang	Shanghai Aerospace Control Technology Institute
Wenjing Zhang	Shanghai Aerospace Control Technology Institute
0457 A Deep Reinforcement Learning-Based Multi-UAV Global Path Planning	
Xinru Li	Beijing Information Science and Technology University
Xu Wang	Beijing Information Science and Technology University
Junfang Fan	Beijing Information Science and Technology University
Sixing Zhang	Beijing Information Science and Technology University
Qianqian Li	Beijing Information Science and Technology University
0464 An Adaptive Proportional Navigation Algorithm Based on BADS under Solar Illumination Constraint	
Changhao Gao	Nanjing University of Science and Technology
Xingxiu Li	Nanjing University of Science and Technology
Chaojie Zhang	Nanjing University of Science and Technology
Shan He	Nanjing University of Science and Technology
Panlong Wu	Nanjing University of Science and Technology
0565 A cooperative guidance method based on trust region strategy optimization learning under terminal impact angle constraint	
Ge Lan	Harbin Institute of Technology
Xiao Jun Ban	Harbin Institute of Technology
0573 Group Target Fine Tracking Algorithm Based on Velocity Correction via Collaborative Relationships	
Shuai Ke	Nanjing University of Science and Technology
Guoqing Qi	Nanjing University of Science and Technology
Yinya Li	Nanjing University of Science and Technology
Andong Sheng	Nanjing University of Science and Technology
0582 State Estimation and Trajectory Prediction of Near Space Hypersonic Vehicles	
Congrao Wang	Harbin Institute of Technology
Bowei Yan	Harbin Institute of Technology
Xiao Jun Ban	Harbin Institute of Technology
Di Zhou	Harbin Institute of Technology
0774 Online Allan Variance Noise Coefficient Estimation Method Based on Iterative Least Squares	
Zhangyi Wu	Nanjing University of Science and Technology
Yuanyuan Sun	Beijing Institute of Electronic Engineering
Bo Zhang	Nanjing University of Science and Technology
Xiang Xu	Nanjing University of Science and Technology
0809 Variational Bayesian Kalman Filtering Algorithm for GPS/INS Integrated Navigation System	
Yiren Wang	Nanjing University of Science and Technology
Yuanyuan Sun	China Aerospace Science and Industry Corporation Limited
Zhangyi Wu	Nanjing University of Science and Technology
Xiang Xu	Nanjing University of Science and Technology
0825 考虑电流限幅的构网型变流器直流侧电压控制策略研究	
武云丽	北京控制工程研究所
0685 Predictor-Based Load Frequency Control for Large-Scale Networked Control Power Systems	
Xiaoxiao Guo	Liaocheng University
Rongni Yang	Shandong University
0209 Switch-Free Prescribed-Time Control for Attitude Consensus of Multiple Spacecraft: A Fully Actuated System Approach	
Xiaoyu Yang	Zhejiang University of Technology
Qiang Chen	Zhejiang University of Technology
Shuzong Xie	Zhejiang University of Technology
Yaqian Li	Zhejiang University of Technology
0840 Pred-ID: Future Event Prediction Based on Event Type Schema Mining by Graph Induction and Deduction	
Shibo Li	Anhui Jianzhu University
Zhenyu Lu	Nanjing University of Information Science & Technology
Zhongfeng Chen	Nanjing University of Information Science & Technology

Huan Rong	Nanjing University of Information Science & Technology
0423 Continuous Safety-Critical Control of Euler-Lagrange Systems Subject to Multiple Obstacles and Velocity Constraints	
Zhi Liu	Northeastern University
Si Wu	Northeastern University
Tengfei Liu	Northeastern University
Zhong-Ping Jiang	New York University
0600 Observer Design and Attitude Control for Dumbbell-shaped Spacecraft Using a Fully-actuated System Approach	
Yuechang Li	China Academic of Launch Vehicle Technology
Feng Zhang	China Academy of Launch Vehicle Technology
Zhaohui Gao	China Academy of Launch Vehicle Technology
0631 Adaptive Control of Fully-Actuated Cable-Driven Parallel Robots for Mars Rover Landing Simulation	
Yanqi Lu	Harbin Institute of Technology
Shuo Han	Harbin Institute of Technology
Weiran Yao	Harbin Institute of Technology
0635 Practical Finite-Time Sliding Mode Control of Stochastic Systems via Output Feedback	
Jiahui Wang	Hebei University of Technology
Qingrun Wang	Hebei University of Technology
Junhua Gu	Hebei University of Technology
Zhuang Liu	Harbin Institute of Technology
Xiaoning Shen	Harbin Institute of Technology
Yabin Gao	Harbin Institute of Technology
0637 Disturbance Observer-Based Sliding Mode Control of PMSM via High-Order Fully Actuated System Approaches	
Yinjia Jiao	Harbin Institute of Technology
Xiaoning She	Harbin Institute of Technology
Jianan Qu	Power Grid
Juxing Tian	Clean Energy Company
Xinpo Lin	Harbin Institute of Technology
Zhuang Liu	Harbin Institute of Technology
Jianxing Liu	Harbin Institute of Technology
0677 Predefined-Time Control for Nonplanar Hexarotor UAVs Based on High-Order Fully Actuated System Theory	
Ruizhi Tong	Harbin Institute of Technology
Runze WANG	Harbin Institute of Technology
Yankui Shi	Harbin Institute of Technology
Hongzhen Li	Harbin Institute of Technology
Yi Zeng	Harbin Institute of Technology
0843 Fully Actuated System Approach to Tracking Control of Fixed-Wing Unmanned Aerial Vehicles	
HanJun Shang	Harbin Institute of Technology
Yabin Gao	Harbin Institute of Technology
Jiahui Wang	Harbin Institute of Technology
Qimin Hou	Harbin Institute of Technology
Jiyuan Kuang	Harbin Institute of Technology
Zhuang Liu	Harbin Institute of Technology
0858 Fixed-Time Fuzzy Sliding Mode Control of Nonlinear Systems with Stochastic Processes	
Yao Li	Harbin Institute of Technology
Jiahui Wang	Harbin Institute of Technology
Yabin Gao	Harbin Institute of Technology
Yi Zeng	Harbin Institute of Technology
Xiaoning Shen	Harbin Institute of Technology
Jianxing Liu	Harbin Institute of Technology
0043 Model-based dynamic periodic event-triggered control for nonlinear networked control systems with transmission delays	
Wangjiang Li	China Three Gorges University

Hao Yu	Beijing Institute of Technology
0076 Prescribed-Time Active Fault-Tolerant Control for Bipartite Average Tracking of Multiagent Systems With Matrix-Weighted Signed Network	
Xiaofeng Zhao	Tongji University
Yunkai Lv	East China University of Science and Technology
Zhuping Wang	Tongji University
Hao Zhang	Tongji University
0557 Planetary Landing Site Selection Using Multi-Modal Information Fusion	
Zhenyu Yang	Harbin Institute of Technology
Sihan Wang	Shanghai Institute of Satellite Engineering
Wuyue Wang	Harbin Institute of Technology
Yanning Guo	Harbin Institute of Technology
Guangtao Ran	Harbin Institute of Technology
0830 Frilled Lizard Optimization based Fuzzy PD Control for Lower Limb Exoskeleton Rehabilitation Robots	
Xiaoxuan Fan	Zhejiang University of Technology
Ming Chen	Zhejiang University of Technology
Xicheng Yang	Zhejiang University of Technology
Zheming Wang	Zhejiang University of Technology
Ruidong Cheng	Zhejiang Provincial People's Hospital (Affiliated People's Hospital, Hangzhou Medical College)
Bo Chen	Zhejiang University of Technology
0819 Target Tracking Through Dynamic Feature Fusion and Adaptive Attention Optimization in Dynamic Marine Environments	
Kai Li	Nanjing University of Information Science and Technology
Quanbo Ge	Tongji University
Yanjun Huang	Tongji University
0823 Anti-Saturation Quantization Control for Quadrotor Attitude: Dynamic Surface-Based RBF Adaptive Approach	
Yixiao Zhang	East China Jiaotong University
Xuesong Xu	East China Jiao tong University
Yihui Peng	East China Jiaotong University
Quanbo Ge	Tongji University
Yao Yu	University of Science and Technology Beijing
Yanling Zhang	University of Science and Technology Beijing
0850 Biometric-based lightweight V2I authentication and key exchange protocol	
Hexiang Wang	Henan University of Science and Technology
Moli Zhang	Henan University of Science and Technology
Beibei Han	Henan University of Science and Technology
Muhua Liu	Henan University of Science and Technology
Dongwei Li	Henan University of Science and Technology
0851 Graph-text Adversarial Distillation Model for Document-level Joint Relation Extraction	
Wenbo Li	Henan University of Science and Technology
Xiaolong Wang	Henan University of Science and Technology
Weiyu Shen	Henan University of Science and Technology
Jiamei Feng	Henan University of Science and Technology
Meiyi Yang	Henan University of Science and Technology