



第三十九届中国控制会议
The 39th Chinese Control Conference

程序册

Final Program

主办单位

中国自动化学会控制理论专业委员会

中国自动化学会

中国系统工程学会

承办单位

东北大学

Sponsoring Organizations

Technical Committee on Control Theory, Chinese Association of Automation

Chinese Association of Automation

Systems Engineering Society of China

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欢迎辞 (Welcome Address)

中国控制会议是由中国自动化学会控制理论专业委员会发起的系列学术年会，自 1979 年至今已举办了 38 届，现已发展成为国际控制领域具有重要影响力的系列学术会议之一。该会旨在为系统控制领域的专家、学者、工程技术人员及研究生提供一个学术交流的机会，以推动系统控制科学的学科发展和控制技术的实际应用。

受全球新冠疫情的影响，第 39 届中国控制会议 (CCC2020) 于 2020 年 7 月 27-29 日以在线会议的形式举办，主会场设置在辽宁沈阳。在此，我们谨代表会议程序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！

本届会议由中国自动化学会控制理论专业委员会、中国自动化学会和中国系统工程学会主办，东北大学承办，并得到中国科学院数学与系统科学研究院，中国工业与应用数学学会，亚洲控制学会，IEEE 控制系统协会，韩国控制、机器人与系统学会和日本仪器与控制工程师学会等国内外组织的协办。

会议共收到来自 19 个国家和地区的投稿论文 2272 篇，经严格、认真评审程序，共 1518 篇被会议录用并收入论文集，其中英文论文占 94%。

CCC2020 会议语言为中文和英文。本届会议安排口头报告 138 组（包括 41 个邀请组），共 825 篇论文，分 28 个线上会议室进行交流。会议安排张贴报告 4 组，共 693 篇论文。

我们很荣幸地邀请了 7 位国际知名学者作大会报告，他们是 Anuradha Annaswamy (美国麻省理工学院)，Etienne Burdet (英国伦敦帝国理工学院)，陈杰 (同济大学)，George Pappas (美国宾夕法尼亚大学)，钱锋 (华东理工大学)，余星火 (澳大利亚皇家墨尔本理工大学) 和张化光 (东北大学)。报告内容涉及系统控制理论和应用中多个领域。

香港中文大学的陈本美教授为本届会议组织了专题研讨会“从自动化到智能化：机遇与挑战”，纽卡斯尔大学付敏跃教授、南洋理工大学胡国强教授、中国科学院数学与系统科学研究院秦化淑研究员、中国科学院数学与系统科学研究院张纪峰研究员、哥伦比亚大学郑甜教授担任主讲嘉宾。

中国地质大学 (武汉) 的吴敏教授为本届会议组织了专题研讨会“先进机器人：系统与控制”，邀请中国科学院自动化研究所谭民研究员，加拿大康考迪亚大学苏春翌教授，中国科学院沈阳自动化研究所刘连庆研究员，中国地质大学 (武汉) 陈鑫教授担任主讲嘉宾。

清华大学贾庆山副教授和东北大学龙离军教授为本届会议组织了 1 场会前专题讲座，主讲人分别是中国科学院数学与系统科学研究院孙振东研究员、威斯康星大学麦迪逊分校徐相如教授、青岛大学侯忠生教授、中国科学院自动化研究所赵冬斌研究员、纽卡斯尔大学陈智勇教授、清华大学莫一林副教授。

本届会议设立“关肇直优秀论文奖”和“《中国科学》—中国控制会议张贴论文奖”，颁发“TCCT 杰出贡献奖”、“陈翰馥奖”和“IEEE CSS Beijing Chapter 青年作者奖”，旨在奖励为中国系统科学和控制科学理论与应用发展做出的杰出贡献，并且奖励优秀青年学者以推动学科高端人才培养，进一步促进中国系统科学与控制科学的发展。

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、会前专题讲座主讲人、大会专题研讨会主讲人和发展论坛主讲人接受会议邀请，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中国控制会议的支持！

第 39 届中国控制会议欢迎您！

欢迎辞 (Welcome Address)

It gives us enormous pleasure to welcome you all to participate in the 39th Chinese Control Conference (CCC2020) on behalf of the Technical Committee of Control Theory (TCCT), Chinese Association of Automation (CAA) and the Program and Organizing Committees of CCC2020. The Chinese Control Conference (CCC) is an annual technical conference founded and sponsored by TCCT since 1979. This year marks its 39th anniversary. The CCC aims to provide a forum for scientists and engineers worldwide to report their latest research results, and to exchange ideas and experiences, for the advancement of systems & control theory and its applications.

As a result of the COVID-19 pandemic, the 39th Chinese Control Conference (CCC2020) is held online during July 27-29, 2020. CCC2020 is sponsored by the TCCT, CAA and Systems Engineering Society of China, and locally organized by Northeastern University, China. The conference is also technically co-sponsored by Academy of Mathematics and Systems Science of Chinese Academy of Sciences (CAS), China Society for Industrial and Applied Mathematics (CSIAM), Asian Control Association, IEEE Control Systems Society (CSS), Institute of Control, Robotics and Systems (ICROS), Korea, and The Society of Instrument and Control Engineers (SICE), Japan.

CCC2020 received a total of 2272 submissions with authors from 19 countries and regions. Based on a rigorous peer-review process, 1518 papers were accepted and included in the conference proceedings, among which 94% are in English. The program is scheduled over 138 parallel oral sessions including 41 invited sessions, and 4 poster sessions, covering new developments concerning theory, application, and education in control science and engineering. The conference languages are Chinese and English in parallel.

We are delighted to present to CCC2020 participants seven plenary sessions, delivered by internationally distinguished speakers including: Professor Anuradha Annaswamy (Massachusetts Institute of Technology, USA), Professor Etienne Burdet (Imperial College London, UK), Professor Jie Chen (Tongji University, China), Professor George Pappas (University of Pennsylvania, USA), Professor Feng Qian (East China University of Science and Technology, China), Professor Xinghuo Yu (RMIT University, Australia), Professor Huaguang Zhang (Northeastern University, China).

Moreover, Professor Ben M. Chen from Chinese University of Hong Kong, China and Professor Min Wu from China University of Geosciences (Wuhan), organized and chair two plenary panel discussions for the conference. The panel discussion “From Automation to Intelligence: Opportunities and Challenges” features panelists Minyue Fu (University of Newcastle, Australia), Guoqiang Hu (Nanyang Technological University, Singapore), Huashu Qin (Academy of Mathematics and Systems Science, CAS, China), Ji-Feng Zhang (Academy of Mathematics and Systems Science, CAS, China), Tian Zheng (Columbia University, USA). The panel discussion “Advanced Robots: Systems and Control” is moderated by the panelists including Min Tan (Institute of Automation, CAS, China), Chun-Yi Su (Concordia University, Canada), Lianqing Liu (Shenyang Institute of Automation, CAS, China), Xin Chen (China University of Geosciences, Wuhan, China).

CCC2020 also holds one pre-conference workshop organized by Professor Qing-Shan Jia from Tsinghua University, China, and Professor Lijun Long from Northeastern University. The workshop speakers are Zhendong Sun (Academy of Mathematics and Systems Science, CAS, China), Xiangru Xu (University of Wisconsin-Madison, USA), Zhongsheng Hou (Qingdao University, China), Dongbin Zhao (Institute of Automation, Chinese Academy of Sciences), Zhiyong Chen (the University of Newcastle, Australia), Yilin Mo (Tsinghua University, China).

CCC2020 confers the Guan Zhao-Zhi Best Paper Award and the SCIS-CCC Poster Paper Award, and presents the 7th TCCT Outstanding Contribution Award, the 7th Chen Han-Fu Award, and the IEEE CSS Beijing Chapter Young Author Award in recognition of young scholars who have demonstrated excellence in their contributing papers to CCC2020, thereby further promoting the development of systems and control theory and its applications in China.

The excellence and the success of CCC2020 program would not be possible without the participation and contribution of the authors, plenary speakers, workshop and invited session organizers, the session chairs and the reviewers. We sincerely thank all individuals who have contributed to CCC2020. Special thanks are extended to reviewers and the program committee members for their thorough effort, and to the organizing committee members for their dedicated work. We would also like to express our gratitude to plenary speakers, workshop speakers, invited panelists, and all the authors and participants.

We hope you enjoy the conference.



Jun Fu



Jian Sun

Program Committee Chairmen, the 39th Chinese Control Conference

CCC2020

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中国自动化学会
中国系统工程学会

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CCCC2020

重要信息 (Important Information)

- 会议时间：2020年7月27日–29日
Time: July 27–29, 2020
- 会议主会场：沈阳
Venue: Shenyang
- 会议日程：2020年7月27日–29日学术报告
Agenda: July 27–29, 2020, Academic lectures and discussion
- 会前专题讲座：7月26日 (8:30–11:30, 13:30–16:30)
Pre-conference workshops: July 26 (8:30–11:30, 13:30–16:30)
- 会议语言：中文和英文
Official Languages: Chinese and English

CCC2020网站：<http://ccc2020.neu.edu.cn/>

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

口头报告 (Oral Presentation)

- 每篇论文报告时间为20分钟（包含讨论）。

Oral Presentation Time: 20 minutes (including discussion).

- 口头报告采用线上会议方式进行，口头报告参会流程如下：

The oral presentation is conducted online using the following procedures.

1. 登陆论文投稿系统<https://cms.amss.ac.cn/>，在CCC2020作者工作区提交发布协议文件。发布协议文件下载地址：http://tcct.amss.ac.cn/news/CCC2020/CCC2020_agreement_cn.docx。

Log in the online submission system (<https://cms.amss.ac.cn/>), and submit the Release Agreement Document in the Author Center of CCC2020. The Release Agreement Document is available at http://tcct.amss.ac.cn/news/CCC2020/CCC2020_agreement_en.docx.

2. 报告人应在**7月16日前**与自己所在口头报告分组的志愿者取得联系（口头报告分组通讯录http://tcct.amss.ac.cn/news/CCC2020/CCC2020_Oral_Contact.xlsx），并在志愿者引导下熟悉线上会议使用方法，并准备好相应的环境条件。

The author should contact the volunteer of oral presentation group they belong to by **July 16, 2020** (the contact information of volunteers of oral presentation is available at http://tcct.amss.ac.cn/news/CCC2020/CCC2020_Oral_Contact.xlsx). Moreover, under the guidance of the volunteers, the author should be familiar with the online conference and prepare the hardware/software accordingly.

3. 因特殊原因无法使用钉钉平台进行线上口头报告直播的报告人，应在**7月19日前**通过论文投稿系统 (<https://cms.amss.ac.cn/>) 提交预先录制的口头报告视频文件（15分钟左右，MP4格式，大小不超过200MB），会议期间由组委会协助播放。

Authors who cannot use the “DingTalk” for online oral presentation due to special reasons, should submit their video files (15 minutes, MP4 format, file size limit 200MB) of pre-recorded oral presentation through the submission system (<https://cms.amss.ac.cn/>) before **July 19, 2020**.

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- CCC 2020论文张贴报告在线上进行，流程如下：

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2. 张贴论文作者需要按照CCC2020张贴模板（Word模板和LaTeX模板样式见下方链接），提供张贴电子文档（PDF格式）及讲解音频文件（3-5分钟，MP3格式），并将相关材料于**7月19日前**上传至投稿系统<https://cms.amss.ac.cn/>。

The presentation of poster papers will be arranged online. Authors of poster papers should upload the electronic document of the poster (PDF format, CCC2020 provides Word and LaTeX poster templates for your reference) and the corresponding presentation audio (3-5 minutes, MP3 format). Then submit the PDF poster document and the presentation audio through the submission system (<https://cms.amss.ac.cn/>), no later than **July 19, 2020**.

Poster template in Word: http://tcct.amss.ac.cn/news/CCC2020/CCC2020_Poster_Template.docx

Poster template in LaTeX: http://tcct.amss.ac.cn/news/CCC2020/CCC2020_Poster_Template_LaTeX.zip

3. 为了便于参会代表线上实时交流，会议要求每位作者在论文张贴期间建立个人会议室等待在线交流，未完成此环节视为缺席会议（No Show）。每位张贴论文作者需提前自行在“钉钉”平台预约视频会议，获得11位入会口令（Meeting Code），填写于模板右上角；同时将“钉钉”个人信息二维码（Name Card）

粘贴于模板对应空白处，以供参会代表与您在线交流。在论文展示期间，张贴论文展示者需在该会议室内等候交流。

预订钉钉会议室指引说明：

http://tcct.amss.ac.cn/news/CCC2020/Guidelines_for_Booking_DingTalk_Meeting_Rooms.pdf

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http://tcct.amss.ac.cn/news/CCC2020/Guideline_for_Getting_the_Name_Card_QR_Code_of_DingTalk.pdf

For convenience of online communication among participants, each author is required to set up a personal meeting room via DingTalk APP during the paper posting. Failure to complete this session will be deemed as “No Show”. The meeting room should be booked in advance by the author. Author should fill the 11-digit Meeting Code in the top right corner of the Poster and paste his/her DingTalk personal information QR code in the corresponding place for online exchange. During the paper presentation period, author should be waiting in the conference room.

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- 会议期间，所有参会代表可以在对应张贴时间段浏览论文海报，并收听讲解音频。现场该时间段所有张贴报告人均在线等候，感兴趣的代表可以通过对应文章的“入会口令 (Meeting Code)”加入报告人的会议室进行交流。

During the paper posting, all the delegates can view the Poster, and listen to the presentation audio. Presenters/authors of the poster papers are available online for live discussions. The delegate who wants to have an in-depth discussion are cordially invited to enter the meeting room, using the displayed Meeting Code, to have a live discussion with the presenter.

- 本届会议设立“《中国科学》—中国控制会议张贴论文奖”，具体条例请见控制理论专业委员会网站和中国控制会议网站：<http://tcct.amss.ac.cn/>, <http://ccc2020.neu.edu.cn/7156/list.htm>。

The regulations for the SCIS-CCC Poster Paper Award can be found at TCCT website: <http://tcct.amss.ac.cn>, or CCC2020 website: <http://ccc2020.neu.edu.cn/ccc2020eng/7174/list.htm>.

大会报告 (Plenary Lectures)

Plenary Lecture 1

7月27日09:00-10:00

July 27, 09:00-10:00

Jie Chen

Tongji University, China

Optimization-Based Cooperative Decision and Control of Multi-Agent Systems

Chair: Jie Huang (The Chinese University of Hong Kong, China)

Abstract: The world has witnessed explosive development of artificial intelligence, especially collective intelligence driven multi-agent systems. The problems of cooperative decision and control of multi-agent systems with collective intelligence have prominently emerged, where the associated theoretical breakthroughs are still under developing and key techniques are waiting to be fully exploited. In this presentation, three emerged research topics are introduced in detail: UAV-UGV cooperation, distributed fault detection, and multi-agent sharing control. Correspondingly, the key techniques to deal with such problems are discussed, including intelligent computation-based cooperation between aerial and ground vehicles, H_∞/H_2 hybrid optimization-based cooperative fault detection, and intension-based sharing control for human/multi-robot teaming systems. Finally, several experimental results are given to demonstrate promising applications of the presented cooperative decision and control techniques in various practical scenarios.



Jie Chen is IEEE Fellow, IFAC Fellow, Academician of Chinese Academy of Engineering, President of Tongji University, Director of the State Key Laboratory of Intelligent Control and Decision of Complex Systems. He is a Distinguished Young Scholar awarded by the NSFC, and a Changjiang Scholar Distinguished Professor awarded by the Chinese Ministry of Education. He serves as the Vice President of the Chinese Association of Automation, and an Executive Director of the Chinese Artificial Intelligence Society. He is also the Managing Editor for the Journal of Systems Science and Complexity, and editorial board members and associate editors for several renowned international journals, such as *IEEE Transactions on Cybernetics*, *International Journal of Robust and Nonlinear Control*, *Science China Information*

Sciences, etc.

His main research interests include multi-objective optimization and decision for complex systems, cooperative control of multi-agent systems, and constrained nonlinear control. He has authored/co-authored 4 monographs and more than 80 SCI journal papers, and holds 43 patents of invention. He received the National Natural Science Award of China (Class II) once, and the National Science and Technology Progress Awards of China (Class II) twice.

Plenary Lecture 2

7月27日10:20-11:20

July 27, 10:20-11:20

Anuradha Annaswamy

Massachusetts Institute of Technology, USA

Lessons from Adaptive Control: Towards Real-time Machine Learning

Chair: Lihua Xie (Nanyang Technological Univ., Singapore)

Abstract: The fields of adaptive control and machine learning have evolved in parallel over the past few decades, with a significant overlap in goals, problem statements, and tools. Machine learning as a field has focused on computer based systems that improve through experience. Often times the process of learning is encapsulated in the form of a parameterized model, whose parameters are learned in order to approximate a function. The field of adaptive control, on the other hand, has focused on the process of controlling engineering systems in order to accomplish regulation and tracking of critical variables of interest. The approach used for accomplishing such regulation and tracking in adaptive control is the learning of underlying parameters through an online estimation algorithm. Learning parameters of a model in both machine learning and adaptive control occurs through the use of input-output data. In both cases, the main algorithm used for updating the parameters is based on a gradient descent-like algorithm. Related tools of analysis, convergence, and robustness in both fields have a tremendous amount of similarity. As the scope of problems in both fields increases, the associated complexity and challenges increase as well. In order to address learning and decision-making in real time, it becomes more and more necessary to understand these similarities and connections so as to develop new methods, tools, and algorithms for addressing the emerging challenges.

This talk will examine the similarities and interconnections between adaptive control and optimization methods commonly employed in machine learning. Concepts in stability, performance, and learning, common to both fields are then discussed. Building on the similarities in update laws and common concepts, new intersections and opportunities for improved algorithm analysis will be explored. In particular, specific problems related to higher order learning and exponentially fast learning is solved through insights obtained from these intersections. Accelerated learning techniques have seen widespread use in machine learning and have led to parameter convergence through the use of stochastic inputs. Parameter estimation methods have long been examined in adaptive control as a central learning component, with emphasis on necessary and sufficient conditions for convergence and fast convergence rates. High-order tuners and time-varying learning rates have been employed in adaptive control leading to very interesting results in dynamic systems with delays. We will explore how higher order learning and exponentially fast learning can be carried out and lead to provably correct methods for adaptation, learning, and estimation. Applications of these problems in the context of engineering systems will be discussed as well.



Anuradha Annaswamy is Founder and Director of the Active-Adaptive Control Laboratory in the Department of Mechanical Engineering, Massachusetts Institute of Technology, USA, where she has been a faculty since 1991. Her research interests span adaptive control theory and its applications to aerospace, automotive, and propulsion systems as well as cyber physical systems such as Smart Grids, Smart Cities, and Smart Infrastructures. Dr. Annaswamy is an author of over 100 journal publications and 250 conference publications, co-author of a graduate textbook on adaptive control, and co-editor of several cutting edge science and technology reports including Systems & Control for the future of humanity, research agenda: Current and future roles, impact and grand challenges (Annual Reviews in Control, 2016), Smart Grid Control: Overview and Research Opportunities (Springer, 2018), and Impact of Control Technology (IoCT-report 2011 and 2013). Her current research is supported by the US Air- Force Research Laboratory, US Department of Energy, Boeing, Ford-MIT Alliance, and NSF.

Dr. Annaswamy has received several awards including the George Axelby (1986) and Control Systems Magazine

(2010) best paper awards from the IEEE Control Systems Society (CSS), the Presidential Young Investigator award from NSF (1992), the Hans Fisher Senior Fellowship from the Institute for Advanced Study at the Technische Universität München (2008), the Donald Groen Julius Prize from the Institute of Mechanical Engineers (2008). Dr. Annaswamy has been elected to be a Fellow of the IEEE (2002) and IFAC (2017). She received a Distinguished Member Award and a Distinguished Lecturer Award from IEEE CSS in 2017.

Dr. Annaswamy is actively involved in IEEE, IEEE CSS, and IFAC. She has served as General Chair of the American Control Conference (2008) as well as the 2nd IFAC Conference on Cyber-Physical & Human Systems (2018). She is Deputy Editor of the Elsevier publication *Annual Reviews in Control* (2016-present). She has been a member of the IEEE Fellows Committee and the IEEE CSS Outreach Committee, and is the Chair of IEEE Smart Grid Meetings and Conferences. In IEEE CSS, she has served as Vice President of Conference Activities (2015-16) and Technical Activities (2017-18), and will serve as the President in 2020.

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Plenary Lecture 3

7月27日11:20-12:20

July 27, 11:20-12:20

Etienne Burdet

Imperial College London, UK

Interaction Control in Humans and with Robots

Chair: Hong Qiao (Institute of Automation, CAS, China)

Abstract: My talk will present some of our attempts to i) understand how humans skillfully interact with their environment, and ii) endow robots with similarly successful control behaviors. Twenty years ago, we discovered how humans constantly adapt their muscle activations to identify and adapt to the dynamic environment they are working with. I will first present this discovery and how it led to novel adaptive control behaviors for robots, which will enable them to interact with rigid and soft environments, with perspective in fields such as manufacturing and medical robotics. In recent years, we studied how humans physically interact with each other, e.g. during physical neurorehabilitation after a stroke or while dancing. By examining the behaviors of individuals when their right hands are physically connected, we could show how haptic information enables humans to estimate partners' motor plan and use it to improve one own performance. Embodied as a robot partner, this model was verified as it induced the same improvements in motor performance as a human partner. These results elucidate the haptic communication taking place between physically interacting humans and promise collaborative robot systems with human-like assistance.



Etienne Burdet is Chair of Human Robotics at the Imperial College of Science, Technology and Medicine in UK. He is also a visiting Professor at University College London. He holds an MSc in Mathematics (1990), an MSc in Physics (1991), and a PhD in Robotics (1996), all from ETH-Zurich. He was a postdoctoral fellow with TE Milner from McGill University, Canada, JE Colgate from Northwestern University, USA and Mitsuo Kawato of ATR in Japan. Professor Burdet's group uses an integrative approach of neuroscience and robotics to: i) investigate human motor control, and ii) design efficient systems for training and rehabilitation, which are tested in clinical trials and commercialized.

Plenary Lecture 4

7月28日08:30-09:30

July 28, 08:30-09:30

Feng Qian

East China University of Science & Technology, China

**Integrated Human-Machine Smart Industrial Manufacturing System
- Artificial Intelligence EMPOWERS Manufacturing**

Chair: Min Wu (China University of Geosciences, Wuhan, China)

Abstract: In the context of rapid progress of artificial intelligence, human-machine integration (HMI) can be understood as the natural interaction, close collaboration, adaptive acclimatization, with safety and security as prerequisites, between human and machine in a relative complex, dynamic and open environment. The ultimate objective of HMI is the mutual perception, mutual comprehension, mutual aid, mutual promotion, and mutual perfection.

Petroleum and chemical industry (abbreviated as petrochemical), as one of the representative complicated manufacturing processes, the production operation and decision making process of it heavily rely on knowledge-based workers. It indicates that the increasing of resource and energy utilization rates, meanwhile the guarantees in terms of safety and security metrics and the improvements of operation decision with the considerations of the characteristics of process units, by means of the mutual improvements between human and machine/control systems with the help of modern information technologies such as artificial intelligence, big data and industrial internet, are the core of the high quality transitions from 'global petrochemical manufacturing power' to 'global petrochemical smart manufacturing power'.

This keynote speech mainly focuses on the major national demands regarding to the upgrading of the petrochemical industries. With the background of refining and chemical production processes, we highlight the technologies with respect to the realizations of smart decision and manufacturing in modern industrial enterprises by means of information technologies like artificial intelligence, so as to propel syncretic utilization of the flow of capital, matter, energy and information. The main contents include: (1) Plantwide digital twin system, (2) Value-oriented resource optimal allocation and decision system, (3) Real time optimization and control system under multi operation condition. Finally, the challenges, difficulties of smart manufactory system and corresponding preliminary research results will be illustrated by some industrial applications.



Feng Qian is Academician of Chinese Academy of Engineering, an expert in Process Control and Process Systems Engineering. He is currently the Vice President of East China University of Science and Technology (ECUST), Director of the Key Laboratory of Advanced Control and Optimization for Chemical Processes under the Ministry of Education and Director of the Process Systems Engineering Research Center under the Ministry of Education. He is also a member of the consultation group of Control Science and Engineering Academic Degree Accreditation Committee under the State Council, and the Vice President of China Petroleum and Chemical Industry Automation Association. He is also the member of the 11th, 12th and 13th National Committee of Chinese People's Political Consultative Conference (CPPCC).

Since 1980s, he has focused on research and development of new theories and key technologies to implement intelligent control and real-time optimization for process manufacturing systems so as to achieve efficient use of chemical process resources and energy. His research team developed novel intelligent control and optimal operation algorithms and software for large scale ethylene plants. These research outcomes have been widely used in the ethylene industry in China and have achieved remarkable economic benefits. His research team also achieved breakthrough in key technologies of the whole terephthalic acid process optimal operation and achieved substantial energy saving in industry. His research team also developed the optimal control technology for gasoline pipeline

blending, which achieved long term efficient operation of the real-time optimization system for blending process. The research outcomes have been successfully used in dozens of large scale petrochemical plants, and remarkable economic and social benefits have been realized. His research team has won 4 National Second-Prizes for Progress in Science and Technology and also over 20 provincial and ministerial-level Science and Technology awards. His team has 40 national invention patents authorized and 70 pieces of national computer software copyrights successfully registered. They also won 2 Chinese patent outstanding awards and 2 First-Prizes of Shanghai Invention Patent Award. He has published 3 monographs and over 300 papers indexed by SCI and EI. The research from his research team was selected as the Top 10 cases of the university-industry cooperation. He was among the first batch of national candidates for the New Century Talents Project, the principal scientist of the national “973” program, winner of the National Science Fund of China for Distinguished Young Scholars. He was the Changjiang Scholar Professor of the Ministry of Education. He is also the winner of Science and Technology Innovation Award of Ho Leung Ho Lee Foundation, the Award of National Invention and Entrepreneurship, Elite of Shanghai Science and Technology plus many other honors.

CCCC2020

Plenary Lecture 5

7月28日09:30-10:30

July 28, 09:30-10:30

George J. Pappas

University of Pennsylvania, USA

Safe Autonomy with Deep Learning in Feedback Loop

Chair: Yiguang Hong (Academy of Mathematics and Systems Science, CAS, China)

Abstract: Deep learning has been extremely successful in computer vision and perception. Inspired by this success in perceiving environments, deep learning is now one of the main sensing modalities in autonomous robots, including driverless cars. The recent success of deep reinforcement learning in chess or AlphaGo suggests that robot planning control will soon be performed by deep learning in a model free manner, disrupting traditional model-based engineering design. However, recent crashes in driverless cars as well as adversarial attacks in deep networks have exposed the brittleness of deep learning perception which then leads to catastrophic decisions. There is a tremendous opportunity for the cyber physical systems community to embrace these challenges and develop principles, architectures, and tools to ensure safety of autonomous systems.

In this talk, I will present our approach in ensuring the robustness and safety of autonomous robots that use deep learning as a perceptual sensor in the feedback loop. Using ideas from robust control, we develop tools to analyze the robustness of deep networks that ensure that the perception of the environment is more accurate. Critical to our approach is creating semantic representations of unknown environments while also quantifying the uncertainty of semantic maps. Autonomous planning and control need to both embrace such semantic representations and formally reason about the environment uncertainty produced by deep learning the feedback loop, leading to autonomous robots that operate with prescribed safety in unknown but learned environments.



George J. Pappas is the UPS Foundation Professor and Chair of the Department of Electrical and Systems Engineering at the University of Pennsylvania. He also holds a secondary appointment in the Departments of Computer and Information Sciences, and Mechanical Engineering and Applied Mechanics. He is member of the GRASP Lab and the PRECISE Center. He has previously served as the Deputy Dean for Research in the School of Engineering and Applied Science. His research focuses on control systems, robotics, formal methods and machine learning for safe and secure cyber-physical systems applications. He has received various awards such as the Antonio Ruberti Young Researcher Prize, the George S. Axelby Award, the O. Hugo Schuck Best Paper

Award, the ICCPS Best Paper Award, the NSF PECASE award, and the George H. Heilmeier Faculty Excellence Award. He is a Fellow of IEEE and IFAC and was the inaugural steering committee chair of CPSWEEK. More than thirty alumni of his group are now faculty in leading universities around the world.

Plenary Lecture 6

7月29日08:30-09:30

July 29, 08:30-09:30

Xinghuo Yu

Royal Melbourne Institute of Technology, Australia

Complex Network Systems: A Control Science and Engineering Perspective

Chair: Guang-Hong Yang (Northeastern University, China)

Abstract: Many real-world systems are of dynamical complex networks nature, such as power grids and biological systems. A major challenge is how to deal with sheer size and complexity in the complex network systems to deliver time-critical desirable outcomes. Central to meeting the challenge are the efficient and effective control mechanisms to enable the successful engineering of the complex network systems.

This talk will first dissect the very nature of complex network systems from a control science and engineering perspective. It will then present an overview of the current developments in the integration and interplay of complex network systems and control science and engineering. Furthermore, it will examine some Nature inspired smart mechanisms for developing new efficient and effective methods and tools for dealing with modelling, control and optimization of complex network systems. Key technical issues and challenges in both fields and their integration and interplay will be outlined.



Xinghuo Yu is an Associate Deputy Vice-Chancellor and Distinguished Professor at Royal Melbourne Institute of Technology (RMIT University), Melbourne, Australia. He is the President of IEEE Industrial Electronics Society (2018-2019).

He received BEng and MEng degrees from the University of Science and Technology of China, Hefei, China, in 1982 and 1984, and PhD degree from Southeast University, Nanjing, China in 1988, respectively. In 1989-1991, he was a Postdoctoral Fellow with University of Adelaide, Australia. In 1991-2002, he was with Central Queensland University, Australia, where, before he left, he was Chair Professor of Intelligent Systems. Since 2002, he has been with RMIT University, where he has occupied various senior academic and managerial positions.

His main research areas include control systems, intelligent and complex systems, future energy systems. He received many awards and honors for his contributions, including 2018 MA Sargent Medal from Engineers Australia, 2018 Australasian AI Distinguished Research Contribution Award from Australian Computer Society, and 2013 Dr.-Ing. Eugene Mittelmann Achievement Award from IEEE Industrial Electronics Society. He has been named a Highly Cited Researcher by Clarivate Analytics since 2015. He is a Fellow of the IEEE, Engineers Australia, Australian Computer Society, and Australian Institute of Company Directors.

Plenary Lecture 7

7月29日09:30-10:30

July 29, 09:30-10:30

Huaguang Zhang

Northeastern University, China

Adaptive Dynamic Programming for Optimal Control: Fundamental Theory, New Research Results and Applications

Chair: Ji-Feng Zhang (Academy of Mathematics and Systems Science, CAS, China)

Abstract: The Energy Internet (EI) is becoming an inevitable development trend and direction for the future energy network. As the main carrier of the Energy Internet in the physical level, the cooperative control of integrated energy system (IES) is of great significance to the large-scale integration and application of renewable clean energy as well as traditional energy. Meanwhile, ADP is known as a powerful tool in solving the optimal control problems of complex nonlinear systems based on the principle of optimality and neural networks. Therefore, in this talk, the distributed optimal cooperative control issues of IES will be addressed as follows: 1) The fundamental theory and recent development of ADP-based optimal control; 2) The optimal cooperative control is proposed to solve the distributed optimal control problem of general multi-agent systems, which can even only requires system data with different control inputs; 3) Considering the practical applications, we further study the distributed optimal control of the integrated energy system to solve the cooperative power sharing and realize the voltage and frequency regulation. Some examples are provided to show that the proposed method has good robustness to the uncertainty and unmodeled dynamics of the integrated energy system.



Huaguang Zhang received the Ph.D. degree from Southeast University, Nanjing, China, in 1991. From 1992 to 1994, he did his postdoctoral research at Northeastern University, Shenyang, China. He has been with Northeastern University since 1991, and is currently as a Full Professor and Ph.D. advisor. He has authored and coauthored over 300 journal and conference papers, four monographs and co-invented more than 50 patents. He has been severing as an associate Editor of *Automatica* since 2008, an associate Editor of *IEEE Transactions on Neural Networks* since 2010, an associate Editor of *IEEE Transactions on Cybernetics* since 2007, an associate editor of *Neurocomputing* since 2007. In addition, he is a fellow of IEEE, the former E-letter Chair, and the former Chair of Adaptive Dynamic Programming & Reinforcement Learning Technical Committee

in IEEE Computational Intelligence Society. Besides those he has been a member of the Neural Systems and Applications (NSA) Committee of IEEE Circuits and Systems Society, a member of the Blind Signal Processing (BSP) Committee of IEEE Circuits and Systems Society, a member of the Technical Committee on Computational Intelligence of the Systems, Man, and Cybernetics Society since 2007. He was awarded the Outstanding Youth Science Foundation Award from the National Natural Science Foundation Committee of China in 2003. He was named the Cheung Kong Scholar by the Education Ministry of China in 2005. He is a recipient of the IEEE Transactions on Neural Networks Outstanding Paper Award (2012) and Andrew P. Sage Best Transactions Paper Award (2015) with IEEE SMC Society. His current research interests include Adaptive Dynamic Programming, Fuzzy System Theory, Fuzzy Control, Neural Network-Based Control, Adaptive Control, Complex Industry Process Automation, Electric Power System Automation, Motor Driving System Automation, Integrated Energy System Optimization.

大会专题研讨会 (Panel Sessions)

Panel Discussion 1

7月28日 10:50-12:20

July 28, 10:50-12:20

From Automation to Intelligence: Opportunities and Challenges

从自动化到智能化：机遇与挑战

Chair: Ben M. Chen (Chinese University of Hong Kong, China)

Panelists: Minyue Fu (University of Newcastle, Australia)

Guoqiang Hu (Nanyang Technological University, Singapore)

Huashu Qin (Academy of Mathematics and Systems Science, CAS, China)

Ji-Feng Zhang (Academy of Mathematics and Systems Science, CAS, China)

Tian Zheng (Columbia University, USA)

Abstract: CCC 2020 proudly presents the plenary panel session on From Automation to Intelligence: Opportunities and Challenges. We are honored to be able to invite five prominent renowned researchers and educators in the field to be the panelists. The objective of the plenary panel session is to provide an opportunity for researchers, especially youngsters, to interact with the experts in the field to seek their advice or debate on issues relating to control, automation and artificial intelligence such as current status, challenges and opportunities, future perspectives, as well as how to start a career as a researcher and how to approach challenging research issues, etc. During the session, panel members will share their vast experiences and visions with audience through effective face-to-face dialogues. The panel consists of the following four world class researchers and educators.



Minyue Fu received the B.Sc. degree in electrical engineering from the University of Science and Technology of China, China, in 1982, and the M.S. and Ph.D. degrees in electrical engineering from the University of Wisconsin-Madison, USA. in 1983 and 1987, respectively. From 1987 to 1989, he was an Assistant Professor in the Department of Electrical and Computer Engineering, Wayne State University, USA. He joined the Department of Electrical & Computer Engineering at the University of Newcastle, Australia, in 1989, where he is a Chair Professor of Electrical Engineering. He has been Visiting Professors at the University of Iowa, USA, Nanyang Technological University, Singapore and Tokyo University, Japan. He has held Changjiang Visiting Professorship at Shandong University, China, and Distinguished Professorship at Zhejiang University and Guangdong University of Technology, China.

Professor Fu has been an Associate Editor for *IEEE Transactions on Automatic Control*, *Automatica*, *IEEE Transactions on Signal Processing*, and the *Journal of Optimization and Engineering*. His main research interests include control systems, signal processing, and communications. His current research projects include networked control systems, distributed control, smart electricity networks, and super-precision positioning control systems. He is a Fellow of IEEE, Fellow of Institute of Engineers Australia, and Fellow of Chinese Association of Automation.



Guoqiang Hu received the B.Eng. degree in Automation from the University of Science and Technology of China in 2002, the M.Phil. degree in Automation and Computer-Aided Engineering from the Chinese University of Hong Kong in 2004, and the Ph.D. degree in Mechanical Engineering from the University of Florida in 2007. He joined the School of Electrical and Electronic Engineering at Nanyang Technological University, Singapore in 2011, and is currently a tenured Associate Professor. He was an Assistant Professor at Kansas State University, Manhattan KS, USA, from 2008 to 2011. His research interests include distributed control, optimization and games, with applications to multirobot systems and smart city systems.

He was a recipient of the Best Paper in Automation Award in the 14th IEEE International Conference on Information and Automation in 2017, a recipient of the Guan Zhao-Zhi Award in the 36th Chinese Control Conference in 2017, and a recipient of the Early Career Teaching Excellence Award at Nanyang Technological University, Singapore, in 2015. He serves as Associate Editor for *IEEE Transactions on Automatic Control*, *IEEE Transactions on Control Systems Technology*, *IEEE Transactions on Automation Science and Engineering*, and *Unmanned Systems*, and Technical Editor for *IEEE/ASME Transactions on Mechatronics*.



Huashu Qin graduated from the Department of Mathematics, Nankai University, Tianjin, China, in 1956, and received her Ph.D. degree in mathematics from Jagiellonian University in Cracow, Poland, in 1961. She was a staff member at the Institute of Mathematics, the Chinese Academy of Sciences (CAS) in Beijing and worked in the field of control theory and applications, including guidance and control of missiles and satellites and temperature control of industrial processes. Since 1979, she has been affiliated with the Institute of Systems Science (ISS) of CAS. She is currently a Professor Emeritus.

Professor Qin has been a member of the Standing Council of Chinese Association of Automation (CAA) since 1980, and the Chairman of the Technical Committee on Control Theory (TCCT), CAA (1996 - 2003), and is currently an advisor. She has been the main organizer of the annual Chinese Control Conference (CCC) and she was also one of the main organizers for several international events held in China, which includes the 1988 IFAC Symposium on System identification and the 14th IFAC World Congress. She has been Deputy Editor-in-Chief of the *Journal Control Theory and Applications* since 1984 and is currently a advisor of this journal.

Professor Huashu Qin's current research interests are on the problems of control of optimization and game including their algorithms, and especially artificial intelligent (AI). For example, what is AI from the viewpoint of system control and how to understand from the perspective of algorithm-integrated in the era of big data.



Ji-Feng Zhang received his B.S. degree in mathematics from Shandong University in 1985 and Ph.D. degree from the Institute of Systems Science (ISS), Chinese Academy of Sciences (CAS) in 1991. Since 1985, he has been with the ISS, CAS, and now is the Director of ISS. His current research interests include system modeling, adaptive control, stochastic systems, and multi-agent systems. Professor Zhang is an IEEE Fellow, IFAC Fellow, CAA Fellow, and Member of the European Academy of Sciences and Arts. He received the Distinguished Young Scholar Fund from National Natural Science Foundation of China in 1997, and the Second Prize of the State Natural Science Award of China in 2010 and 2015, respectively. He is Vice Chair of the IFAC Technical Board and Vice President of the Chinese Association of Automation; and was Vice President of the Systems Engineering Society of China, and Convenor of Systems Science

Discipline, Academic Degree Committee of the State Council of China. He is the founding Editor-in-Chief of *All About Systems and Control*, and has served as Editor-in-Chief, Senior Editor or Associate Editor for more than 10

academic journals, including *Science China Information Sciences*, *IEEE Transactions on Automatic Control*, *SIAM Journal on Control and Optimization*.



Tian Zheng is Professor and Chair of Statistics, Associate Director for Education of Data Science Institute at Columbia University, USA. She develops novel methods for exploring and understanding patterns in complex data from different application domains such as biology, psychology, climatology, and etc. Her current research projects are in the fields of statistical machine learning, spatiotemporal modeling and social network analysis. Professor Zheng's research has been recognized by the Outstanding Statistical Application Award from the American Statistical Association (ASA), the Mitchell Prize from ISBA and a Google research award. She became a Fellow of American Statistical Association in 2014. Professor Zheng is the receipt of 2017 Columbia's Presidential Award for Outstanding Teaching. In 2019, she is the Chair for ASA's section on Statistical Learning and Data Science.

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Panel Discussion 2

7月29日10:50-12:20

July 29, 10:50-12:20

Advanced Robots: Systems and Control

先进机器人：系统与amp;控制

Chair: Min Wu (China University of Geosciences, China)

Panelists: Min Tan (Institute of Automation, CAS, China)
 Chun-Yi Su (Concordia University, Canada)
 Lianqing Liu (Shenyang Institute of Automation, CAS, China)
 Xin Chen (China University of Geosciences, China)

Abstract: CCC2020 proudly presents the plenary panel session on “Advanced Robots: Systems and Control”. We are very glad to invite four prominent professors in this field to be panelists. They will share their precious experiences and further research on system design and autonomous control of bio-robots, soft robots, and humanoid robots. The objective of this plenary panel is to provide an opportunity for interested participants to interact with the experts in the field through effective face-to-face dialogues.



Min Tan received the B.E. degree from Tsinghua University, Beijing, China, and the Ph.D. degree in control theory and control engineering from the Institute of Automation, Chinese Academy of Sciences, Beijing, in 1986 and 1990, respectively. He is currently a Professor in the State Key Laboratory of Management and Control for Complex Systems, Institute of Automation, Chinese Academy of Sciences. He is Principal Investigator of an Innovative-Research-Group Program, and a Distinguished Young Scholar Program supported by the Natural Science Foundation of China. His main research interests include advanced robot control, biomimetic robot, multirobot system. He has authored/co-authored more than 100 SCI journal papers, and holds more than 50 patents of invention. He received the second prize of National Natural Science Award

of China.



Chun-Yi Su received his B.E. degree in control engineering from Xi’an University of Technology in 1982, his M.E. and Ph.D. degrees in control engineering from South China University of Technology, in 1987 and 1990, respectively. Since 1990, he has held various positions in several universities including Concordia University and the University of Victoria. He also held a number of visiting positions including Chair Professor of Chang Jiang (Cheung Kong) Scholars Program in China and JSPS Invitation Fellow in Japan. He was selected as “National Distinguished Experts” through thousand talents program in 2010. His research covers control theory and its applications to various mechanical systems, with a focus on control of systems involving hysteresis nonlinearities. He is the author or co-author of over 200 journal publications. He has been identified as 2019 Highly Cited Researchers from the Web of Science Group.

Dr. Su has served as Associate Editor for several journals, including *IEEE Transactions on Automatic Control*, *IEEE Transactions on Control Systems Technology*, *Mechatronics*, *Control Engineering Practice* (both are the journals of IFAC). He is a Distinguished Lecturer of IEEE RA Society and has also served as Chair/Co-Chair for numerous international conferences.



Lianqing Liu received his Ph.D. degree in Pattern Recognition and Intelligent System from university of Chinese Academy of Sciences, China in 2008, and B.S. degree in Industry Automation from Zhengzhou University, China in 2002. He started his career in 2006 at Shenyang Institute of Automation, Chinese Academy of Sciences, and holds the position of Assistant Professor (2006-2008), Associate Professor (2009-2010) and Professor (2011 to now) respectively.

He was awarded the Early Government/Industrial Career Award by the IEEE Robotics and Automation Society in 2011, Outstanding Young Scientist of Chinese Academy of Sciences in 2014, Talent Young Scholar Funds of NSFC in 2015, National Program for support of Top-Notch Young Professionals in 2015, and Distinguished Young Scholar

Funds of NSFC in 2019. He has served as guest editor for *Sensors*, *TIMC*, *Journal of Autonomous Robotics*, *Journal of Healthcare Engineering*, associate editor of *Mechatronics*, General Chair of IEEE-NANO2019, IEEE-CYBER2017, Organizing Chair of IEEE-CYBER 2015, as organizing committee member of IROS2019, IROS2018, IEEE-NANO2015, IEEE-ICRA 2014, IEEE-IROS 2009 and so on. He has been elected as the vice president of IEEE Robotics and Automation Society for the term of 2018-2019. He serves as a member of long range planning committee of RAS since 2017, and a representative of TAB in PAB and CAB. Member of GI committee.



Xin Chen received his B.S. and M.S. degrees in engineering from Central South University, Changsha, China, in 1999 and 2002, respectively, and the Ph.D. degree in engineering from University of Macau, China, in 2007. He finished his postdoctoral research on control science and engineering at Central South University. He is currently a Professor with the School of Automation, China University of Geosciences. He won the Science Fund for Distinguished Young Scholars of Hubei Province, and the Distinguished Professor of “Chutian Scholar Program” of Hubei Province. He was a visiting professor with the Department of Electrical and Computer Engineering of the University of Alberta from December 2018 to December 2019.

His research interests include intelligent control, multi-agent systems, robotics and process control. He is the member of Technical Committee of Control Theory, Education Works Committee and Youth Works Committee of Chinese Association of Automation, also the member of Society of Intelligent Aerospace Systems of Chinese Association for Artificial Intelligence. He served as the program committee chair of 37th Chinese Control Conference (CCC2018).

发展论坛 (Development Forums)

Development Forum 1

7月28日 13:30-15:00

July 28, 13:30-15:00

Ocean Robots

海洋机器人

Chair: Weidong Zhang (Shanghai Jiaotong University, China)

Panelists: Jiancheng Yu (Shenyang Institute of Automation, CAS, China)

Junzhi Yu (Peking University, China)

Jun Luo (Chongqing University, China)

Weidong Zhang (Shanghai Jiaotong University, China)

Abstract: Ocean robots, including unmanned submersibles, unmanned surface vessels and unmanned aerial vehicles, are the hot research directions in the field of robotics in recent years, and also the current key development direction in the field of robotics in China. In this development forum, we invited domestic authoritative experts to introduce the international latest research results on autonomous control of underwater gliders, visual perception in aquatic environment, positioning and control of surface vessels, analyze the bottleneck problems in this field, and prospect the future trend. This forum provides an opportunity for interested participants to interact with the experts in the field through face-to-face communication.

Title: Technology and Application of Marine Observation Robots

Abstract: In recent years, the technology of marine robots represented by underwater glider has made great advance, and has been widely used in the field of ocean observation, and achieved remarkable application results. Focusing on the demand of multi-scale, high-resolution and real-time observation for marine scientific research, it is an important development direction in the future to deeply integrate marine robot technology, automation technology and artificial intelligence technology, and promote the realization of intelligent ocean observation step by step. This report will introduce the development status of marine robot technology, and discuss the autonomy ocean observation technology and application with marine robots.

Jiancheng Yu is the director of the Center for Innovative Marine Robotics, Shenyang Institute of automation, CAS. He received Ph.D. degree in mechatronic engineering from Shenyang Institute of Automation, CAS in 2006. He mainly engaged in the research of new concept underwater vehicles, theory and technology for autonomy ocean observation, control methods for underwater vehicles.



Title: Visual Perception and Control in Aquatic Environments

Abstract: Acquiring underwater environment information at low cost remains a critical problem to be solved in underwater robot operations. Due to the particularity of the underwater environment, underwater machine vision is facing serious quality degradation, motion degradation and other problems. In response to these challenging issues, this talk focuses on the introduction of underwater vision real-time adaptive recovery, sequential single-stage detection and multi-target tracking methods, as well as depth, orientation, planar path tracking and other control technologies of bionic robotic dolphin for mobile sensing applications. At last, future directions of research related to this work will also be discussed.



Junzhi Yu is an Endowed Boya Professor of Peking University. His research interests generally lie in intelligent robots, motion control, and intelligent mechatronic systems. He has published more than 100 papers in international journals and conferences, including 60+ papers in IEEE Transactions. Dr. Yu serves/served as associate editors of *IEEE Transactions on Robotics*, *IEEE/ASME Transactions on Mechatronics*, *Bioinspiration & Biomimetics*, etc.

Title: Key Technology and Equipment for USV

Abstract: Unmanned surface vehicles (USV) have found extensive applications in mapping nautical charts, investigating marine environment, and supporting national military defense. USVs that are at abominable sea states are faced with crucial challenges including how to navigate accurately, how to automatically avoid obstacles, how to get retrieved by carriers and how to stay stable. Hereby we propose an anti-disturbance control method based on space mapping between flow disturbances and USV attitude. As such, high-precision trajectory tracking is achieved in complex areas of reefs, islands and coral cays. Under code 4 sea state, the tracking error is within 2m, which is 60% more accurate than that IHO Standards for Hydrographic Surveys (5m+5% λ). We propose a control method based on uncertainty set constraint for obstacle avoidance, achieving a safety distance as short as 40m away from moving target at sea under the high speed of 18kn. Also, we develop vibration isolation technique based on a 6 DoFs fully decoupled mechanism, nonlinear negative stiffness rheological structure and a large-amplitude-single-frequency vibration control approach. The amplitude and stabilizing period are sharply reduced by 98.4%, and from 7s to 0.3s, respectively. The USV vibration at sea is suppressed to -10dB@1HZ and -35dB@10Hz, achieving the sound stealth effect. With the above combined technologies, our USVs managed to accomplish a great many tasks, e.g. mapping charts, undertaking geological survey, conducting sea rescue, investigating marine environment, implementing archaeological survey and so on at East China Sea and South China Sea.



Jun Luo is a professor and the director of the State Key Laboratory of Mechanical Transmissions at Chongqing University. He is also the director of research Institute of USV engineering at Shanghai University. He was the former president of SHU Research Office, former director of Shanghai Robotics Institute, leader of the Double-First Class discipline of mechanical engineering of the ministry of education, and deputy director of Shanghai Key Laboratory of Intelligent Manufacturing and Robotics.

His research focuses on mechanical transmission control, anti-jamming of mobile robot towards environment loads, and intelligent unmanned systems. He has conducted over 40 state-level and provincial level projects and won the National Technology Invention Awards (2nd class), Shanghai Technology Invention Awards (1st class), Progress of Science and Technology Prize (1st class), etc. He has published more than 200 research papers, including over 100 journal papers. He has been authorized with over 110 invention patents.

Title: Research and Verification of Autonomous Positioning Technology for Oversea Unmanned Systems

Abstract: Autonomous positioning is a basic core technology of the unmanned system, which is the premise and guarantee for the system to complete all kinds of missions. In recent years, IPAC Group of Shanghai Jiaotong University has carried out a lot of work around the positioning technology of the oversea unmanned system. The talk introduces the research progress of IPAC Group, and focuses on the work of air-sea cooperative positioning and multi ship cooperative positioning. The air-sea cooperative positioning system is composed of USV and UAV. The UAV Landing based on visual navigation is realized through autonomous positioning for automatic energy supply. The

multi ship cooperative positioning system is composed of multiple ships, which can achieve the desired task through high-precision positioning. The talk introduces the background and demand of the such positioning technologies, analyzes the key problems and challenges of the system, demonstrates the results of technical verification, and prospects future applications of the technology.



Weidong Zhang received his Bachelor degree, Master degree and Ph.D. from Zhejiang University. He is the receipt of the National Science Fund for Distinguished Young Scholars, Alexander von Humboldt fellow, and the Excellent Discipline Leader of Shanghai. He is currently Director of the Engineering Research Center of Marine Automation, Shanghai Municipal Education Commission. His research interests include intelligent control theory and artificial intelligence theory, and their application in ocean unmanned systems. His academic contribution is to put forward quantitative control theory. He has published 1 English monograph and more than 160 SCI papers, and holds 52 invention patents. His paper has won the IEEE CCTA Excellent Paper and the IET CTA Best Paper Award.

CCTA 2020

Development Forum 2

7月28日 15:20-16:50

July 28, 15:20-16:50

Cooperative Robots
协作机器人

Chair: Weidong Zhang (Shanghai Jiaotong University, China)

Panelists: Qiang Huang (Beijing Institute of Technology, China)
 Panfeng Huang (Northwestern Polytechnical University, China)
 Yili Fu (Harbin University of Technology, China)
 Hao Fang (Beijing Institute of Technology, China)

Abstract: Cooperation is an important feature of many robots, including cooperation among different functional units of robots and cooperation among different robots. In this plenary panel discussion, we invited domestic authoritative experts to introduce the international latest research results on humanoid robot, space robot, surgical robot and multi-agent cooperation, analyze the bottleneck problems in this field, and prospect the future trend. This development forum provides an opportunity for interested participants to interact with the experts in the field through face-to-face communication.

Title: Humanoid Robotics: Latest Progress, Challenges and Insights on Its Development

Abstract: Being able to walk with two legs and manipulate tools with both hands, humanoid robots can easily adapt to our daily environment and has application in wide fields including social services and public security. This presentation begins with an overview of the state-of-the-art humanoid robots in the world and then gives an assessment of the gaps and challenges that Chinese and global developers are facing. In this presentation, it is proposed that improvements can be made in core components, environment adaptability and intelligent manipulations that mimic human. The presentation concludes with an introduction of the each generation of BHR Humanoids and its latest progress.



Qiang Huang is a professor at Beijing Institute of Technology, director of the Ministry of Education Key Laboratory for Biomimetic Robots, executive director of Beijing Advanced Innovation Center for Intelligent Robots and Systems (BAICIRS). Prof. Huang was appointed as one of the first Scientific and Technological Innovation Leading Talents of China's "Ten Thousand Talent Program", awarded Distinguished Professor under the Changjiang Scholars Program, and granted National Science Fund for Distinguished Young Scholars.

He serves as a member of the editorial boards of several international academic journals including *Advanced Robotics* and *Intl. J. Social Robotics*. He is also a co-founder of IEEE TC for Cyborg and Bionic Systems (CBS), the IEEE CBS international conference series and a founding editor of the journal *Cyborg and Bionic Systems*. In recent years, Professor Huang as general chairs has organized a number of international conferences including IEEE-Humanoids 2018, IEEE-ROBIO 2017, IEEE-CBS 2017 and ICME 2017.

His research interests include bionic robotics, micro/nano-robotics and smart prosthesis. He led the development of BHR robots, published over 100 papers in SCI journals and has been authorized more than 70 patents. For his contribution, Prof. Huang received the Second Prize of State Technological Invention, IFToMM's Award of Merit and over 10 awards for his papers in international conferences.

Title: Key Technology and Application of Intelligent Space Robots

Abstract: In the 21st century, on-orbit service and maintenance technology have become a new hotspot in the development of aerospace high-tech field and strategic commanding height of national security. As an effective means to carry out this task, space robots have become a research hotspot in the field of spacecraft on-orbit service and

maintenance technology. This report will introduce the key technology research and on-orbit test of space robots developed by the Research Center for Intelligent Robotics, Northwestern Polytechnical University with the support of national major missions and projects. Firstly, the report has expounded the development and flight test of teleoperation system in the major task of "space maintenance technology scientific experiment" in China. Secondly, the key technology research and development of a new tethered space robot have been introduced. And the difficult problems and development trends of space robots have been sorted out. Finally, the report has prospected the application potentiality of space robots in on-orbit service, manned space engineering and deep space exploration.



Panfeng Huang is now Professor and Dean of the College of Automation, Northwestern Polytechnical University. He received B.S. degree and M.S degree from Northwestern Polytechnical University, and Ph.D. from the Chinese University of Hong Kong in Automation and Computer Aided Engineering in 2005. He was granted by the National Science Fund for Distinguished Young Scholars, and was awarded by The National Ten-thousand Talents Program in 2017. He served as a national expert on High-Technology Development Planning (863) from 2008 to 2016, vice president of National Major Task from 2009 to 2016. He was invited expert on National Manned Space Applications and Services from 2015, and served as expert on National New Generation AI Major Project from 2018. He is responsible for developing the first teleoperation system for space

robotic arm in China, which successfully achieved remote operation of the space manipulator by man on the ground. A Tethered Space Robotics system for on-orbit capture including design theory and methodology is first addressed and refined by Prof. Huang. Besides, he was a PI of more than forty national projects in the last ten years, including the National Natural Science Foundation of china, National Key Research and Development Project, and major projects in High-Technology Development Planning (863) etc. He was awarded two Second Prize of National Defense Technology Inventions (ranking first). He has published two English monographs and Two Chinese monographs. He was published over 100 academic papers, more than seventy papers were published or accepted by international journal among these papers. He has been authorized 55 national invention patents.

Title: Latest Progress and Challenges of Intelligent Surgery Robotics

Abstract: Surgical robot is one of the most important research directions since the robot came out, and will become a new growth point of the world economy. But the design, control, test, safety and other aspects of the surgical robot and the industrial robot are very different. This talk introduces the advanced achievements of international surgical robots, expounds the differences between the research and development of surgical robots and industrial robots, analyzes the gap between the most advanced robots in China and the world, and prospects the development direction of the combination of surgical robots and artificial intelligence. At last, the latest development of the research on the surgical robot of Harbin Institute of technology is introduced.



Yili Fu is Professor of Harbin University of Technology, deputy director of National Key Laboratory of Robotics and Systems, deputy director of Robotics Research Institute of Harbin University of Technology, chief scientist of robotics group of Harbin University of Technology, director of robotics Professional Committee of Chinese Society of Artificial Intelligence, leader of Technical Expert Group of Intervention Operation Robot and other projects in the 13th five year National Key Research and Development Plan.

He served as editorial board member of six international journals, including int. J. of Humanoid Robotics. He has served more than 10 times as chairman of IEEE series of famous international academic conferences, chairman of procedure Committee and chairman of organization committee.

He is engaged in research and development of medical robots and special robots. As the chief scientist and project leader of the project, he has undertaken more than 30 national and provincial level projects. The first large-scale robot mechanism simulation system, finger injury and rehabilitation bionic manipulator, digital human brain anatomy

electronic atlas, cardiovascular intervention surgery robot system, abdominal minimally invasive surgery robot system and hydraulic driven biped robot system in China have been developed. He has won 7 provincial and ministerial science and technology progress awards, published more than 100 SCI articles, 5 monographs and 47 national invention patents.

Title: Distributed Cooperative Fault Detection for Multi-Agent Systems

Abstract: Multi-agent systems have received more and more attention because of their many advantages such as low development cost, high efficiency and flexibility. However, the lack of a central agent to monitor the entire system's behavior makes the system extremely vulnerable to interference, trapping and strikes, which may leads to faulty nodes and brings great challenges to the security and reliability of the system. In this talk, we propose a novel distributed fault detection scheme where the cooperation mechanism among agents is applied to achieve reliable detection of faulty agents without improving the hardware performance of agents. This scheme can solve the fault detection and identification problem under the condition that both physical faults in facilities and false-data-injection attacks in communication networks exist, and can also solve the fault detection problem using only relative output measurements. Moreover, a data-driven fault detection algorithm by using both hardware redundancy and time redundancy is investigated.



Hao Fang received his B.S. degree from Xi'an University of Technology in 1995, received the M.S. and Ph.D. degrees from Xi'an Jiaotong University in 1998 and 2002. He has held two postdoctorate appointments at INRIA/France research group of COPRIN and at LASMEA (UNR6602 CNRS/Blaise Pascal University, Clermont-Ferrand, France). He has served as Assistant Professor (2005-2011) and Professor (2011-) in School of Automation, Beijing Institute of Technology. His research interests include multi-agent system control, complex system control and intelligent robots. He won the Second Prize of National Natural Science Awards in 2014, the First Prize of Natural Science Award of the Ministry of Education in 2013, the support of the Program for New Century Excellent Talents in University in 2012.

Development Forum 3

7月28日 14:00-16:00

July 28, 14:00-16:00

Education Reform and Development on Automation

自动化教育改革与发展

Chair: Quan Pan (Northwestern Polytechnical University, China)

Shaoyuan Li (Shanghai Jiao Tong University, China)

Panelists: Renquan Lu (Guangdong University of Technology, China)
 Qinglei Hu (Beihang University, China)
 Song Gao (Xi'an Technological University, China)
 Yu-Xin Zhao (Harbin Engineering University, China)
 Weihua Cao (China University of Geosciences, Wuhan, China)
 Zhunga Liu (Northwestern Polytechnical University, China)

Abstract: CCC2020 proudly presents the development forum on “Education reform and development on automation”. We are very glad to invite six prominent professors in the field of automation to be panelists. They will share their precious experiences and thinking on the reform and development for the undergraduate and graduate education and discipline construction in automation. We want to provide an opportunity for interested participants to interact with these professors through effective dialogues in this forum.



Renquan Lu received his Ph.D. degree in Control Science and Engineering from Zhejiang University, Hangzhou, China, in 2004. He was supported by the National Science Fund for Distinguished Young Scientists of China in 2014, honored as the Distinguished Professor of Pearl River Scholars Program of Guangdong Province, the Distinguished Professor of Yangtze River Scholars Program by the Ministry of Education of China in 2015 and 2017, respectively. Currently, he is a professor of the School of Automation, and the dean of Academy of Science and Humanities, Guangdong University of Technology, Guangzhou, China.

Dr. Lu focuses on the investigation of cooperative control of unmanned systems with variable structure. He has already built production line for UAVs and UGVs from design, processing, integration to assembling, and developed unmanned robots like amphibious vehicle with variable structures, air-water/air-ground autonomous amphibians with variable structures. The self-developed unmanned driving system and the self-developed flight control system have been industrialized as well. Meanwhile, he also obtained the support of the local innovation team of Guangdong Province (level 1), the innovation team in the key areas of the Ministry of Science and Technology, and the research team of the Natural Science Foundation of Guangdong Province. He was honored the first prize of Natural Science of Ministry of Education, First Prize of Guangdong Science and Technology Progress Award. He has 68 ESI highly cited papers, applies for more than 70 patents. In 2019, Prof Lu was selected as highly cited scholar worldwide.



Qinglei Hu received the B.Eng. degree in electrical and electronic engineering from Zhengzhou University, Zhengzhou, China, in 2001, and the Ph.D. degree, with the specialization in guidance and control, in control science and engineering 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. He worked as a postdoctoral research fellow in Nanyang Technological University from 2006-2007, and from 2008-2009, he visited University of Bristol as Senior Research Fellow supported by Royal Society Fellowship, and from 2010-2014, he visited Concordia University, Lakehead University and Nanyang Technological University again as visiting professor.

His current research interests include variable structure control and applications, and fault-tolerant control and applications. In these areas, he has authored or co-authored more than 80 technical papers. He has been actively involved in various technical professional societies such as AIAA, IEEE and ASME, as reflected by AIAA Associate Fellow, IEEE Senior Member and general chair of many international conferences. He also served as Associate Editors for many international journals, such as the IEEE Transaction on Aerospace and Electronic Systems, etc.

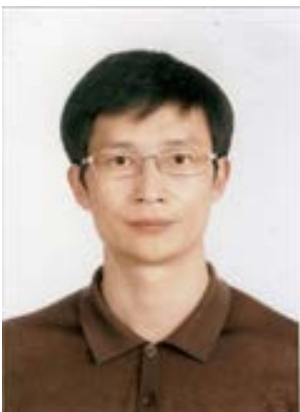


Song Gao received the B.E. degree in detection technology and instrument professional from Huazhong University of Science and Technology in 1988, his M.E. and Ph.D. degrees in control science and control engineering from Northwestern Polytechnical University, in 1995 and 2011, respectively. He visited the Windsor University in Canada as a visiting scientist from October 2007 to September 2008, and has carried out scientific research cooperation and academic exchanges in the United States, Germany, the United Kingdom, and other countries.

He is currently the dean of the School of Electronic Information Engineering of Xi'an Technological University, the director of "International Joint Research Center for Autonomous Systems and Intelligent Controls". His main research interests include intelligent control, detection technology, automatic control system and grid-connected inverter, etc. Now, he works as the national second-level professor and doctoral tutor. He also serves as director of China Command and Control Society, executive director of Shaanxi Automation Society, member of Education Working Group of Control Theory Professional Committee of China Automation Society, IEEE member, national international scientific and technological cooperation expert of Ministry of Science and Technology, coordinating member of the Teaching Guidance Committee of the Automation Specialty in colleges and universities of the Ministry of Education.



Yu-Xin Zhao received his B.S. degree in Automation, and Ph.D. degree in navigation, guidance, and control from Harbin Engineering University (HEU), China, in 2001 and 2005, respectively. He completed his postdoctoral research in control science and engineering from Harbin Institute of Technology in 2008. He is currently the professor and head with the College of Automation, HEU. His research interests include marine navigation system, marine surveying instruments and marine intelligent system. He was awarded the Young scholars of "Chang Jiang Scholars Program" in 2017 and served as the fellow of IET, the fellow of China Navigation Institute.



Weihua Cao received his B.S., M.S., and Ph.D. degrees in engineering from Central South University, Changsha, China, in 1994, 1997, and 2007, respectively. He was a Visiting Scholar with the Department of Electrical Engineering, University of Alberta, Edmonton, AB, Canada, from 2007 to 2008. He is currently a Professor with the School of Automation, China University of Geosciences. His research interests include intelligent control, robotics control, and process control. He has published more than 70 SCI-indexed papers, and won 2 second-class prizes and 2 third-class prizes of Provincial or Ministerial Science and Technology Progress Award.

He is a member of Technical Committee of Control Theory of Chinese Association of Automation and a member of Technical Committee of Intelligent Robots of Chinese Association for Artificial Intelligence. He served as the Chair of Organization Committee of Chinese Control Conference in 2018.



Zhunga Liu received the Bachelor and Master degree from Northwestern Polytechnical University (NPU) in 2007 and 2010 respectively, and the Ph.D. degree from Telecom Bretagne, France in 2014. He is a professor and vice dean of School of Automation, NPU. His current research interests mainly focus on information fusion and pattern recognition. He has been awarded the national youth talent support funding, and the first prize of science and technology of Shaanxi Province. He serves as board of director in The Belief functions and Applications society (BFAS). He was TPC member and session Chair for many international conferences like FUSION 2014-2018, and he serves as Special sessions/panels co-chair in organization committee of FUSION2019. He is the area editor of International Journal of Approximate Reasoning, and the associate editor of *IEEE Transactions on Systems, Man, and Cybernetics: Systems*. He

served as Guest editor of *SCIENCE CHINA Information Sciences*.

CCCC2020

Development Forum 4

7月29日 15:00-17:00

July 29, 15:00-17:00

Control of Stochastic Systems

随机系统的控制

Chair: Feiqi Deng (South China University of Technology, China)

Panelists: Zhi-Xin Liu (Academy of Mathematics and Systems Science, CAS, China)
 Bo Shen (Donghua University, China)
 Xiaoyue Li (Northeast Normal University, China)
 Wuquan Li (Ludong University, China)

Abstract: CCC2020 forum exchanges the latest research results around the analysis and control of stochastic systems and shares research findings. We are very happy to invite authoritative experts in the field of random system control to share our valuable experience and ideas. We hope that through effective dialogue at the conference, the research on the theory of stochastic system control will be further developed in domestic and foreign academic circles.

Title: Convergence of distributed estimation algorithms of multi-agent systems

Abstract: With the development of computer science and communication, sensor networks are widely applied due to the advantages of flexibility, fault tolerance, and ease of deployment. The sensor networks bring more and more data, and how to apply the data from the sensors to design the proper estimation algorithm is a promising research direction. The distributed estimation algorithms are proposed where the distributed estimators are aimed to collectively estimate an unknown parameter from a set of noisy measurements obtained by distributed sensors. The cooperative excitation conditions are introduced, under which the convergence of the distributed estimation algorithms can be obtained without relying on the independency and stationarity assumptions of regression vectors which are commonly used in existing literature. Furthermore, we show that all sensors can cooperate to fulfill the estimation task even though any individual sensor not.



Zhi-Xin Liu received the B.S. degree in Mathematics from Shandong University, China, in 2002, and the Ph.D. degree in control theory from Academy of Mathematics and Systems Science (AMSS), Chinese Academy of Sciences (CAS), in 2007. She is currently a full professor of AMSS, CAS, and the director of the Key Laboratory of Systems and Control of CAS. She had visiting positions at KTH Royal Institute of Technology, University of New South Wales, Canberra and University of Maryland, College Park. She was a recipient of the T. J. Tarn Best Theoretical Paper Award of the 13th World Congress on Intelligent Control and Automation in 2018, a recipient of the Outstanding Young Scholar Award by Chinese Society of Industrial and Applied Mathematics in 2015, and a recipient of SIGEST paper award in 2014. She now serves as the Deputy Editor-in-Chief for *Journal of Systems Science and Mathematics*, Associate Editor for *Science China Information Sciences*, *Control Theory and Applications*. She also serves as the vice-chair of the CSIAM Activity Group on Complex Networks and Complex Systems, and the General Secretary of Technical Committee on Control theory of Chinese Association on Automation. Her current research interests are complex systems, multi-agent systems and distributed estimation.

Title: Control and Filtering with Aperiodic Samplings

Abstract: Aperiodic sampled-data systems have attracted increasing attention from researchers. In this talk, the aperiodic samplings are divided into passive and initiative sampling fashions. In the case of passive sampling, some new stochastic sampling phenomena are investigated and the results on the control and filtering problems with such stochastic samplings are presented. For the case of initiative sampling, the event-triggering strategy is adopted and the corresponding event-based filter is designed. Moreover, the future research topics related to aperiodic sampled-

data systems are discussed.



Bo Shen received his B.Sc. degree in mathematics from Northwestern Polytechnical University, Xi'an, China, in 2003 and the Ph.D. degree in control theory and control engineering from Donghua University, Shanghai, China, in 2011. He is currently a Professor with the College of Information Science and Technology, Donghua University, Shanghai, China. From 2009 to 2010, he was a Research Assistant in the Department of Electrical and Electronic Engineering, the University of Hong Kong, Hong Kong. From 2010 to 2011, he was a Visiting PhD Student in the Department of Information Systems and Computing, Brunel University, U.K. From 2011 to 2013, he was a Research Fellow (Scientific co-worker) in the Institute for Automatic Control and Complex Systems, University of Duisburg-Essen, Germany. His research interests include nonlinear control and filtering, stochastic control and filtering, as well as complex networks and neural networks. He has published around 80 papers in refereed international journals.

Title: Delay Feedback Control for Switching Diffusion Systems Based on Discrete Time Observations

Abstract: For the sake of saving time and costs the feedback control based on discrete-time observations is used to stabilize the switching diffusion systems. Response lags are required by most of physical systems and play a key role in the feedback control. The aim of this paper is to design delay feedback control functions based on the discrete-time observations of the system states and the Markovian states in order for the controlled switching diffusion system (SDS) to be exponentially stable in p th moment and probability one as well as stable in H_∞ . The designed control principles are implementable to stabilize quasi-linear and highly nonlinear SDSs. For quasi-linear SDSs the criteria are sharp that under the control with high strength the controlled SDSs will be stable (bounded) while under the weaker control they will be unstable (unbounded) in mean square. The sample and moment Lyapunov exponents are estimated which have close relationship with the time delays.



Xiaoyue Li, Professor of Northeast Normal University, PhD supervisor, American Mathematics Reviewer. She is engaged in the study of stability theory of diffusion systems and switching diffusion systems as well as their numerical approximations. She published more than 30 SCI papers with a single citation rate of more than 200 times. Some research results were published in *J. Differential Equations*, *SIAM J. Numer. Anal.*, *SIAM J. Appl. Math*, *Automatica* and so on. Her research are supported by several NSFC projects and others.

Title: Control and analysis of stochastic high-order nonlinear systems

Abstract: Stochastic high-order nonlinear systems is an important class of stochastic systems including stochastic underactuated mechanical system as a special case. Due to the Jacobian linearizations of such systems are neither controllable nor feedback linearizable, with the effect of stochastic noise, the control and analysis is nontrivial. In this talk, we aim to present the results on output-feedback stabilization, output-feedback tracking, and cooperative control of stochastic high-order nonlinear systems. Stochastic homogeneous domination technique and distributed integrator backstepping design method are developed.



Wuquan Li received his Ph.D. degree in College of Information Science and Engineering, Northeastern University, China, in 2011. From 2012 to 2014, he carried out his postdoctoral research with Institute of Systems Science, Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China. From 2018 to 2019, he was a visiting scholar in University of California, San Diego, USA. Since January 2011, he has been with School of Mathematics and Statistics Science, Ludong University, where he is currently a professor.

Dr. Li is Young Taishan Scholar and Shandong Provincial Distinguished Young Scholar. He has received Shandong Province Youth Science and Technology Award. He has presided three National Natural Science Foundations. As the first author, he has published 11 papers on the three top journals: *Automatica*, *IEEE Transactions on Automatic Control*, and *SIAM Journal on Control and Optimization*. His research interests include stochastic nonlinear systems control and identification of stochastic nonlinear systems

CCCC2020

会前专题讲座 (Pre-conference Tutorial Workshops)

- 会议时间: 2020年7月26日
Time: July 26, 2020

Workshop 1

7月26日08:30-11:30, 13:30-16:30

July 26, 08:30-11:30, 13:30-16:30

System Performance Analysis and Optimization

Chair: Qing-Shan Jia (Tsinghua University, China)

Lijun Long (Northeastern University, China)

Lecturer: Zhendong Sun (Academy of Mathematics and Systems Science, CAS, China)
Xiangru Xu (University of Wisconsin-Madison, USA)
Zhongsheng Hou (Qingdao University, Qingdao, China)
Dongbin Zhao (Institute of Automation, Chinese Academy of Sciences, China)
Zhiyong Chen (The University of Newcastle, Australia)
Yilin Mo (Tsinghua University, China)

Title: Stabilizing Design of Switched Linear Systems

Abstract: In this talk, we focus on the problem of stabilization for switched linear systems. While much progress has been made, the problem is still largely open. We review the essential difficulties for solving the problem, including (1) non-existence of convex control-Lyapunov functions; (2) the one-subsystem-one-linear-feedback scheme is generally insufficient; and (3) finite-automaton-induced switching is generally insufficient. We introduce recent progress towards (partly) overcoming the difficulties.



Zhendong Sun is with the Key Laboratory of Systems & Control, Academy of Mathematics & Systems Science, Chinese Academy of Sciences, where he is currently a Researcher. His research interests are in the fields of nonlinear control systems, switched and hybrid systems, and nano-micro-electronic systems. He is the first author of the monographs “Switched Linear Systems-Control and Design” and “Stability Theory of Switched Dynamical Systems” (London: Springer, 2005 & 2011). He serves/served as Associate Editor for IEEE Transactions on Automatic Control and International Journal of Robust and Nonlinear Control.

Title: Control Barrier Functions for Safety-Critical Control of Dynamic Systems

Abstract: We are witnessing a new era of autonomy – from self-driving cars in the streets, to delivery drones in the sky, to exploration rovers on Mars. These autonomous systems are safety critical and involve the tight coupling between potentially conflicting control objectives and safety constraints. In this talk, I will describe a provably-safe optimization-based feedback control framework for the safety-critical control of dynamic systems where the safety condition is specified in terms of forward invariance of a set and verified via control barrier functions and the control objective is specified in terms of control Lyapunov functions. I will also demonstrate the application of this framework to robotic systems.



Xiangru Xu is currently an assistant professor in the Department of Mechanical Engineering in the University of Wisconsin-Madison, USA. Before joining UW-Madison, he held postdoc positions in the University of Michigan-Ann Arbor and the University of Washington-Seattle. He received his Ph.D. degree from Academy of Mathematics and Systems Science, Chinese Academy of Sciences, and B.S. degree from Beijing Normal University. He received the Best New Application Paper Award from IEEE Transactions on Automation Science and Engineering in 2019.

Title: Does R. E. Kalman's Paradigm Still Works at the Big Data/AI Age?

Abstract: Professor R. E. Kalman was the founder and visionary intellectual leader of the field of mathematical system theory. His contributions to optimal control, optimal estimation and filtering, realization theory, and mathematical system theory are at the foundations of these fields. They have significantly influenced much of the subsequent developments. Their influence transcends well beyond system and control into diverse fields of engineering, mathematics, physical sciences, social sciences, and others. However, there have been very significant developments in science, engineering, technology, and society in the last few decades. It is clear that change will accelerate further in the coming decades. Thus, thinking about the relevance and implications of the Kalman's paradigm of the control theory under the big data or the AI age, that might illuminate the path of the system and control research for the future.

This talk includes five parts. What is the Kalman's Paradigm; The Challenges under the Kalman's Paradigm the Problems We Face under the Big Data/AI Age; The Possible Solutions for the Post-Kalman Era; and the Conclusion.



Zhongsheng Hou (SM'13) received the B.S. and M.S. degrees from Jilin University of Technology, Jilin, China, in 1983 and 1988, respectively, and the Ph.D. degree from Northeastern University, Shenyang, China, in 1994.

From 1995 to 1997, he was a Postdoctoral Fellow with Harbin Institute of Technology, Harbin, China. From 2002 to 2003, he was a Visiting Scholar with Yale University, CT, USA. From 1997 to 2018, he was with Beijing Jiaotong University, Beijing, China, where he was a Distinguished Professor and the Founding Director of Advanced Control Systems Lab, and the Head of the Department of Automatic Control. He is currently a Chair Professor with the School of Automation, Qingdao University, Qingdao, China.

His research interests are in the fields of data-driven control, model-free adaptive control, learning control, and intelligent transportation systems. Up to now, he has authored or co-authored more than 180 peer-reviewed journal papers and over 140 papers in prestigious conference proceedings. He has authored two monographs, *Nonparametric Model and its Adaptive Control Theory*, Science Press (in Chinese), 1999, and *Model Free Adaptive Control: Theory and Applications*, CRC Press, 2013. His pioneering work on model-free adaptive control has been verified in more than 160 different field applications, laboratory equipment and simulations with practical background, including wide-area power systems, lateral control of autonomous vehicles, temperature control of silicon rod. His works on data-driven learning and control has been supported by multiple projects supported by the National Natural Science Foundation of China (NSFC), including three Key Projects in 2009, 2015, and 2019, respectively, and a Major International Cooperation Project in 2012.

Prof. Hou is the Founding Director of the Technical Committee on Data Driven Control, Learning and Optimization (DDCLO), Chinese Association of Automation (CAA), and is a Fellow of CAA. He is also an International Federation of Automatic Control Technical Committee Member of both "Adaptive and Learning Systems" and "Transportation Systems." Dr. Hou was the Guest Editor for two Special Sections on the topic of data-driven control of the *IEEE Transactions on Neural Networks* in 2011, and the *IEEE Transactions on Industrial Electronics* in 2017.

Title: Deep Reinforcement Learning Algorithms and Applications

Abstract: Deep reinforcement learning (DRL), combines the merits of the decision ability of reinforcement learning and the perception ability of deep learning, is becoming a major artificial intelligence (AI) algorithm. Recently, Google DeepMind proposed several DRL algorithms to conquer the Atari video games, Go, and Starcraft II, thought to be several milestones in AI. The corresponding papers were also published in Nature and Science. Other teams in OpenAI and Microsoft also had great achievements in Dota2 video game and Mahjong separately with the strong support of DRL algorithm. This talk will introduce these shining hotspots, typical DRL algorithms, related applications, and discuss future potential directions.



Dongbin Zhao is a professor at Institute of Automation, Chinese Academy of Sciences, and also with the University of Chinese Academy of Sciences, China. He has published 4 books, and over 80 international journal papers. Dr. Zhao is an IEEE senior member. He serves as the Associate Editor of *IEEE Transactions on Neural Networks and Learning Systems* (TNNLS), *IEEE Transactions on Cybernetics*, *IEEE Computational Intelligence Magazine* (CIM), etc. He is the Chair of Technical Activities Strategic Planning Sub-Committee, and was the Chair of Beijing Chapter, Adaptive Dynamic Programming and Reinforcement Learning Technical Committee of IEEE Computational Intelligence Society. He works as several guest editors of renowned international journals, including two lead guest editors on deep reinforcement learning in IEEE TNNLS and IEEE CIM. He is involved in organizing many international

conferences. His current research interests are in the area of deep reinforcement learning, computational intelligence, autonomous driving, game artificial intelligence, robotics, smart grids, etc.

Title: Secure Networked Control of Large-Scale Cyberphysical Systems using Cryptographic Techniques

Abstract: This work aims to create a secure environment for networked control systems composed of multiple dynamic entities and computational control units via networking, in the presence of disclosure attacks. In particular, we consider the situation where some dynamic entities or control units are vulnerable to attacks and can become malicious. Our objective is to ensure that the input and output data of the benign entities are protected from the malicious entities as well as protected when they are transferred over the networks in a distributed environment. Both these security requirements are achieved using cryptographic techniques. However, the use of cryptographic mechanisms brings additional challenges to the design of controllers in the encrypted state space; the closed-loop system gains and states are required to match the specified cryptographic algorithms. We propose a methodology for the design of secure networked control systems integrating the cryptographic mechanisms with the control algorithms. The approach is based on the separation principle, with the cryptographic techniques addressing the security requirements and the control algorithms satisfying their performance requirements.



Zhiyong Chen received his Bachelor degree from the Department of Automation, University of Science and Technology of China in 2000. He received his M.Phil. and Ph.D. degrees from the Department of Mechanical and Automation Engineering, The Chinese University of Hong Kong, in 2002 and 2005, respectively. He worked as a Research Associate at the University of Virginia during 2005-2006. He joined the School of Electrical Engineering and Computing, the University of Newcastle, Australia in 2006 where he is currently a Full Professor. He was elected to Changjiang Scholar Chair Professorship with Central South University in 2016. He is the author of over 100 journal papers and one textbook. He is the recipient of National Natural Science Award of China (second prize) in 2010, and several international conference best paper awards. He was/is an Associate Editor for many international journals including *IEEE Transactions on Automatic Control*, *Automatica*, *IEEE Transactions on Cybernetics*.

IEEE Transactions on Automatic Control, *Automatica*, *IEEE Transactions on Cybernetics*.

Title: Secure Information Fusion in Cyber-Physical Systems

Abstract: The concept of Cyber-Physical System (CPS) refers to the embedding of sensing, communication, control and computation into the physical spaces. Today, CPSs can be found in areas as diverse as aerospace, automotive, chemical process control, civil infrastructure, energy, health-care, manufacturing and transportation, most of which are safety critical. Any successful attack to such kind of systems can cause major disruptions, leading to great economic losses and may even endanger human lives. The first-ever CPS malware (called Stuxnet) was found in July 2010 and has raised significant concerns about CPS security. In this talk we discuss how to design secure and efficient information fusion algorithms for CPS. We first consider the binary hypothesis testing problem with multiple sensors and design secure algorithm against an unknown set of Byzantine sensors. We further quantify the cost of adding security to the system and prove that our algorithm causes minimum impact on the performance in the absence of an attack. Next we consider the state estimation problem, and prove necessary and sufficient conditions, under which a convex optimization based estimator is secure against Byzantine attacks.



Yilin Mo is an Associate Professor in the Department of Automation, Tsinghua University. He received his Ph.D. in Electrical and Computer Engineering from Carnegie Mellon University in 2012 and his Bachelor of Engineering degree from Department of Automation, Tsinghua University in 2007. Prior to his current position, he was a postdoctoral scholar at Carnegie Mellon University in 2013 and California Institute of Technology from 2013 to 2015. He held an assistant professor position in the School of Electrical and Electronic Engineering at Nanyang Technological University from 2015 to 2018. His research interests include secure control systems and networked control systems, with applications in autonomous driving and sensor networks.

第七届中国自动化学会控制理论专业委员会“杰出贡献奖”获奖者 (The Awardee of the 7th TCCT Outstanding Contribution Award)



段广仁, 1989 年获哈尔滨工业大学博士学位。1991 至今任哈尔滨工业大学教授, 是哈尔滨工业大学控制理论与制导技术研究中心的创始人和主任。

主要研究方向为控制系统的参数化设计、鲁棒控制和航天器控制等。作为第一完成人获国家自然科学二等奖 2 项, 是中国科学院院士, IEEE Fellow, IET Fellow 和 CAA Fellow。

段广仁院士曾任第九、十届中国自动化学会控制理论专业委员会 (TCCT) 副主任 (2008-2017); 第十一届 TCCT 委员(2018-2022)。在 TCCT 任职期间他汇集了会员们的想法, 共同推动了中国控制大会, 并大力发展了 CCC。

Guang-Ren Duan received his Ph.D. from Harbin Institute of Technology in 1989. Since 1991, he has been a professor in Harbin Institute of Technology. He is the founder and the Director of the Center for Control Theory and Guidance Technology in Harbin Institute of Technology.

His main research interests include parametric design of control systems, robust control, spacecraft control and so on. He has won two State Natural Science Awards of China, both as the principal investigator. He is now Academician of the Chinese Academy of Sciences, the Fellow of IEEE, IET, and CAA (Chinese Association of Automation).

Professor Duan served as the Vice-President of the 9th and 10th Technical Committee on Control Theory (TCCT), CAA (2008-2017), and is currently member of the 11th TCCT. He pooled members' idea together to promote the Chinese Control Conference (CCC) and has developed CCC tremendously while serving as the Vice-President of TCCT.

会议程序总览 (Program at a Glance)

第39届中国控制会议
 The 39th Chinese Control Conference
 中国·沈阳 (Shenyang, China)
 July 27-29, 2020

| 7月26日 (星期日) July 26 (Sunday) | 7月27日 (星期一) July 27 (Monday) | | 7月28日 (星期二) July 28 (Tuesday) | | 7月29日 (星期三) July 29 (Wednesday) | |
|--|--|---|--|---|--|---|
| 08:30-11:30 13:30-14:30 会前专题讲座 1/ Pre-conference workshop 1 | 08:30-09:00 开幕式/Opening Ceremony 09:00-10:00 大会报告 1/ Plenary Talk 1 by Jie Chen 10:20-11:20 大会报告 2/ Plenary Talk 2 by Anuradha Annaswamy 大会报告 3/ Plenary Talk 3 by Etienne Burdet | 13:30-15:30 关奖答辩/ Award Session MoA00: Guan Zhao-Zhi Award Finalist | 08:30-09:30 大会报告 4/ Plenary Talk 4 by Feng Qian 09:30-10:30 大会报告 5/ Plenary Talk 5 by George J. Pappas 10:50-12:20 专题研讨 1/Panel Discussion 1 From Automation to Intelligence: Opportunities and Challenges | 13:30-15:30 口头报告/ Oral Sessions TuA01-28 15:30-15:50 茶歇/ Tea Break 15:50-17:50 口头报告/ Oral Sessions TuB01-28 13:30-15:30 张贴报告/ Poster Session PTuA 15:50-17:50 张贴报告/ Poster Session PTuB | 13:30-15:00 发展论坛 1/ Development Forum 1 15:20-16:50 发展论坛 2/ Development Forum 2 14:00-16:00 发展论坛 3/ Development Forum 3 | 08:30-09:30 大会报告 6/ Plenary Talk 6 by Xinghuo Yu 09:30-10:30 大会报告 7/ Plenary Talk 7 by Huanguang Zhang 10:50-12:20 专题研讨 2/ Panel Discussion 2 Advanced Robots: Systems and Control |
| 14:30-17:00 控制理论专业委员会会议/ Meeting of TCCT | 13:30-15:30 口头报告/ Oral Sessions MoA01-27 15:30-15:50 茶歇/ Tea Break 15:50-17:50 口头报告/ Oral Sessions MoB01-27 13:30-15:30 张贴报告/ Poster Session PMoA 15:50-17:50 张贴报告/ Poster Session PMoB | 15:00-17:00 发展论坛 4/ Development Forum 4 | 17:00-17:30 闭幕式/ Closing Ceremony | 16:00-17:30 《关肇直奖》评奖委员会会议/ Meeting of Guan Zhao-Zhi Award Evaluation Committee | | 20:00-22:00 《中国科学》—中国控制会议张贴论文奖评奖委员会会议/ Meeting of SCIS-CCC Poster Award Evaluation Committee |

| Track | July 27, Monday | | July 28, Tuesday |
|-------|--|---|--|
| 0 | MoA00 Guan Zhao-Zhi Award Finalist | | |
| 1 | MoA01 Systems Theory and Control Theory (1) | MoB01 Systems Theory and Control Theory (2) | TuA01 Systems Theory and Control Theory (3) |
| 2 | MoA02 Nonlinear Systems and Control (1) | MoB02 Nonlinear Systems and Control (3) | TuA02 Nonlinear Systems and Control (4) |
| 3 | MoA03 Nonlinear Systems and Control (2) | MoB03 Complexity and Complex System Theory | TuA03 Stochastic Systems (1) |
| 4 | MoA04 System Modeling and Identification (1) | MoB04 System Modeling and Identification (2) | TuA04 Optimal Control (1) |
| 5 | MoA05 Optimization and Scheduling (1) | MoB05 Optimization and Scheduling (2) | TuA05 Optimization and Scheduling (3) |
| 6 | MoA06 Robust Control (1) | MoB06 Robust Control (2) | TuA06 Adaptive Control and Learning Control (1) |
| 7 | MoA07 Fuzzy System and Fuzzy Control (1) | MoB07 Fuzzy System and Fuzzy Control (2) | TuA07 Process Control (1) |
| 8 | MoA08 Predictive Control (1) | MoB08 Predictive Control (2) | TuA08 Motion Control (1) |
| 9 | MoA09 Signal Processing and Information Fusion (1) | MoB09 Signal Processing and Information Fusion (2) | TuA09 Signal Processing and Information Fusion (3) |
| 10 | MoA10 Big Data Analysis and Control (1) | MoB10 Big Data Analysis and Control (2) | TuA10 Navigation and Guidance (1) |
| 11 | MoA11 Control Design (1) | MoB11 Control Design (2) | TuA11 Fault Diagnosis and Reliable Control (1) |
| 12 | MoA12 Intelligent Robots (1) | MoB12 Intelligent Robots (2) | TuA12 Intelligent Robots (3) |
| 13 | MoA13 Control of Network Systems and Networked Control Systems (1) | MoB13 Control of Network Systems and Networked Control Systems (2) | TuA13 Control of Network Systems and Networked Control Systems (3) |
| 14 | MoA14 Multi-Agent Systems and Distributed Control (1) | MoB14 Multi-Agent Systems and Distributed Control (2) | TuA14 Multi-Agent Systems and Distributed Control (3) |
| 15 | MoA15 New Energy Technology and Control in Environment (1) | MoB15 New Energy Technology and Control in Environment (2) | TuA15 Smart Grid (1) |
| 16 | MoA16 Vehicle Control and Transportation Systems (1) | MoB16 Vehicle Control and Transportation Systems (2) | TuA16 Vehicle Control and Transportation Systems (3) |
| 17 | MoA17 Aircraft Control (1) | MoB17 Aircraft Control (2) | TuA17 Aircraft Control (3) |
| 18 | MoA18 Pattern Recognition (1) | MoB18 Pattern Recognition (2) | TuA18 Pattern Recognition (3) |
| 19 | MoA19 Neural Networks and Deep Learning (1) | MoB19 Neural Networks and Deep Learning (2) | TuA19 Neural Networks and Deep Learning (3) |
| 20 | MoA20 IS: Control of Industrial Robots and Actuator Systems | MoB20 IS: Fault Diagnosis and Fault Tolerance Control of Aerospace Vehicle | TuA20 IS: Quantum Control and Learning (1) |
| 21 | MoA21 IS: Analysis and Control of Networked Systems (1) | MoB21 IS: Analysis and Control of Networked Systems (2) | TuA21 IS: Hybrid Logical Systems (1) |
| 22 | MoA22 IS: Distributed Schemes for Optimization and Games in Multi-Agent Systems over Networks | MoB22 IS: Advanced Control of Robotic System and Its Applications | TuA22 IS: Nonlinear Control and Optimization |
| 23 | MoA23 IS: Active Disturbance Rejection Control: Methodology, Practice and Analysis (1) | MoB23 IS: Active Disturbance Rejection Control: Methodology, Practice and Analysis (2) | TuA23 IS: Swarm Intelligence Technology for Distributed Space-based Systems |
| 24 | MoA24 IS: Theory and Application of Networked Systems | MoB24 IS: Optimization and Control for Cyber Physical System | TuA24 IS: Advanced Control Design Methods |
| 25 | MoA25 IS: Recent Advances in Intelligent and Learning Control: Theory and Application | MoB25 IS: Stochastic Systems Identification, Optimization and Control | TuA25 IS: Multi-agent Optimization Theory and Applications |
| 26 | MoA26 IS: Information-based Control of Networked Systems and Its Applications | MoB26 IS: Distributed Control and Optimization of Multiagent Systems | TuA26 IS: Modeling and Control of Flexible Structures and Their Applications |
| 27 | MoA27 IS: Multi-agent Systems: Control and Application | MoB27 IS: Analysis and Control of Networked System | TuA27 IS: Frontiers in Distributed Optimization and Control for Multi-agent Systems |
| 28 | | | TuA28 IS: Social Networks and Dynamics |

Poster Session P MoA

Poster Session P MoB

| Track | July 28, Tuesday | July 29, Wednesday |
|-------|---|---|
| 1 | TuB01 Systems Theory and Control Theory (4) | WeA01 Stability and Stabilization |
| 2 | TuB02 Nonlinear Systems and Control (5) | WeA02 Nonlinear Systems and Control (6) |
| 3 | TuB03 Stochastic Systems (1) | WeA03 Hybrid Systems and DEDS |
| 4 | TuB04 Optimal Control (2) | WeA04 Variable Structure Control |
| 5 | TuB05 Optimization and Scheduling (4) | WeA05 Game Theory and Social Networks |
| 6 | TuB06 Adaptive Control and Learning Control (2) | WeA06 Adaptive Control and Learning Control (3) |
| 7 | TuB07 Process Control (2) | WeA07 Intelligent Manufacturing and Industrial Intelligence |
| 8 | TuB08 Motion Control (2) | WeA08 Motion Control (3) |
| 9 | TuB09 Signal Processing and Information Fusion (4) | WeA09 Signal Processing and Information Fusion (5) |
| 10 | TuB10 Navigation and Guidance (2) | WeA10 Navigation and Guidance (3) |
| 11 | TuB11 Fault Diagnosis and Reliable Control (2) | WeA11 Fault Diagnosis and Reliable Control (3) |
| 12 | TuB12 Intelligent Robots (4) | WeA12 Social/Economic Systems and Control |
| 13 | TuB13 Sensor Networks and Internet of Things (IoT) | WeA13 Multi-Agent Systems and Distributed Control (5) |
| 14 | TuB14 Multi-Agent Systems and Distributed Control (4) | WeA14 Multi-Agent Systems and Distributed Control (6) |
| 15 | TuB15 Smart Grid (2) | WeA15 System Simulation, Integration and Evaluation |
| 16 | TuB16 Vehicle Control and Transportation Systems (4) | WeA16 Data-Driven Modeling and Control |
| 17 | TuB17 Aircraft Control (4) | WeA17 Systems Biology and Life Systems |
| 18 | TuB18 Pattern Recognition (4) | WeA18 Pattern Recognition (5) |
| 19 | TuB19 Neural Networks and Deep Learning (4) | WeA19 Neural Networks and Deep Learning (5) |
| 20 | TuB20 IS: Quantum Control and Learning (2) | WeA20 Neural Networks and Deep Learning (6) |
| 21 | TuB21 IS: Hybrid Logical Systems (2) | WeA21 IS: Analysis, Synthesis and Applications of Multiple-Time-Scale Systems |
| 22 | TuB22 IS: Modeling, Sensing and Control for Vehicle and Robot Systems | WeA22 IS: Sensing and Control with Multi-Agents |
| 23 | TuB23 IS: Intelligent Control of Unmanned System | WeA23 IS: Recent Developments in Anti-disturbance Control Theory and Applications |
| 24 | TuB24 IS: New Challenges in Engine Control | WeA24 IS: Navigation, Guidance and Control of Unmanned Autonomous Vehicles |
| 25 | TuB25 IS: Model, control and optimization of complex systems | WeA25 IS: Advances in Intelligent Robotic Control |
| 26 | TuB26 IS: Security and Control in Intelligent Cyber-Physical Systems | WeA26 IS: Advances in Distributed Control and Optimization of Cyber-physical Systems |
| 27 | TuB27 IS: Distributed Control, Estimation and Computation of Multi-agent Systems | WeA27 IS: Switched Systems, Switching Control and Its Applications |
| 28 | TuB28 IS: Distributed Optimization of Multi-agent Systems and Its Applications to Economic Dispatch for Smart Grid | |

Poster Session PTuA

Poster Session PTuB

Technical Program

Monday, July 27, 2020

| | | | | | |
|--|-------------|--|--|--|--|
| PL1 | 9:00-10:00 | | | | |
| 大会报告1 | | | | | |
| Plenary Lecture 1 | | | | | |
| Chair: Huang, Jie | | The Chinese University of Hong Kong | | | |
| ► PL-1 | 9:00-10:00 | | | | |
| ^{PL1} Optimization-Based Cooperative Decision and Control of Multi-Agent Systems | | | | | |
| Chen, Jie | | Tongji Univ., China | | | |
| PL2 | 10:20-11:20 | | | | |
| 大会报告2 | | | | | |
| Plenary Lecture 2 | | | | | |
| Chair: Xie, Lihua | | Nanyang Technological Univ., Singapore | | | |
| ► PL-2 | 10:20-11:20 | | | | |
| ^{PL2} Lessons from Adaptive Control: Towards Real-time Machine Learning | | | | | |
| Annaswamy, Anuradha | | MIT, USA | | | |
| PL3 | 11:20-12:20 | | | | |
| 大会报告3 | | | | | |
| Plenary Lecture 3 | | | | | |
| Chair: Qiao, Hong | | Chinese Academy of Sciences | | | |
| ► PL-3 | 11:20-12:20 | | | | |
| ^{PL3} Interaction Control in Humans and with Robots | | | | | |
| Burdet, Etienne | | Imperial College London, UK | | | |
| MoA00 | 13:30-15:35 | | | | |
| Award Session: Guan Zhao-Zhi Award Finalists | | | | | |
| Chair: Chen, Jie | | Beijing Inst. of Tech. | | | |
| Co-Chair: Zhao, Qianchuan | | Tsinghua Univ. | | | |
| ► MoA00-1 | 13:30-13:55 | | | | |
| ⁰⁰⁶⁹ Value-iteration-based Adaptive Optimal Reagents Control for Antimony Flotation Process | | | | | |
| Li, Zhongmei | | East China Univ. of Sci. & Tech. | | | |
| Huang, Mengzhe | | New York Univ. Tandon School of Engineering | | | |
| Gui, Weihua | | Central South Univ. | | | |
| Jiang, Zhong-Ping | | New York Univ. | | | |
| ► MoA00-2 | 13:55-14:20 | | | | |
| ¹²⁸² Distributed Observer for General Linear Leader Systems over Periodic Switching Digraphs | | | | | |
| He, Changran | | The Chinese Univ. of Hong Kong | | | |
| Huang, Jie | | Chinese Univ. of Hong Kong, China | | | |
| ► MoA00-3 | 14:20-14:45 | | | | |
| ¹⁴⁷⁸ Intrinsic Formation Control under Finite-Time Differential Game Framework | | | | | |
| Li, Yibei | | KTH-Royal Inst. of Tech. | | | |
| Du, Juan | | South China Univ. of Tech. | | | |
| Hu, Xiaoming | | Royal Inst. of Tech. | | | |
| ► MoA00-4 | 14:45-15:10 | | | | |
| ²¹⁵³ Bridging the Gap between Opinion Dynamics and Evolutionary Game Theory: Some Equivalence Results | | | | | |
| Wu, Bin | | Beijing Univ. of Post & Telecommunications | | | |
| Du, Jinming | | Northeastern Univ. | | | |
| Wang, Long | | Peking Univ. | | | |
| ► MoA00-5 | 15:10-15:35 | | | | |
| ²³¹⁷ Obstacle-Avoidance Distributed Optimal Coordination of Multiple Euler-Lagrangian Systems | | | | | |
| An, Liwei | | Northeastern Univ. | | | |
| Yang, Guang-Hong | | Northeastern Univ. | | | |
| MoA01 | 13:30-15:30 | | | | |
| Regular Session: Systems Theory and Control Theory (1) | | | | | |
| Chair: Chen, Zengqiang | | Nankai Univ. | | | |
| Co-Chair: Li, Xindong | | China Acad. of Space Tech. | | | |
| ► MoA01-1 | 13:30-13:50 | | | | |
| ⁰¹⁰⁴ 航天器欠测量欠驱动控制模型及可重构判据研究 | | | | | |
| Defective Measure-Drive Models and Reconfiguration Condition Criteria for Spacecrafts | | | | | |
| Wu, Yunli | | Beijing Inst. of Control Engineering | | | |
| Zhao, Tianyi | | Harbin Inst. of Tech. | | | |
| Lin, Bo | | Beijing Inst. of Control Engineering | | | |
| Zeng, Haibo | | Beijing Inst. of Control Engineering | | | |
| ► MoA01-2 | 13:50-14:10 | | | | |
| ⁰²⁰² Third-order Differentiator, Differential Feedback Control and Application in QUAV | | | | | |
| Li, Xia | | Tiangong Univ. | | | |
| Qi, Guoyuan | | Tiangong Univ. | | | |
| ► MoA01-3 | 14:10-14:30 | | | | |
| ⁰²²⁷ An Observer with Integral for Unknown Nonlinear Function and Disturbance of System | | | | | |
| Qi, Guoyuan | | Tiangong Univ. | | | |
| Li, Xia | | Tiangong Univ. | | | |
| Chen, Zengqiang | | Nankai Univ. | | | |
| ► MoA01-4 | 14:30-14:50 | | | | |
| ⁰⁴⁷⁷ Stability Margins of MIMO Linear Interval Systems | | | | | |
| Li, Xindong | | China Acad. of Space Tech. | | | |
| Wang, Yu | | Beijing Inst. of Control Engineering | | | |
| Zou, Kui | | Beijing Inst. of Control Engineering | | | |
| Shi, Zhengwei | | Beijing Inst. of Control Engineering | | | |
| ► MoA01-5 | 14:50-15:10 | | | | |
| ⁰⁵²² Input-to-state Stability for Hybrid Delayed Systems with Delay-dependent Impulses | | | | | |
| Cao, Zhengbao | | Northeastern Univ. | | | |
| ► MoA01-6 | 15:10-15:30 | | | | |
| ⁰⁵³³ Fully Distributed Dynamic Event-Triggered Semiglobal Consensus of Multi-Agent Uncertain Systems with Input Saturation | | | | | |
| Zhao, Guanglei | | Yanshan Univ. | | | |
| Wang, Zhao | | Yanshan Univ. | | | |
| Chen, Xi | | Yanshan Univ. | | | |
| Wei, Haoxiong | | Yanshan Univ. | | | |
| MoA02 | 13:30-15:30 | | | | |
| Regular Session: Nonlinear Systems and Control (1) | | | | | |
| Chair: Zhao, Xia | | Nanjing Univ. of Aeronautics & Astronautics | | | |
| Co-Chair: Fan, Yunsheng | | Dalian Maritime Univ. | | | |
| ► MoA02-1 | 13:30-13:50 | | | | |
| ⁰¹⁵⁵ Probabilistic-constrained Filtering for A Class of Time-varying Systems with Stochastic Nonlinearities and Sensor Saturation | | | | | |
| Zhao, Xia | | Nanjing Univ. of Aeronautics & Astronautics | | | |
| Liu, Chunsheng | | Nanjing Univ. of Aeronautics & Astronautics | | | |
| Wang, Kunyu | | Nanjing Normal Univ. | | | |
| Tian, Engang | | Nanjing Normal Univ. | | | |
| ► MoA02-2 | 13:50-14:10 | | | | |
| ⁰¹⁶⁹ Full-order Observers Design for Impulsive Nonlinear Systems with Unknown Input and Destabilising Impulses | | | | | |
| Tong, Lisheng | | Hunan Univ. of Tech. | | | |
| Liu, Bin | | Hunan Univ. of Tech. | | | |
| Pang, Gonghe | | Hunan Univ. of Tech. | | | |
| Zhong, Yuxuan | | Hunan Univ. of Tech. | | | |
| ► MoA02-3 | 14:10-14:30 | | | | |
| ⁰¹⁹⁶ Removing Feasibility Conditions on Adaptive Fuzzy Control of State-Constrained High-Order Nonlinear Systems | | | | | |
| Wu, You | | Qufu Normal Univ. | | | |
| Xie, Xue-Jun | | Qufu Normal Univ. | | | |
| ► MoA02-4 | 14:30-14:50 | | | | |
| ⁰²⁷⁶ Adaptive Second-order Global Terminal Sliding Mode Direct Torque Control of Switched Reluctance Motor Based on RBFNN | | | | | |
| Sheng, Linhao | | College of Naval Architecture & Electrical Engineering | | | |
| Wang, Guofeng | | Dalian Maritime Univ. | | | |
| Fan, Yunsheng | | Dalian Maritime Univ. | | | |
| ► MoA02-5 | 14:50-15:10 | | | | |

| | | | | | |
|------|--|---|--|--------------|---|
| 0281 | <i>Unknown Time-Varying Input Delay Compensation for Cold Rolling Mill System</i> | Qiu, Xuechao Zhang, Liuliu Hua, Changchun | Yanshan Univ. Inst. of Electrical Engineering Yanshan Univ. | ▶ MoA04-3 | 14:10–14:30 |
| | | | | 0700 | <i>Double Norms Method-Based for Kernel Regression Model Identification</i> |
| | | | | | Liu, Xiaoyong Wang, Yulan Zhang, Nanqing Li, Qing |
| | | | | | Zunyi Normal College Zunyi Normal Univ. Zunyi Normal Univ. Zunyi Normal Univ. |
| | | | | ▶ MoA02-6 | 15:10–15:30 |
| 0576 | <i>Adaptive Command Filtered Backstepping Control for Uncertain Non-linear Systems and Its Application to Power System</i> | Guo, Jinmin Nai, Yongqiang Yang, Qingyu | Shaanxi Shangluo Power Generation Co. LTD Xi'an Jiaotong University Xi'an Jiaotong Univ | ▶ MoA04-4 | 14:30–14:50 |
| | | | | 0968 | <i>Source Term Estimation with Unknown Number of Sources Using Improved Cuckoo Search Algorithm</i> |
| | | | | | Wang, Zhi-Pu Wu, Huai-Ning |
| | | | | | Beihang Univ. Beijing Univ. of Aeronautics & Astronautics |
| | | | | ▶ MoA04-5 | 14:50–15:10 |
| | | | | 1194 | <i>Review of Used Mobile Phone Recognition Method for Recycling Equipment</i> |
| | | | | | Wang, Zixuan Tang, Jian |
| | | | | | Beijing Univ. of Tech. Beijing Univ. of Tech. |
| | | | | ▶ MoA04-6 | 15:10–15:30 |
| | | | | 1386 | <i>Circuit Design of Moving Object Recognition System</i> |
| | | | | | Shan, Dan Zhang, Xiaoxu Lu, Wei |
| | | | | | Dalian Neusoft Univ. of Information Dalian Neusoft Univ. of Information Dalian Univ. of Tech. |
| | | | | MoA05 | 13:30–15:30 |
| | | | | | Regular Session: Optimization and Scheduling (1) |
| | | | | | Chair: Liu, Yefeng Co-Chair: Tian, Miaomiao |
| | | | | | Shenyang Inst. of Tech. Tsinghua Univ. |
| | | | | ▶ MoA05-1 | 13:30–13:50 |
| | | | | 0286 | <i>Multi-UAVs Target Attack Based on Improved Genetic Algorithm</i> |
| | | | | | Su, Jiarui Qi, Juntong Wu, Chong Wang, Mingming Guo, Jinjin |
| | | | | | Tianjin Univ. Tianjin Univ. EFY Intelligent Control TianJin Univ. Tianjin Univ. |
| | | | | ▶ MoA05-2 | 13:50–14:10 |
| | | | | 0312 | <i>Optimization and Application of Flexible Production Line Production Scheduling</i> |
| | | | | | Liu, Yefeng Zhao, Yuan Li, Kangju |
| | | | | | Shenyang Inst. of Tech. Shenyang Inst. of Tech. Liaoning Key Laboratory of Information Physics Fusion & Intelligent Manufacturing for Grade CNC Machine |
| | | | | | Yu, Shengping Northeastern Univ. |
| | | | | ▶ MoA05-3 | 14:10–14:30 |
| | | | | 0368 | <i>Application of Gradient-Free Optimization Algorithms in Yield Optimization of Fed-Batch Fermentation Processes</i> |
| | | | | | Zheng, Dongbin Chen, Li Guo, Jiaming Chen, Xing Fu, Wei Kong, Xiangsong |
| | | | | | Xiamen Univ. of Tech. Communication Univ. of Zhejiang Xiamen Inst. of Tech. Xiamen Univ. of Tech. Xiamen Univ. of Tech. Xiamen Univ. of Tech. |
| | | | | ▶ MoA05-4 | 14:30–14:50 |
| | | | | 0428 | <i>Research on Capacity Configuration and Cost Optimization of Hybrid Energy Storage System Based on Ship Power Grid</i> |
| | | | | | Zhang, Jingnan Wang, Yutong |
| | | | | | Harbin Engineering Univ. Harbin Engineering Univ. |
| | | | | ▶ MoA05-5 | 14:50–15:10 |
| | | | | 0662 | <i>Intelligent Scheduling Method for Satellite Ground Station Resources</i> |
| | | | | | Tian, Miaomiao Xu, Shu Huang, Peng |
| | | | | | Tsinghua Univ. Chinese Acad. of Sci. Inst. of Remote Sensing & Digital Earth, Chinese Acad. of Sci. |
| | | | | | Ma, Guangbin Feng, Ke |
| | | | | | Chinese Acad. of Sci. Chinese Acad. of Sci. |
| | | | | ▶ MoA05-6 | 15:10–15:30 |
| | | | | 0668 | <i>Impact of Energy Storage Unit on Power System Economic Dispatch: A Multi-parametric Programming Method and Its Implication on Energy Storage Sizing</i> |
| | | | | | Fang, Baomin Wu, Danman |
| | | | | | State Grid Qinghai Electric Power Company Tsinghua Univ. & Department of Electrical Engineering |
| 0281 | <i>Unknown Time-Varying Input Delay Compensation for Cold Rolling Mill System</i> | Qiu, Xuechao Zhang, Liuliu Hua, Changchun | Yanshan Univ. Inst. of Electrical Engineering Yanshan Univ. | | |
| | | | | ▶ MoA02-6 | 15:10–15:30 |
| 0576 | <i>Adaptive Command Filtered Backstepping Control for Uncertain Non-linear Systems and Its Application to Power System</i> | Guo, Jinmin Nai, Yongqiang Yang, Qingyu | Shaanxi Shangluo Power Generation Co. LTD Xi'an Jiaotong University Xi'an Jiaotong Univ | | |
| | | | | MoA03 | 13:30–15:30 |
| | | | | | Regular Session: Nonlinear Systems and Control (2) |
| | | | | | Chair: Wang, Yijing Co-Chair: Jia, Xianglei |
| | | | | | Tianjin Univ. Hangzhou Dianzi Univ. |
| | | | | ▶ MoA03-1 | 13:30–13:50 |
| 2410 | <i>一种基于混合混沌系统和信息熵增强算法的图像加密方案</i> | | | | |
| | <i>An Image Encryption Scheme Based on Hybrid Chaotic System and Information Entropy Enhancement Algorithm</i> | Ding, Yi Wang, Lidan | Southwest Univ. Southwest Univ. | | |
| | | | | ▶ MoA03-2 | 13:50–14:10 |
| 2423 | <i>基于预定性能的轮式移动机器人固定时间编队控制</i> | | | | |
| | <i>Fixed-Time Formation Control for Wheeled Mobile Robots with Prescribed Performance</i> | Chang, Shaoping Wang, Yijing Zuo, Zhiqiang | Tianjin Univ. Tianjin Univ. Tianjin Univ. | | |
| | | | | ▶ MoA03-3 | 14:10–14:30 |
| 0436 | <i>Consensus of Nonlinear Multi-agent Systems with Mismatched Uncertainties and Unknown High-frequency Gains</i> | Wang, Gang Wang, Chaoli Ji, Yunfeng | Univ. of Shanghai for Sci. & Tech. Univ. of Shanghai for Sci. & Tech. Univ. of Shanghai for Sci. & Tech. | | |
| | | | | ▶ MoA03-4 | 14:30–14:50 |
| 0610 | <i>A New Adaptive Fuzzy Sliding Mode Control Method for Active Front Steering System</i> | Tian, Tian Fang, Liandi Ding, Shihong Zheng, Weixing | Jiangsu Univ. Jiangsu Univ. Jiangsu Univ. Western Sydney Univ. | | |
| | | | | ▶ MoA03-5 | 14:50–15:10 |
| 0634 | <i>Adaptive Tracking of Nonlinear Time-delay Systems Subject to Symmetrical Dead-zone Input</i> | Cao, Zhenxing Jia, Xianglei Shao, Yiming Li, Shuo | Hangzhou Dianzi Univ. Hangzhou Dianzi Univ. Hangzhou Dianzi Univ. Hangzhou Dianzi Univ. | | |
| | | | | ▶ MoA03-6 | 15:10–15:30 |
| 0889 | <i>Adaptive Practical Fixed-Time Control for A Class of Nonlinear Systems with Input Saturation</i> | Yang, Wei Cui, Guozeng Li, Ze Tao, Chongben | Suzhou Univ. of Sci. & Tech. Suzhou Univ. of Sci. & Tech. Suzhou Univ. of Sci. & Tech. Suzhou Univ. of Sci. & Tech. | | |
| | | | | MoA04 | 13:30–15:30 |
| | | | | | Regular Session: System Modeling and Identification (1) |
| | | | | | Chair: Wu, Huai-Ning Co-Chair: Tang, Jian |
| | | | | | Beijing Univ. of Aeronautics & Astronautics Beijing Univ. of Tech. |
| | | | | ▶ MoA04-1 | 13:30–13:50 |
| 0319 | <i>Nonlinear Modeling and Identification of Vessel Based on Constrained Quadratic Programming Method</i> | Wang, Xudong Zhao, Jin Geng, Tao | Huazhong Univ. of Sci. & Tech. Huazhong Univ. of Sci. & Tech. Henan Univ. | | |
| | | | | ▶ MoA04-2 | 13:50–14:10 |
| 0502 | <i>Mathematical Modeling of Variable Pitched Electric Power System on UAV</i> | Chen, Sicheng Chen, Shuxian An, Siqi | Civil Aviation Flight Univ. of China Civil Aviation Flight Univ. of China Civil Aviation Flight Univ. of China | | |

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| Li, Yanhe | State Grid Qinghai Electric Power Company | Zhang, Zejian | Beihua Univ. |
| Huang, Shaowei | Tsinghua Univ. | Wang, Dawei | Beihua Univ. |
| Mei, Shengwei | Tsinghua Univ. | Gao, Xiao Zhi | Helsinki Univ. of Tech., Espoo |
| MoA06 13:30–15:30 | | MoA07-6 15:10–15:30 | |
| Regular Session: Robust Control (1) | | 1660 <i>A Vector Control System of PMSM with the Assistance of Fuzzy PID Controller</i> | |
| Chair: Ao, Dun | Beijing Univ. of Tech. | Ren, Wanwan | Changsha Univ. of Sci. & Tech. |
| Co-Chair: Ban, Xiao Jun | Harbin Inst. of Tech. | Wu, You | Changsha Univ. of Sci. & Tech. |
| ▶ MoA06-1 13:30–13:50 | | Du, Ronghua | Changsha Univ. of Sci. & Tech. |
| 0181 <i>A Simple Strategy for the Control of Soft Robot</i> | | MoA08 13:30–15:30 | |
| Zheng, Gang | Inria Lille | Regular Session: Predictive Control (1) | |
| ▶ MoA06-2 13:50–14:10 | | Chair: Hao, Fei | Beihang Univ. |
| 0703 <i>LPV Control of A DFIG-based Small Vertical Axis Wind Turbine: A Comparison with H-Infinity and PID Control</i> | | Co-Chair: Luo, Zhiyong | Chongqing Univ. of Posts & Telecommunications |
| Bundi, Josephat | Harbin Inst. of Tech. | ▶ MoA08-1 13:30–13:50 | |
| Ban, Xiao Jun | Harbin Inst. of Tech. | 0166 <i>基于中性温度的室内环境品质控制与优化的研究</i> | |
| Ding, Shuchen | Harbin Inst. of Tech. | <i>Study on Control and Optimization of Indoor Environmental Quality Based on Model Prediction</i> | |
| Huang, Xianlin | Harbin Inst. of Tech. | Zhao, Anjun | Xi'an Univ. of Architecture & Tech. |
| ▶ MoA06-3 14:10–14:30 | | Zhou, Meng | Xi'an Univ. of Architecture & Tech. |
| 0798 <i>Disturbance Observer-based Active Vibration Suppression and Attitude Tracking for Flexible Spacecraft</i> | | Yu, Junqi | Xi'AN Univ. of Architecture & Tech. |
| Zhu, Wanwan | Tianjin Univ. | ▶ MoA08-2 13:50–14:10 | |
| Zong, Qun | Tianjin Univ. | 0732 <i>Accelerating the Advanced-Step NMPC by A Lifted Implicit Runge-Kutta Integrator for Fast Embedded Applications</i> | |
| Zhang, Xiuyun | Tianjin Univ. | Zhu, Zhu | Hefei Univ. of Tech. |
| Liu, Wenjing | Tianjin Univ. | Jiang, Canghua | Hefei Univ. of Tech. |
| ▶ MoA06-4 14:30–14:50 | | Jin, Cheng | Hefei Univ. of Tech. |
| 0847 <i>Harmonics Cancellation of Boost Converters Based on Two-Phase Sliding Mode</i> | | Guo, Zhiqiang | Hefei Univ. of Tech. |
| Yang, Mingyang | Harbin Inst. of Tech. | Xu, Zongqi | CRSC Research & Design Inst. Group Co.,Ltd |
| Wang, Yanmin | Harbin Inst. of Tech. | ▶ MoA08-3 14:10–14:30 | |
| Niu, Ziming | Harbin Inst. of Tech. | 0752 <i>MPC with A Disturbance Model Using Online Extreme Learning Machine with Kernels for SCR Denitrification System</i> | |
| ▶ MoA06-5 14:50–15:10 | | Zeng, Lingchao | Southeast Univ. |
| 1095 <i>Design of Finite Frequency Domain H[∞] Controller for Neutral System with Input Delay</i> | | Li, Yiguo | Southeast Univ. |
| Ao, Dun | Beijing Univ. of Tech. | ▶ MoA08-4 14:30–14:50 | |
| Xu, Qianjiao | Beijing Univ. of Tech. | 1078 <i>Generalized Predictive Temperature Control in Tubular Chemical Reactors by Means of Proper Orthogonal Decomposition and Least Squares Support Vector Machine</i> | |
| Wang, Rui | Beijing Univ. of Tech. | Ai, Ling | Harbin Univ. of Sci. & Tech. |
| ▶ MoA06-6 15:10–15:30 | | Zhang, Desheng | Harbin Univ. of Sci. & Tech. |
| 1254 <i>Spatial-Differential Linear Matrix Inequality-based Distributed H-infinity Control for the Coupled Parabolic PDEs System</i> | | Teo, Kok Lay | Curtin Univ. |
| Zhong, Jiaqi | Chongqing Univ. of Posts & Telecommunications | Deng, Liwei | Harbin Univ. of Sci. & Tech. |
| Yuan, Yupeng | Ltd, China Electronics Tech. Group Corporation | ▶ MoA08-5 14:50–15:10 | |
| MoA07 13:30–15:30 | | 1226 <i>Event-triggered Dual-mode Model Predictive Control for Discrete Linear Systems with Two-channel Transmissions</i> | |
| Panel Session: Fuzzy System and Fuzzy Control (1) | | Hu, Xiaoda | Beihang Univ. |
| Chair: Zhang, Baoyong | Nanjing Univ. of Sci. & Tech. | Hao, Fei | Beihang Univ. |
| Co-Chair: Wu, You | Changsha Univ. of Sci. & Tech. | ▶ MoA08-6 15:10–15:30 | |
| ▶ MoA07-1 13:30–13:50 | | 1411 <i>Research on Optimization of Centrifugal Process Parameters Based on Support Vector Machine</i> | |
| 0615 <i>Receding horizon H[∞] control for nonlinear systems with tensor product model transformation</i> | | Luo, Zhiyong | Chongqing Univ. of Posts & Telecommunications |
| Chang, Fei | Inner Mongolia Univ. | Zhang, Rou | Chongqing Univ. of Posts & Telecommunications |
| Zhao, Guoliang | Heilongjiang Univ. of Sci. & Tech. | Zhao, Jie | Chongqing Univ. of Posts & Telecommunications |
| ▶ MoA07-2 13:50–14:10 | | Cai, Ting | Chongqing Univ. of Posts & Telecommunications |
| 0830 <i>Command Filter Based Adaptive Fuzzy Control for Stochastic Nonlinear Systems with Unknown Hysteresis</i> | | MoA09 13:30–15:30 | |
| Ma, Min | Harbin Inst. of Tech. | Regular Session: Signal Processing and Information Fusion (1) | |
| Guo, Runsheng | Harbin Inst. of Tech. | Chair: Tan, Chao | Tianjin Univ. |
| Wang, Tong | Harbin Inst. of Tech. | Co-Chair: Luo, Ji-An | Hangzhou Dianzi Univ. |
| Qiu, Jianbin | Harbin Inst. of Tech. | ▶ MoA09-1 13:30–13:50 | |
| ▶ MoA07-3 14:10–14:30 | | 0305 <i>Prior Information-based Optimization for Electrical Tomographic Imaging</i> | |
| 0971 <i>Autonomous Mobile Robot Obstacle Avoidance Using Fuzzy-PID Controller in Robot' s Varying Dynamics</i> | | Lu, Jian | Tianjin Univ. |
| Ur-Rehman, Aqeel- | Nanjing Univ. of Sci. & Tech. | Yue, Shihong | Tianjin Univ. |
| Cai, Chenxiao | Inst. of Automation, Nanjing Univ. of Sci. & Tech. | Ma, Haitao | Tianjin Univ. |
| ▶ MoA07-4 14:30–14:50 | | Yem, Sidolla | Tianjin Univ. |
| 1255 <i>Fuzzy Control of Coupled Differential-Difference Nonlinear Systems with Input Saturation and Time-Varying Delays</i> | | Wang, Huaxiang | Tianjin Univ. |
| Xia, Tianian | Nanjing Univ. of Sci. & Tech. | ▶ MoA09-2 13:50–14:10 | |
| Zhang, Baoyong | Nanjing Univ. of Sci. & Tech. | 0379 <i>Direct Target Tracking Using Laplace Approximation</i> | |
| Li, Yongmin | Huzhou Teachers College | Luo, Ji-An | Hangzhou Dianzi Univ. |
| ▶ MoA07-5 14:50–15:10 | | Guo, Mengchun | Hangzhou Dianzi Univ. |
| 1490 <i>Stability Analysis for Interval Type-2 Fuzzy Systems Based on Network Environments under Imperfect Premise Matching</i> | | Liu, Xuejun | Hangzhou Dianzi Univ. |

Final Program

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| Song, Ke-Kang | National Key Laboratory of Sci. & Tech. on Blind Signal Processing | Wang, Sen | Hohai Univ. |
| Yang, Yu-Xiang | National Key Laboratory of Sci. & Tech. on Blind Signal Processing | Hou, Dongchen | Hohai Univ. |
| | | Zhang, Linchuang | Bohai Univ. |
| MoA09-3 14:10–14:30 | | MoA11 13:30–15:30 | |
| 0406 | <i>Covariance Intersection Kalman Fuser with Time-delayed Measurements</i> | Regular Session: Control Design (1) | |
| Qi, Wenjuan | Heilongjiang Univ. | Chair: Yang, Hongjiu | Tianjin Univ. |
| Sheng, Zunbing | Heilongjiang Univ. | Co-Chair: Feng, Guorui | Shandong Univ. of Political Sci. & Law |
| MoA09-4 14:30–14:50 | | MoA11-1 13:30–13:50 | |
| 0440 | <i>An Interpolation Method of Particle Distribution Reconstruction in Liquid-Solid Two-Phase Flow Using Ultrasonic Diffraction Tomography</i> | 0203 <i>Autonomous Control System for GEO Satellite Based on Hierarchical Structure</i> | |
| Zhang, Jialin | Tianjin Univ. | Feng, Jiajia | Beijing Inst. of Control Engineering |
| Tan, Chao | Tianjin Univ. | Wang, Zuo-Wei | Beijing Inst. of Control Engineering, Chinese Acad. of Space Tech. |
| Dong, Feng | Tianjin Univ. | Liu, Weijie | Beijing Inst. of Control Engineering |
| MoA09-5 14:50–15:10 | | MoA11-2 13:50–14:10 | |
| 0447 | <i>Excitation Strategy Analysis of Magnetic Induction Tomography for Intracranial Hemorrhage Detection</i> | 0215 <i>An Automatic Guided Vehicle Control System Based on An ARX Model Identifications and A Hybrid Particle Swarm Parameter Optimization</i> | |
| Chen, Yixuan | Tianjin Univ. | Wang, Qilai | Inner Mongolia Univ. of Tech. |
| Tan, Chao | Tianjin Univ. | Dong, Chao-Yi | Inner Mongolia Univ. of Tech. |
| Dong, Feng | Tianjin Univ. | Qi, Yongsheng | Inner Mongolia Univ. of Tech. |
| MoA09-6 15:10–15:30 | | MoA11-3 14:10–14:30 | |
| 0486 | <i>Reconstruction of Attenuation Coefficient Using Amplitude Distribution Map</i> | 0274 <i>Linear Active Disturbance Rejection Control for Propeller-Driving System Based on Model Information Compensation</i> | |
| Wu, Nan | Tianjin Univ. | Zhang, Baoqing | Nanjing Univ. of Aeronautics & Astronautics |
| Zhao, Shu | Chinese Acad. Medical Sci. | Wang, Biao | Nanjing Univ. of Aeronautics & Astronautics |
| Dong, Feng | Tianjin Univ. | Yao, Zhennan | Nanjing Univ. of Aeronautics & Astronautics |
| MoA10 13:30–15:30 | | Tang, Chaoying | |
| Regular Session: Big Data Analysis and Control (1) | | MoA11-4 14:30–14:50 | |
| Chair: Sun, Yonghui Hohai Univ. | | 0580 <i>Model Predictive Tracking Control for Wheeled Mobile Robots Based on Polytopic Linear Differential Inclusion</i> | |
| Co-Chair: Yang, Zan Tongji Zhejiang College | | Li, Peng | |
| MoA10-1 13:30–13:50 | | Yang, Hongjiu | |
| 0424 | <i>Air Quality Evaluation Method Based on Data Analysis</i> | Wang, Shizhan | |
| Ma, Haitao | Tianjin Univ. | Wang, Shuaiying | |
| Yue, Shihong | Tianjin Univ. | MoA11-5 14:50–15:10 | |
| Li, Jia | Tianjin Univ. | 0601 <i>Implementation of Camshaft Processing Control System Based on Heterogeneous Machine</i> | |
| MoA10-2 13:50–14:10 | | Feng, Guorui | |
| 0820 | <i>Missing Data Filling Methods of Air-conditioning Power Consumption for Public Buildings</i> | MoA11-6 15:10–15:30 | |
| Li, Hui | Shandong Jianzhu Univ. | 1138 <i>A PIλ controller for a 3rd-order Sigma-Delta Modulator</i> | |
| MoA10-3 14:10–14:30 | | Xu, Chi | |
| 0943 | <i>Triple-GAN with Fixed Memory Step Gradient Descent Method and Xwish Activation Function</i> | Jin, Yu | |
| Hong, Zheming | Tongji Zhejiang College | MoA12 13:30–15:30 | |
| Yang, Zan | Tongji Zhejiang College | Regular Session: Intelligent Robots (1) | |
| Yang, Cancan | Tongji Zhejiang College | Chair: Shi, Buhai | |
| Liao, Shan | Tongji Zhejiang College | Co-Chair: Li, Zhaoyang | |
| Sun, Yuan | Tongji Zhejiang College | South China Univ. of Tech. | |
| Xing, Yidan | Tongji Zhejiang College | Univ. of Electronic Sci. & Tech. of China | |
| MoA10-4 14:30–14:50 | | MoA12-1 13:30–13:50 | |
| 0944 | <i>Stochastic Neighbor Embedding with Trust Region Method Combining with Filter</i> | 0028 <i>Model Adaption Object Detection System for Robot</i> | |
| Li, Haoyang | Tongji Zhejiang College | Fu, Jingwen | |
| Li, Dan | Tongji Zhejiang College | Zong, Licheng | |
| Zhang, Chi | Tongji Zhejiang College | Li, Yingbin | |
| Ma, Lanfei | Tongji Zhejiang College | Li, Ke | |
| Song, Jiayi | Tongji Zhejiang College | Yang, Bingqian | |
| Nai, Wei | Tongji Zhejiang College | Liu, Xibei | |
| MoA10-5 14:50–15:10 | | MoA12-2 13:50–14:10 | |
| 0945 | <i>T-Distributed Stochastic Neighbor Embedding with Gauss Initialization of Quantum Whale Optimization Algorithm</i> | 0040 <i>Dynamic Modeling and Control of Inspection Robot Joint Drive System</i> | |
| Yang, Zan | Tongji Zhejiang College | Li, Xiaopeng | |
| Sun, Yuan | Tongji Zhejiang College | Shang, Dongyang | |
| Li, Dan | Tongji Zhejiang College | Yang, Yingnan | |
| Zhang, Zhihao | Tongji Zhejiang College | Guo, Junqiang | |
| Xie, Yuchen | Tongji Zhejiang College | MoA12-3 14:10–14:30 | |
| MoA10-6 15:10–15:30 | | 0243 <i>Design of UGV Trajectory Tracking Controller in UGV-UAV Cooperation</i> | |
| 1153 | <i>Ultra-short-term Interval Prediction of Wind Farm Cluster Power Based on LASSO</i> | Wu, Qize | |
| Zhou, Yan | Hohai Univ. | Qi, Juntong | |
| Sun, Yonghui | Hohai Univ. | Wu, Chong | |
| | | EFY Intelligent Control | |

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| Wang, Mingming | TianJin Univ. | Tang, Huaibin | Shandong Univ. |
| ► MoA12-4 | 14:30–14:50 | ► MoA14-2 | 13:50–14:10 |
| ⁰³⁰¹ <i>Design and Analysis of Joint-Assisted Exoskeleton Control System of Upper Limb in Active Spacesuit</i> | | ⁰⁶⁸⁶ <i>Synchronization for Homogeneous and Heterogeneous Discrete-time Multi-agent Systems: A Scale-free Protocol Design</i> | |
| Li, Zhaoyang | Univ. of Electronic Sci. & Tech. of China | Nojavanzadeh, Donya | School of Electrical Engineering & Computer Sci. |
| Dai, Yuehong | Univ. of Electronic Sci. & Tech. of China | | |
| Hu, Jiejun | Univ. of Electronic Sci. & Tech. of China | Liu, Zhenwei | Northeastern Univ. |
| Wang, Junyao | Univ. of Electronic Sci. & Tech. of China | Saberi, Ali | Washington State Univ. |
| Tang, Peng | Univ. of Electronic Sci. & Tech. of China | Stoorvogel, Anton | Univ. of Twente |
| ► MoA12-5 | 14:50–15:10 | ► MoA14-3 | 14:10–14:30 |
| ⁰³⁴³ <i>Pose and Velocity Estimation Algorithm for UAV in Visual Landing</i> | | ⁰⁷⁶⁷ <i>A Distributed Strategy-updating Rule with Event-triggered Communication for Noncooperative Games</i> | |
| Wang, Zhe | Nanjing Univ. of Aeronautics & Astronautics | Cai, Xin | North China Electric Power Univ. |
| Wang, Biao | Nanjing Univ. of Aeronautics & Astronautics | Xiao, Feng | North China Electric Power Univ. |
| Tang, Chaoying | Nanjing Univ. of Aeronautics & Astronautics | Wei, Bo | North China Electric Power Univ. |
| Xu, Guili | Nanjing Univ. of Aeronautics & Astronautics | | |
| ► MoA12-6 | 15:10–15:30 | ► MoA14-4 | 14:30–14:50 |
| ²³¹⁸ <i>Design and Implement of Shape Detection for the Soft Manipulator</i> | | ⁰⁸⁰¹ <i>Distributed Multi-Step Subgradient Random Projection Algorithm over Switching Graphs with Random Time Delay</i> | |
| Zou, Shuangquan | Harbin Inst. of Tech. | Zhong, Yannan | South China Univ. of Tech. |
| Lv, Yueyong | Harbin Inst. of Tech. | Gao, Wenhua | South China Univ. of Tech. |
| Man, Yuan Chen | BEIJING AEROSPACE MEASUREMENT & CONTROL Tech. COLTD | Ren, Hongwei | Guangdong Univ. of Petrochemical Tech. |
| Han, Weidi | Harbin Inst. of Tech. | | |
| MoA13 | 13:30–15:30 | ► MoA14-5 | 14:50–15:10 |
| Regular Session: Control of Network Systems and Networked Control Systems (1) | | ⁰⁹⁶⁷ <i>Standard Formation Generation and Keeping of Unmanned Aerial Vehicles Through A Potential Functional Approach</i> | |
| Chair: Ding, Sanbo | Hebei Univ. of Tech. | Li, Huiming | National Univ. of Defense Tech. |
| Co-Chair: Guan, Zhe | Hiroshima Univ. | Chen, Hao | National Univ. of Defense Tech. |
| ► MoA13-1 | 13:30–13:50 | Yang, Shaowu | National Univ. of Defense Tech. |
| ²⁰⁹⁸ <i>Malicious Attack Design for Cyber Physical Systems: A Novel Sparse Sensor Attack Strategy</i> | | Wang, Xiangke | National Univ. of Defense Tech. |
| Lu, An-Yang | NEU | ► MoA14-6 | 15:10–15:30 |
| Yang, Guang-Hong | Northeastern Univ. | ¹⁰²⁰ <i>Distributed Fault Detection for A Class of Heterogeneous Agents with Internal Model Controllers</i> | |
| ► MoA13-2 | 13:50–14:10 | Jia, Wenhao | Peking Univ. |
| ⁰⁰⁷² 切换事件触发控制的离散时间模拟 | | Wang, Jinzhi | Peking Univ. |
| <i>The Discrete-Time Analog for Switching Event-Triggered Control</i> | | MoA15 | 13:30–15:30 |
| Ding, Sanbo | Hebei Univ. of Tech. | Regular Session: New Energy Technology and Control in Environment (1) | |
| Wang, Yong | Hebei Univ. of Tech. | Chair: Li, Po | Xiamen Univ. |
| Geng, Yanli | Department of Artificial Intelligent | Co-Chair: Qin, Linlin | Univ. of Sci. & Tech. of China |
| Wang, Jie | Hebei Univ. of Tech. | ► MoA15-1 | 13:30–13:50 |
| ► MoA13-3 | 14:10–14:30 | ⁰¹⁸⁸ <i>Adaptive Finite Control Set Model Predictive Control Scheme for Single-phase Inverters with LCL Filter</i> | |
| ⁰⁵³⁹ <i>Event-triggered Control for Stochastic Networked Control Systems under DoS Attacks</i> | | Li, Po | Xiamen Univ. |
| Hu, Zenghui | Zhengzhou Univ. | Song, Zihan | Xiamen Univ. |
| Mu, Xiaowu | Zhengzhou Univ. | Zhang, Haodong | Xiamen Univ. |
| ► MoA13-4 | 14:30–14:50 | Jin, Wentao | Xiamen Univ. |
| ⁰⁶⁹³ <i>Dynamic Event-triggered and Guaranteed Cost Asynchronous Control for Singular Markov Jump Systems Against Deception Attacks</i> | | ► MoA15-2 | 13:50–14:10 |
| Wang, Haotian | Qingdao Univ. of Tech. | ⁰¹⁹³ <i>Research on Torque Ripple Reduction of Direct-drive Permanent Magnet Wind Power System</i> | |
| Wang, Yanqian | Qingdao Univ. of Tech. | Zheng, Hao | Shenyang Univ. of Tech. |
| ► MoA13-5 | 14:50–15:10 | Zhang, Jiamei | Shenyang Univ. of Tech. |
| ⁰⁷⁶⁸ <i>Adaptive Event-triggered PID Controllers for Linear Discrete-time Plants</i> | | Wang, Xiangming | Shenyang Univ. of Tech. |
| Yu, Hao | Univ. of Alberta | Zhong, Qiqi | Shenyang University of Tech. |
| Guan, Zhe | Hiroshima Univ. | ► MoA15-3 | 14:10–14:30 |
| Chen, Tongwen | Univ. of Alberta | ⁰²²⁶ <i>State of Charge Estimation of Lithium Ion Battery Based on A New Linear Online Model</i> | |
| Yamamoto, Toru | Hiroshima Univ. | Wu, Muyao | Univ. of Sci.& Tech. of China |
| ► MoA13-6 | 15:10–15:30 | Qin, Linlin | Univ. of Sci. & Tech. of China |
| ⁰⁷⁹⁶ <i>Generic Controllability of Undirected Networks of Relative Coupling Identical Systems</i> | | Wu, Gang | Univ. of Sci. & Tech. of China |
| Zhang, Yuan | Beijing Inst. of Tech. | Shi, Chun | Univ. of Sci. & Technology of China |
| Xia, Yuanqing | Beijing Inst. of Tech. | ► MoA15-4 | 14:30–14:50 |
| Gao, Han | Beijing Inst. of Tech. | ⁰²⁹⁴ <i>Disturbance Observer-based Finite-time Control for DC-DC Converter Feeding Constant Power Loads with Unknown Load Variation</i> | |
| MoA14 | 13:30–15:30 | Yuan, Cong | Northwestern Polytechnical Univ. |
| Regular Session: Multi-Agent Systems and Distributed Control (1) | | Huangfu, Yigeng | Northwestern Polytechnical Univ. |
| Chair: Xiao, Feng | North China Electric Power Univ. | Ma, Rui | Northwest Polytechnical Univ. |
| Co-Chair: Tang, Huaibin | Shandong Univ. | ► MoA15-5 | 14:50–15:10 |
| ► MoA14-1 | 13:30–13:50 | ⁰⁶⁵³ <i>Ultra-short-term Solar Power Forecasting Based on A Modified Clear-sky Model</i> | |
| ⁰⁶⁵³ <i>Reputation Agreement in Ad-hoc Networks with Binary-valued Communication</i> | | Ma, Yuan | Tsinghua Univ. |
| Gao, Weixuan | Shandong Univ. | Zhang, Xuemin | Tsinghua Univ. |
| Guo, Yueming | Shandong Univ. | Mei, Shengwei | Tsinghua Univ. |

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| Zhen, Zhao | North China Electric Power Univ. | ► MoA17-2 | 13:50–14:10 |
| Gao, Rui | Tsinghua Univ. | 0195 <i>Nonlinear Predictive Path Following Control for A Stratospheric Airship</i> | Beihang Univ. |
| Zhou, Zijie | Tsinghua Univ. | Yang, Tianyu | Beijing Univ. of Aeronautics & Astronautics |
| ► MoA15-6 | 15:10–15:30 | Huo, Wei | |
| 1229 <i>Optimal Scheduling for A Microgrid with Wind, Photovoltaic and Battery Storage Based on Selected Vertex Scenarios</i> | | ► MoA17-3 | 14:10–14:30 |
| Xie, Xiaojun | Xi'an Thermal Power Research Inst. Company Ltd | 0266 <i>A Novel Collision Avoidance Method for Fixed-wing Unmanned Aerial Vehicles</i> | |
| Wu, Qiong | Xi'an Thermal Power Research Inst. Company Ltd | Zhao, Shulong | National Univ. of Defense Tech. |
| Zhang, Ruigang | Xi'an Thermal Power Research Inst. Company Ltd | Wang, Xiangke | National Univ. of Defense Tech. |
| Yang, Bo | Xi An Thermal Power Research Inst. Company Ltd | ► MoA17-4 | 14:30–14:50 |
| Xi, Hang | Xi An Thermal Power Research Inst. Company Ltd | 0289 <i>Control System Design of A Vertical Take-off and Landing Unmanned Aerial Vehicle</i> | |
| MoA16 | 13:30–15:30 | Lin, Kai | Tianjin Univ. |
| Regular Session: Vehicle Control and Transportation Systems (1) | | Qi, Juntong | Tianjin Univ. |
| Chair: Luo, Xiaoyuan | Yanshan Univ. | Wu, Chong | EFY Intelligent Control |
| Co-Chair: Zhu, Xiaoyuan | Shanghai Maritime Univ. | Wang, Mingming | TianJin Univ. |
| ► MoA16-1 | 13:30–13:50 | Zhu, Guojun | Tianjin Univ. |
| 0431 <i>A Velocity Difference Related Spacing Policy for the Platoon Control of Connected Vehicles</i> | | ► MoA17-5 | 14:50–15:10 |
| Liu, Jiayu | Chang'an Univ. | 0308 <i>A PID Gain Adjustment Scheme Based on Reinforcement Learning Algorithm for A Quadrotor</i> | |
| Yang, Panpan | Chang'an Univ. | Zheng, Qingqing | Beijing Inst. of Tech. |
| Song, Jiacheng | Chang'an Univ. | Tang, Renjie | Beijing Inst. of Tech. |
| Lin, Hai | Chang'an Univ. | Gou, Siyuan | Beijing Inst. of Tech. |
| ► MoA16-2 | 13:50–14:10 | Zhang, Weizhong | Beijing Inst. of Tech. |
| 0431 <i>Integrated Torsional Oscillations Controller Design for Electrified Powertrain System over CAN</i> | | ► MoA17-6 | 15:10–15:30 |
| Zhu, Wei | Shanghai Maritime Univ. | 0404 <i>Robust Attitude Control of A 3-DOF Helicopter Considering Communication Delays</i> | |
| Li, Wei | Shanghai Maritime Univ. | Peng, Huachao | Shanghai Maritime Univ. |
| Zhu, Xiaoyuan | Shanghai Maritime Univ. | Zhu, Xiaoyuan | Shanghai Maritime Univ. |
| ► MoA16-3 | 14:10–14:30 | MoA18 | 13:30–15:30 |
| 0476 <i>Waypoint Tracking for Collision Avoidance Using Artificial Potential Field</i> | | Regular Session: Pattern Recognition (1) | |
| Lin, Pengfei | Hanyang Univ. | Chair: Yin, Zhong | Univ. of Shanghai for Sci. & Tech. |
| Choi, Woo Young | Hanyang Univ. | Co-Chair: Zheng, Zhanpeng | Univ. of Shanghai for Sci. & Tech. |
| Yang, Jin Ho | Hanyang Univ. | ► MoA18-1 | 13:30–13:50 |
| Chung, Chung Choo | Hanyang Univ. | 0128 <i>The QRS Complex Detection of ECG Signal Based on IPCMM Algorithm</i> | |
| ► MoA16-4 | 14:30–14:50 | Li, Wei | Qilu Univ. of Tech. |
| 0506 <i>基于一对多拓扑的电动车自由定位无线电能传输系统</i> | | Li, Bin | Qilu Univ. of Tech. (Shandong Acad. of Sci.) |
| <i>Free Positioning Wireless Power Transfer System for Electric Vehicle Based on One-to-Multiple Topology</i> | | Meng, Hailong | Qilu Univ. of Tech. (Shandong Acad. of Sci.) |
| Chen, Jing | Wuhan Univ. | Qiao, Fengjuan | Qilu Univ. of Tech. |
| Zhou, Hong | Wuhan Univ. | Liu, Xiaoyun | Qilu Univ. of Tech. (Shandong Acad. of Sci.) |
| Deng, Qijun | Wuhan Univ. | Zhou, Shuwang | Shandong Artificial Intelligence Inst. |
| Hu, Wenshan | Wuhan Univ. | Xu, Jiyong | Qilu Univ. of Tech. (Shandong Acad. of Sci.) |
| Chen, Fengwei | Department of Automation | ► MoA18-2 | 13:50–14:10 |
| Zhu, Ao | Wuhan Univ. | 0132 <i>Nighttime Traffic Light Location Based on Binocular Vision and Electronic Map</i> | |
| Gao, Xingran | Shenzhen Research Inst., City Univ. of HongKong | Lan, Junfeng | Univ. of Jinan |
| ► MoA16-5 | 14:50–15:10 | Fang, Tiyu | The Univ. of Jinan |
| 0611 <i>Sliding Mode Control for Vehicle Platoons with Disturbance Observer</i> | | Li, Jinping | Univ. of Jinan |
| Luo, Xiaoyuan | Yanshan Univ. | ► MoA18-3 | 14:10–14:30 |
| Zhen, Yunhe | Yanshan Univ. | 0137 <i>An ELM-based Deep SDAE Ensemble for Inter-Subject Cognitive Workload Estimation with Physiological Signals</i> | |
| Zheng, Xinquan | Yanshan Univ. | Zheng, Zhanpeng | Univ. of Shanghai for Sci. & Tech. |
| Wang, Jianmei | Yanshan Univ. | Yin, Zhong | Univ. of Shanghai for Sci. & Tech. |
| ► MoA16-6 | 15:10–15:30 | Zhang, Jianhua | East China Univ. of Sci. & Tech. |
| 0626 <i>Nonlinear Longitudinal Control for Connected Vehicle Platoon Considering the Acceleration Difference</i> | | ► MoA18-4 | 14:30–14:50 |
| Jiao, Ao | Chongqing Univ. of Posts & Telecommunications | 0174 <i>Locally Robust Feature Selection of EEG Signals for the Inter-subject Emotion Recognition</i> | |
| Li, Yongfu | Chongqing Univ. of Posts & Telecommunications | Yin, Zhong | Univ. of Shanghai for Sci. & Tech. |
| Yu, Shuyou | Jilin Univ. | Zhang, Wei | Univ. of Shanghai for Sci. & Tech. |
| Cui, Zhongwei | Guizhou Education Univ. | Zheng, Zhanpeng | Univ. of Shanghai for Sci. & Tech. |
| MoA17 | 13:30–15:30 | ► MoA18-5 | 14:50–15:10 |
| Regular Session: Aircraft Control (1) | | 0175 <i>EEG Feature Selection for Emotion Recognition Based on Cross-subject Recursive Feature Elimination</i> | |
| Chair: Zhang, Yuan-Wen | National Univ. of Defense Tech. | Zhang, Wei | Univ. of Shanghai for Sci. & Tech. |
| Co-Chair: Zheng, Qingqing | Beijing Inst. of Tech. | Yin, Zhong | Univ. of Shanghai for Sci. & Tech. |
| ► MoA17-1 | 13:30–13:50 | ► MoA18-6 | 15:10–15:30 |
| 0651 <i>Spacecraft Self- and Soft-docking via Coupled Actuation of Magnetic Fields</i> | | 0341 <i>Classifying Motor-imagination Signals in Brain-computer Interface Based on Feature Extraction of Parametric AR Model</i> | |
| Zhang, Yuan-Wen | National Univ. of Defense Tech. | Ma, Shuang | Inner Mongolia Univ. of Tech. |
| Zhu, Yanwei | National Univ. of Defense Tech. | Dong, Chao-Yi | Inner Mongolia Univ. of Tech. |
| Zhu, Hao-Kui | National Univ. of Defense Tech. | | |

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| Jia, Tingting | Inner Mongolia Univ. of Tech. | Shi, Ke | Hunan Univ. |
| Chen, Xiaoyan | Inner Mongolia Univ. of Tech. | ► MoA20-4 | 14:30–14:50 |
| MoA19 | 13:30–15:30 | ²⁰¹⁸ <i>Trajectory Tracking Control of Industrial Manipulator Using Adaptive Type-2 Fuzzy Sliding Mode Controller</i> | |
| Regular Session: Neural Networks and Deep Learning (1) | | | |
| Chair: Li, Peng | Harbin Engineering Univ. | Wang, Xingyu | Northeastern Univ. |
| Co-Chair: Li, Xueqi | College of Automation | Wang, Anna | Northeastern Univ. |
| ► MoA19-1 | 13:30–13:50 | Wang, Xinghua | Northeastern Univ. |
| ⁰⁰⁸⁶ <i>Container Damage Identification Based on RP-FCN</i> | | Wang, Dazhi | Northeastern Univ. |
| Li, Xueqi | College of Automation | ► MoA20-5 | 14:50–15:10 |
| ► MoA19-2 | 13:50–14:10 | ²⁰²⁸ <i>Fault Diagnosis of Industrial Robots Based on Multi-sensor Information Fusion and 1D Convolutional Neural Network</i> | |
| ⁰¹¹⁶ <i>Sphere Margins Softmax for Face Recognition</i> | | Wang, Jiaying | Northeastern Univ. |
| Han, Guojiang | Yangzhou Univ. | Wang, Dazhi | Northeastern Univ. |
| Chen, Caikou | Yangzhou Univ. | Wang, Xinghua | Northeastern Univ. |
| Xu, Zhixuan | Yangzhou Univ. | ► MoA20-6 | 15:10–15:30 |
| Zhou, Shengwei | Yangzhou Univ. | ²²³⁸ <i>基于空间电压矢量脉宽调制的同相位四单元永磁轮毂电机单相断路容错控制</i> | |
| ► MoA19-3 | 14:10–14:30 | <i>Single-Phase Open-Circuit Fault-Tolerant Control of A Four-Unit Permanent Magnet In-Wheel Motor Based on Space-Vector Pulse Width Modulation</i> | |
| ⁰¹⁵⁸ <i>Trajectory Prediction of UAV Swarm Based on Neural Relational Inference Model without Physical Control Law</i> | | Li, Haoyang | Southeast Univ. |
| Wang, Qiang | National Univ. of Defense Tech. | Wei, Hua | Southeast Univ. |
| Zhuang, Dongye | National Univ. of Defense Tech. | Chen, Fuyang | NR Electric Company Ltd |
| Qu, Xutao | National Univ. of Defense Tech. | Zhang, Hengliang | Southeast Univ. |
| Xie, Hai-Bin | National Univ. of Defense Tech. | MoA21 | 13:30–15:30 |
| ► MoA19-4 | 14:30–14:50 | Invited Session: Analysis and Control of Networked Systems (1) | |
| ⁰²⁴² <i>The Application of the Dilated Convolution Based on Small Object Detection</i> | | Organizer: Sun, Jian | Beijing Inst. of Tech. |
| Cai, Chengtao | Harbin Engineering Univ. | Organizer: Pang, Zhonghua | North China Univ. of Tech. |
| Wu, Yue | Harbin Engineering Univ. | Organizer: Liu, Guoping | Univ. of South Wales |
| Li, Shuofeng | Harbin Engineering Univ. | Chair: Sun, Jian | Beijing Inst. of Tech. |
| ► MoA19-5 | 14:50–15:10 | Co-Chair: Yang, Rongni | Shandong Univ. |
| ⁰²⁶¹ <i>Improved U-NET Semantic Segmentation Network</i> | | ► MoA21-1 | 13:30–13:50 |
| Gao, Xueyan | Northeastern Univ. | ⁰⁴⁰⁹ <i>Group Consensus for Discrete-time Heterogeneous Multi-agent Networks</i> | |
| Fang, Lijin | Northeastern Univ. | Li, Yanjiang | Heilongjiang Univ. |
| ► MoA19-6 | 15:10–15:30 | Yue, Liang | Harbin Univ. of Sci. & Tech. |
| ⁰²⁸⁰ <i>Research on FOD Detection for Airport Runway Based on YOLOv3</i> | | Tan, Chong | Harbin Univ. of Sci. & Tech. |
| Li, Peng | Harbin Engineering Univ. | ► MoA21-2 | 13:50–14:10 |
| Li, Huajian | Harbin Engineering Univ. | ⁰⁵⁴⁹ <i>Data-driven Stealthy Actuator Attack Against Cyber-Physical Systems</i> | |
| MoA20 | 13:30–15:30 | Zhang, Zhixue | Beijing Satellite Navigation Center |
| Invited Session: Control of Industrial Robots and Actuator Systems | | | |
| Organizer: Wu, Cheng Dong | Northeastern Univ. | Zhang, Qirui | Beijing Inst. of Tech. |
| Organizer: Wei, Hua | Southeast Univ. | Liu, Tao | Beijing Wuzi Univ. |
| Organizer: Yuan, Xiaofang | Hunan Univ. | Pang, Zhonghua | North China Univ. of Tech. |
| Organizer: Liu, Zhen-Tao | China Univ. of GeoSci. | Cui, Bing | Beijing Inst. of Tech. |
| Chair: Wei, Hua | Southeast Univ. | Jin, Shuxin | Beijing Satellite Navigation Center, |
| Co-Chair: Yuan, Xiaofang | Hunan Univ. | Liu, Kun | School of Automation, Beijing Inst. of Tech. |
| ► MoA20-1 | 13:30–13:50 | ► MoA21-3 | 14:10–14:30 |
| ¹⁷⁶⁵ <i>A Distance Measurement Method Based on Dual-parallel-line Projection for A Non-parameter Shooting System</i> | | ⁰⁵⁷¹ <i>Networked Predictive Control of Discrete-time Two-dimensional Systems</i> | |
| Du, Chen | School of Automation, China Univ. of GeoSci., Wuhan | Ding, Shufen | Shandong Univ. |
| She, Jinhua | Tokyo Univ. of Tech. | Yang, Rongni | Shandong Univ. |
| Jian, Xu | China Univ. of GeoSci. (Wuhan) | ► MoA21-4 | 14:30–14:50 |
| Qin, Mengxi | China Univ. of GeoSci. | ⁰⁵⁹¹ <i>Simulink-Based Online Algorithm Design Interface for Web-Based Control Laboratory</i> | |
| ► MoA20-2 | 13:50–14:10 | Xue, Liwei | Wuhan Univ. |
| ¹⁸³⁹ <i>Two-DOF Speed Control of Permanent Magnet Synchronous Machine with A Novel Parameter Identification Method</i> | | Hu, Wenshan | Wuhan Univ. |
| Hu, Mingjin | Southeast Univ. | Liu, Guoping | Univ. of South Wales |
| Wei, Hua | Southeast Univ. | Zhou, Hong | Wuhan Univ. |
| Wu, Xudong | Southeast Univ. | ► MoA21-5 | 14:50–15:10 |
| Wu, Cheng Dong | Northeastern Univ. | ⁰⁶⁴⁹ <i>Design of Virtual Thermal Process Control Framework for NCSLab</i> | |
| Wang, Dazhi | Northeastern Univ. | Feng, Xingle | Wuhan Univ. |
| Liu, Zhen-Tao | China Univ. of GeoSci. | Hu, Wenshan | Wuhan Univ. |
| Yuan, Xiaofang | Hunan Univ. | Zhou, Hong | Wuhan Univ. |
| Zhang, Wennong | Inovance Tech. Co Ltd | Liu, Guoping | Univ. of South Wales |
| ► MoA20-3 | 14:10–14:30 | ► MoA21-6 | 15:10–15:30 |
| ¹⁸³⁹ <i>基于灰色关联分析法的机器人交流伺服电机性能评估研究</i> | | ⁰⁷³¹ <i>A Smartphone-Based Networked Control Platform: Design and Implementation</i> | |
| <i>Comprehensive Performance Evaluation of Robot AC Servo System Based on Grey Relation Analysis</i> | | Chen, Dong-Liang | Dalian Minzu Univ. |
| Tian, Zhengming | College of Electrical & Information Engineering, Hunan Univ. | Liu, Guoping | Harbin Inst. of Tech. |
| Yuan, Xiaofang | Hunan Univ. | | |
| Wang, Haoran | HUNAN Univ. | | |

Final Program

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| MoA22 | 13:30–15:30 | | | | |
| Invited Session: Distributed Schemes for Optimization and Games in Multi-Agent Systems over Networks | | | | | |
| Organizer: Yi, Peng | | Tongji Univ. | | | |
| Organizer: Lei, Jinlong | | Tongji Univ. | | | |
| Chair: Yi, Peng | | Tongji Univ. | | | |
| Co-Chair: Zeng, Xianlin | | Beijing Inst. of Tech. | | | |
| ► MoA22-1 | 13:30–13:50 | | | | |
| ⁰⁵¹⁷ Distributed Optimization of Second-Order Nonlinear Multi-Agent Systems Subject to Communication Delays | | | | | |
| Li, Shiling | | Central South Univ. | | | |
| Nian, Xiaohong | | Central South Univ. | | | |
| Deng, Zhenhua | | Central South Univ. | | | |
| Chen, Zhao | | Central South Univ. | | | |
| ► MoA22-2 | 13:50–14:10 | | | | |
| ¹⁰⁴⁶ Distributed Nash Equilibrium Seeking of Aggregative Games for High-Order Systems | | | | | |
| Zheng, Zhong Qing | | Zhejiang Gongshang Univ. | | | |
| Zhang, Yanqiong | | Acad. of Mathematics & Sys. Sci., Chinese Acad. of Sci. | | | |
| Zhang, Bin | | National Univ. of Defense & Tech. | | | |
| Yin, Rui | | Communication Sci. & Electrical Engineering | | | |
| ► MoA22-3 | 14:10–14:30 | | | | |
| ¹¹⁸² Distributed Computation of Algebraic Riccati Inequalities via An Optimization Design | | | | | |
| Zeng, Xianlin | | Beijing Inst. of Tech. | | | |
| Chen, Jie | | Tongji Univ. | | | |
| Hong, Yiguang | | Chinese Acad. of Sci. | | | |
| ► MoA22-4 | 14:30–14:50 | | | | |
| ¹⁵³¹ On the Boundedness of Subgradients in Distributed Optimization | | | | | |
| Zhu, Kui | | Beijing Univ. of Posts & Telecommunications | | | |
| Zhu, Hao | | Beijing Univ. of Posts & Telecommunications | | | |
| Tang, Yutao | | Beijing Univ. of Posts & Telecommunications | | | |
| ► MoA22-5 | 14:50–15:10 | | | | |
| ²²³³ Distributed Frank-Wolfe Algorithm for Nash Equilibrium Seeking | | | | | |
| Wang, Tongyu | | Shanghai Research Inst. for Intelligent Autonomous Sys., Tongji Univ., Shanghai | | | |
| Yi, Peng | | Tongji Univ. | | | |
| ► MoA22-6 | 15:10–15:30 | | | | |
| ¹⁸¹⁵ Distributed Variational Bayes Based on Consensus of Probability Densities | | | | | |
| Lin, Peng | | China United Network Communications Group Company Limited | | | |
| Hu, Chen | | Xi'an Inst. of High-Tech | | | |
| Lou, Yu | | China United Network Communications Group Company Limited | | | |
| MoA23 | 13:30–15:30 | | | | |
| Invited Session: Active Disturbance Rejection Control: Methodology, Practice and Analysis (1) | | | | | |
| Organizer: Huang, Yi | | Chinese Acad. of Sci. | | | |
| Organizer: Gao, Zhiqiang | | Cleveland State Univ. | | | |
| Organizer: Chen, Sen | | Shaanxi Normal Univ. | | | |
| Chair: Huang, Yi | | Chinese Acad. of Sci. | | | |
| Co-Chair: Song, Kang | | Tianjin Univ. | | | |
| ► MoA23-1 | 13:30–13:50 | | | | |
| ⁰⁴⁹¹ 无人车组的自抗扰纵向编队控制 Active Disturbance Rejection Longitudinal Formation Control of Unmanned Vehicles | | | | | |
| Shi, Haonan | | Shaanxi Normal Univ. | | | |
| Chen, Sen | | Shaanxi Normal Univ. | | | |
| Zhao, Zhiliang | | Shaanxi Normal Univ. | | | |
| ► MoA23-2 | 13:50–14:10 | | | | |
| ⁰⁵⁰⁰ Ultimate Stability Analysis of Active Disturbance Rejection Control with A High-gain Observer | | | | | |
| Wang, Yongshuai | | Nankai Univ. | | | |
| Chen, Zengqiang | | Nankai Univ. | | | |
| Sun, Mingwei | | Nankai Univ. | | | |
| Sun, Qinglin | | Nankai Univ. | | | |
| ► MoA23-3 | 14:10–14:30 | | | | |
| ⁰⁶²² A Parameter Formula Connecting PID and ADRC | | | | | |
| Zhong, Sheng | | Acad. of Mathematics & Sys. Sci. | | | |
| Huang, Yi | | Chinese Acad. of Sci. | | | |
| Guo, Lei | | Chinese Acad. of Sci. | | | |
| ► MoA23-4 | 14:30–14:50 | | | | |
| ¹⁰⁹² Path-Following Control for Self-driving Forklifts Based on Cascade Disturbance Rejection with Coordinates Reconstruction | | | | | |
| Li, Longqing | | Tianjin Univ. | | | |
| Song, Kang | | Tianjin Univ. | | | |
| Xie, Hui | | Tianjin Univ. | | | |
| ► MoA23-5 | 14:50–15:10 | | | | |
| ¹²⁷¹ Path-Following Control for Connected Self-driving Rollers with Preview Distance Online Optimization | | | | | |
| Xie, Hui | | Tianjin Univ. | | | |
| Gao, Yi | | Tianjin Univ. | | | |
| Song, Kang | | Tianjin Univ. | | | |
| ► MoA23-6 | 15:10–15:30 | | | | |
| ¹⁴³⁴ Application of Linear Active Disturbance Rejection Control in Autonomous Underwater Vehicle Robot | | | | | |
| Song, Wanping | | Nankai Univ. | | | |
| Chen, Zengqiang | | Nankai Univ. | | | |
| Sun, Mingwei | | Nankai Univ. | | | |
| Sun, Qinglin | | Nankai Univ. | | | |
| MoA24 | 13:30–15:30 | | | | |
| Invited Session: Theory and Application of Networked Systems | | | | | |
| Organizer: Liu, Zhongxin | | Nankai Univ. | | | |
| Organizer: Xia, Chengyi | | Tianjin Univ. of Tech. | | | |
| Chair: Liu, Zhongxin | | Nankai Univ. | | | |
| Co-Chair: Li, Tao | | East China Normal Univ. | | | |
| ► MoA24-1 | 13:30–13:50 | | | | |
| ⁰⁹⁰⁵ Exponential Synchronization of Neural Networks with Discontinuous Activations | | | | | |
| Sader, Malika | | Nankai Univ. | | | |
| Wang, Fuyong | | Nankai Univ. | | | |
| Liu, Zhongxin | | Nankai Univ. | | | |
| Chen, Zengqiang | | Nankai Univ. | | | |
| ► MoA24-2 | 13:50–14:10 | | | | |
| ¹⁰⁹⁷ Distributed Online Optimization Design over Unbalanced Graphs | | | | | |
| Cheng, Songsong | | Acad. of Mathematics & Sys. Sci., Chinese Acad. of Sci. | | | |
| Hong, Yiguang | | Chinese Acad. of Sci. | | | |
| ► MoA24-3 | 14:10–14:30 | | | | |
| ¹¹⁷⁷ Distributed Optimal Formation Control with Energy and Time Constraints | | | | | |
| Jia, Chunxiang | | Northeastern Univ. | | | |
| Chen, Fei | | Northeastern Univ. | | | |
| ► MoA24-4 | 14:30–14:50 | | | | |
| ¹¹⁸⁰ A Matrix-switched Approach to Reachability Analysis of Networked Finite State Machine | | | | | |
| Zhang, Zhipeng | | Tianjin Univ. of Tech. | | | |
| Xia, Chengyi | | Tianjin Univ. of Tech. | | | |
| Chen, Zengqiang | | Nankai Univ. | | | |
| ► MoA24-5 | 14:50–15:10 | | | | |
| ¹²⁶⁰ Distributed Cooperative Algorithms with Applications in Energy Internet | | | | | |
| Li, Tao | | East China Normal Univ. | | | |
| ► MoA24-6 | 15:10–15:30 | | | | |
| ¹³¹⁷ Finite-time Formation Control of First-order Multi-agents Systems with Region Constraint | | | | | |
| Yang, Zhengquan | | Civil Aviation Univ. of China | | | |
| Pan, Xiaofang | | Civil Aviation Univ. of China | | | |
| Zhang, Qing | | Civil Aviation Univ. of China | | | |
| Chen, Zengqiang | | Nankai Univ. | | | |
| MoA25 | 13:30–15:30 | | | | |
| Invited Session: Recent Advances in Intelligent and Learning Control: Theory and Application | | | | | |
| Organizer: Meng, Deyuan | | Beihang Univ. (BUAA) | | | |
| Organizer: Zhao, Lin | | Qingdao Univ. | | | |
| Chair: Meng, Deyuan | | Beihang Univ. (BUAA) | | | |
| Co-Chair: Zhao, Lin | | Qingdao Univ. | | | |
| ► MoA25-1 | 13:30–13:50 | | | | |
| ¹²⁹⁷ Learning Algorithm Design Based on Manifold Optimization | | | | | |
| Wang, Xi | | Acad. of Math & Sys. Sci. | | | |

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| Ming, Yang | Acad. of Mathematics & Sys. Sci., Chinese Acad. of Sci. | ► MoA27-1 | 13:30–13:50 |
| Hong, Yiguang | Chinese Acad. of Sci. | 1438 <i>Distributed Leader-following Formation Control for Mobile Robots with Unknown Amplitudes of Leader's Velocity</i> | |
| ► MoA25-2 | 13:50–14:10 | Zhang, Xu | Shanghai Jiao Tong Univ. |
| 1450 <i>Transfer Discriminant Analysis in Feature Learning</i> | | Yu, Xiao | Xiamen Univ. |
| Ming, Yang | Acad. of Mathematics & Sys. Sci., Chinese Acad. of Sci. | Lu, Jun-Guo | Shanghai Jiao Tong Univ. |
| Cheng, Zhaoyang | Chinese Acad. of Sci. | Lan, Weiyao | Xiamen Univ. |
| Hong, Yiguang | Chinese Acad. of Sci. | ► MoA27-2 | 13:50–14:10 |
| ► MoA25-3 | 14:10–14:30 | 2013 <i>Leader-Following Consensus for Double-Integrator Multi-Agent Systems via Sampled Output Feedback</i> | |
| 1614 <i>Learning-Based Attitude Control on Spacecraft</i> | | Zhang, Ying | Fuzhou Univ. |
| Zhang, Fan | Beihang Univ. | Su, Youfeng | Fuzhou Univ. |
| Meng, Deyuan | Beihang Univ. (BUAA) | ► MoA27-3 | 14:10–14:30 |
| ► MoA25-4 | 14:30–14:50 | 2026 <i>Distributed Consensus Control of An Interconnected Leader-follower Multiagent System under Switching Network</i> | |
| 1847 <i>Adaptive Neural Consensus Tracking Control for Multiple Euler-Lagrange Systems</i> | | He, Yuheng | SCUT |
| Meng, Fanfeng | Qingdao Univ. | Cai, He | South China Univ. of Tech. |
| Zhao, Lin | Qingdao Univ. | ► MoA27-4 | 14:30–14:50 |
| Chen, Xiao | Qingdao Univ. | 2215 <i>Ripple-free Output Consensus Design for Heterogeneous LTI Multi-agent Systems Using Sampled-data Control</i> | |
| ► MoA25-5 | 14:50–15:10 | Cheng, Jingjing | Nanjing Univ. of Sci. & Tech. |
| 1814 <i>Velocity Regulation for Automatic Train Operation via Meta-Reinforcement Learning</i> | | Xu, Dabo | Nanjing Univ. of Sci. & Tech. |
| Zhao, Feiran | Tsinghua Univ. | Su, Youfeng | Fuzhou Univ. |
| You, Keyou | Tsinghua Univ. | ► MoA27-5 | 14:50–15:10 |
| Fan, Yunxin | CRRRC Zhuzhou Locomotive Co. Ltd | 2271 <i>Cooperative Output Regulation of Discrete-Time Linear Multi-Agent Systems by Output Feedback</i> | |
| Yan, Gang | CRRRC Zhuzhou Locomotive Co. Ltd | Lu, Maobin | Beijing Inst. of Tech. |
| ► MoA25-6 | 15:10–15:30 | ► MoA27-6 | 15:10–15:30 |
| 2349 <i>Study of An Adaptive Iterative Learning Control Based on Extended State Observer in Path Tracking of Double Joint Robot</i> | | 1253 <i>Distributed Optimization for Linear Differential Inclusions</i> | |
| Xu, Jiahui | Beijing Univ. of Chemical Tech. | Jing, Peng | Northeastern Univ. |
| Li, Dazi | Beijing Univ. of Chemical Tech. | Chen, Fei | Northeastern Univ. |
| Jin, Qibing | Beijing Univ. of Chemical Tech., China | | |
| MoA26 | 13:30–15:30 | MoB01 | 15:50–17:50 |
| Invited Session: Information-based Control of Networked Systems and Its Applications | | Regular Session: Systems Theory and Control Theory (2) | |
| Organizer: Meng, Ziyang | Tsinghua Univ. | Chair: Chen, Xuesong | Guangdong Univ. of Tech. |
| Organizer: Yang, Tao | Northeastern Univ. | Co-Chair: Pang, Bo | Northeastern Univ. |
| Chair: Meng, Ziyang | Tsinghua Univ. | ► MoB01-1 | 15:50–16:10 |
| Co-Chair: Yang, Tao | Northeastern Univ. | 0617 <i>Research on Command Information System Architecture for Human-Computer Fusion</i> | |
| ► MoA26-1 | 13:30–13:50 | Zhang, Zhaochen | The 28th Research Inst. of CETC |
| 1178 <i>Minimum-Energy Distributed Consensus Control of Multi-Agent Systems</i> | | Jiang, Wei | The 28th Research Inst. of CETC |
| Chen, Fei | Northeastern Univ. | Mao, Xiaobin | Sci. & Tech. on Information Sys. Engineering Laboratory |
| ► MoA26-2 | 13:50–14:10 | ► MoB01-2 | 16:10–16:30 |
| 1252 <i>Decision Fusion with Feedback in Neyman-Pearson Detection</i> | | 0740 <i>Controllability of Uncertain Polynomial Fuzzy Singular Systems</i> | |
| Zeng, Guangyang | Zhejiang Univ. | Pang, Bo | Northeastern Univ. |
| Wu, Junfeng | KTH, Royal Inst. of Tech. | Gao, Xianwen | Northeastern Univ. China |
| Shi, Zhiguo | Zhejiang Univ. | Sheng, Xiang | Univ. of Victoria |
| ► MoA26-3 | 14:10–14:30 | ► MoB01-3 | 16:30–16:50 |
| 1319 <i>Sparse Learning of Network-reduced Models in Power Systems</i> | | 1224 <i>Event-triggered Stability of Singularly Perturbed System with Time Delay</i> | |
| Ping, Zuowei | Huazhong Univ. of Sci. & Tech. | Ren, Xiang | Beihang Univ. |
| Yang, Tao | Northeastern Univ. | Hao, Fei | Beihang Univ. |
| ► MoA26-4 | 14:30–14:50 | ► MoB01-4 | 16:50–17:10 |
| 1325 <i>An Overview of Biological Data Based Studies of Bird Flocking</i> | | 1381 <i>Delay-Dependent Stability Analysis of Delayed Discrete-Time Systems via State-Connecting-Based Zero-Value Equations</i> | |
| Zhao, Shiyu | Westlake Univ. | Xie, Keyou | China Univ. of GeoSci. (WuHan) |
| ► MoA26-5 | 14:50–15:10 | Chen, Wenhu | China Univ. of GeoSci. |
| 1426 <i>Adaptive Coordinated Formation Control of Heterogeneous Vertical Take-Off and Landing UAVs Subject to Parametric Uncertainties</i> | | Jin, Li | China Univ. of GeoSci. |
| Zou, Yao | Univ. of Sci. & Tech. Beijing | Zhang, Chuan-Ke | China Univ. of GeoSci. |
| ► MoA26-6 | 15:10–15:30 | He, Yong | China Univ. of GeoSci. |
| 1441 <i>Dual Self-triggered Model Predictive Control for Constrained Networked Nonlinear Systems</i> | | ► MoB01-5 | 17:10–17:30 |
| Cui, Di | Northwestern Polytechnical Univ. | 1898 <i>On Iterative Solutions of Periodic Sylvester Matrix Equations</i> | |
| Li, Huiping | Northwestern Polytechnical Univ. | Chen, Zebin | Guangdong Univ. of Tech. |
| | | Chen, Xuesong | Guangdong Univ. of Tech. |
| MoA27 | 13:30–15:30 | ► MoB01-6 | 17:30–17:50 |
| Invited Session: Multi-agent Systems: Control and Application | | 1923 <i>Distributed Computation for Solving the Stein Equation Based on Optimization</i> | |
| Organizer: Cai, He | South China Univ. of Tech. | Chen, Ziqin | Univ. of Sci. & Tech. of China |
| Organizer: Su, Youfeng | Fuzhou Univ. | Li, Li | Tongji Univ. |
| Chair: Cai, He | South China Univ. of Tech. | Hong, Yiguang | Chinese Acad. of Sci. |
| Co-Chair: Su, Youfeng | Fuzhou Univ. | | |

Final Program

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| MoB02 | 15:50–17:50 | | |
| Regular Session: Nonlinear Systems and Control (3) | | | |
| Chair: Du, Haibo | Hefei Univ. of Tech. | Liu, Yujing | Chinese Acad. of Sci. |
| Co-Chair: Mi, Junjie | Nanjing Univ. of Sci. & Tech. | Liu, Zhi-Xin | Chinese Acad. of Sci. |
| ► MoB02-1 | 15:50–16:10 | ► MoB03-6 | 17:30–17:50 |
| ⁰⁵⁹⁴ <i>Finite-Time Anti-Synchronization Control of Memristive Neural Networks with Time Delays</i> | | ⁰²⁰⁴ <i>Time Sequence Based AES S-box Implementation Cryptanalysis Using Deep Learning Approaches</i> | |
| Wu, Jie | China Univ. of GeoSci. | Zhu, Shuaishuai | Engineering Univ. of CAPF |
| Wang, Leimin | China Univ. of GeoSci. | Han, Yiliang | Engineering Univ. of CAPF |
| ► MoB02-2 | 16:10–16:30 | ► MoB03-7 | 17:50–18:10 |
| ⁰⁶⁸¹ <i>Global Finite-time Attitude Stabilization for Spacecraft under Velocity Constraint</i> | | ¹⁸²⁷ <i>Analysis of McEliece Public Cryptography Using Deep AutoEncoder</i> | |
| Yu, Bo | Hefei Univ. of Tech. | Zhu, Shuaishuai | Engineering Univ. of CAPF |
| Du, Haibo | Hefei Univ. of Tech. | Han, Yiliang | Engineering Univ. of CAPF |
| Zhou, Jun | Hefei Univ. of Tech. | | |
| Wu, Di | Southeast Univ. | | |
| ► MoB02-3 | 16:30–16:50 | ► MoB04-1 | 15:50–16:10 |
| ⁰⁷⁷¹ <i>An Output Regulation Approach for Swing-up and Tracking Control of Double Pendulum on A Cart</i> | | ¹⁶⁷² <i>Signal Analysis of Mill Shell Vibration Based on Variational Modal Decomposition</i> | |
| Zhou, Mengya | Hefei Univ. of Tech. | Liu, Zhuo | Northeastern Univ. |
| Ping, Zhaowu | Hefei Univ. of Tech. | Chai, Tianyou | Northeastern Univ. |
| Huang, Yunzhi | Hefei Univ. of Tech. | Tang, Jian | Beijing Univ. of Tech. |
| Lu, Jun-Guo | Shanghai Jiao Tong Univ. | Yu, Wen | CINVESTAV-IPN, México |
| ► MoB02-4 | 16:50–17:10 | ► MoB04-2 | 16:10–16:30 |
| ⁰⁷⁷⁷ <i>ESO-Based Adaptive Robust Control of 3-Axis Winding of Carbon Fiber</i> | | ¹⁹⁰⁹ <i>Modeling of Main Steam Temperature Using An Improved Fuzzy Genetic Algorithm</i> | |
| Mi, Junjie | Nanjing Univ. of Sci. & Tech. | Cheng, Chuanliang | Shanghai Univ. |
| Yao, Jianyong | Nanjing Univ. of Sci. & Tech. | Peng, Chen | Shanghai Univ. |
| ► MoB02-5 | 17:10–17:30 | Zeng, De-Liang | North China Electric Power Univ. |
| ⁰⁷⁹⁵ <i>Integral Sliding-Mode Control of Piecewise Linear Systems</i> | | Zhang, Tengfei | Nanjing Univ. of Posts & Telecommunications |
| Zhang, Chunyang | Beijing Inst. of Tech. | | |
| Gao, Qing | Beihang Univ. | ► MoB04-3 | 16:30–16:50 |
| Zhang, Peng | Beihang Univ. | ²¹⁸⁸ <i>Attitude Model Identification of A Quadrotor Using the Subspace Identification Method</i> | |
| Zhou, Kang | Beijing Inst. of Tech. | Liu, Jin-Cang | Tianjin Univ. of Tech. & Education |
| ► MoB02-6 | 17:30–17:50 | Geng, Li-Hui | Tianjin Univ. of Tech. & Education |
| ⁰⁹³⁶ <i>Research on Filtering Phase Compensation of Noise-disturbed Signal Based on Tracking Differentiator and Taylor's Formula</i> | | ► MoB04-4 | 16:50–17:10 |
| Zhu, Yongting | Guizhou Univ. | ²³⁷⁷ <i>Model Identification of the Skid-steered Wheeled Vehicle at Operating Point</i> | |
| Zhang, Ze | Guizhou Univ. | Zheng, Yadi | South China Univ. of Tech. |
| MoB03 | 15:50–18:10 | Li, Junhui | South China Univ. of Tech. |
| Regular Session: Complexity and Complex System Theory | | | |
| Chair: Han, Jing | Acad. of Mathematics & Sys. Sci., CAS | ► MoB04-5 | 17:10–17:30 |
| Co-Chair: Zhu, Shuaishuai | Engineering Univ. of CAPF | ²⁴⁷⁴ <i>基于随机逼近算法的集值系统辨识</i> | |
| ► MoB03-1 | 15:50–16:10 | <i>Set-Valued System Identification Based on Stochastic Approximation Algorithm</i> | |
| ⁰⁷⁵³ <i>New Theory of Turbulent Complex System and Its Mechanism</i> | | Ke, Jieming | Univ. of Chinese Acad. of Sci. |
| Yu, Huize | Zhejiang Univ. | Zhao, Yanlong | Chinese Acad. of Sci. |
| Fu, Youping | None | Zhang, Ji-Feng | Chinese Acad. of Sci. |
| Zhu, Wenjun | Zhejiang Univ. | ► MoB04-6 | 17:30–17:50 |
| Meng, Jun | Zhejiang Univ. | ²⁴⁷⁷ <i>Analysis of Identification Algorithms of Set-Valued Systems</i> | |
| Sun, Changkai | Dalian Univ. of Tech. | Tang, Yin | Univ. of Chinese Acad. of Sci. |
| ► MoB03-2 | 16:10–16:30 | Zhao, Yanlong | Chinese Acad. of Sci. |
| ¹⁸⁷⁶ <i>Observer-Based Robust Containment Control of Multi-agent Systems with Input Saturation</i> | | ► MoB04-7 | 17:50–18:10 |
| Qian, Juan | Nanjing Univ. of Posts & Telecommunications | ²¹⁰⁶ <i>Mining Rare Patterns in Wind Tunnel by A Sequential Outlier Ensemble</i> | |
| Wang, Xiaoling | Shanghai Jiao Tong Univ. | Cao, Yang | Aerodynamics Research Inst. of AVIC |
| Jiang, Guo-Ping | Nanjing Univ. of Posts & Telecommunications | Cui, Xiaochun | Aerodynamics Research Inst. of AVIC |
| Su, Housheng | Huazhong Univ. of Sci. & Tech. | Zhang, Ran | Aerodynamics Research Inst. of AVIC |
| ► MoB03-3 | 16:30–16:50 | Wang, Biao | Shenyang Aerospace Univ. |
| ²⁰⁰⁰ <i>Analysis of Dynamic Five-Element Model</i> | | MoB05 | 15:50–17:50 |
| Lin, Haipeng | Acad. of Mathematics & Sys. Sci., CAS | Regular Session: Optimization and Scheduling (2) | |
| Han, Jing | Acad. of Mathematics & Sys. Sci., CAS | Chair: Fan, Siyuan | Northeast Electric Power Univ. |
| ► MoB03-4 | 16:50–17:10 | Co-Chair: Yang, Hong | China Electronics Standardization Inst. |
| ²⁴⁰⁸ <i>Node Importance Evaluation Algorithm for Complex Network Based on Time Series and TOPSIS</i> | | ► MoB05-1 | 15:50–16:10 |
| Jia, Han | Engineering Univ. of PAP | ⁰⁷¹⁸ <i>Multi-UAVs Cooperative Detection Based on Improved NSGA-II Algorithm</i> | |
| Han, Yiliang | Engineering Univ. of CAPF | Cong, Rui | Tianjin Univ. |
| Wu, Xuguang | Engineering College of APF | Qi, Juntong | Tianjin Univ. |
| Zhu, Shuaishuai | Engineering Univ. of CAPF | Wu, Chong | EFY Intelligent Control |
| ► MoB03-5 | 17:10–17:30 | Wang, Mingming | Tianjin Univ. |
| ¹⁹³⁷ <i>湍流系统EMMS模型的非合作博弈建模与仿真</i> | | Guo, Jinjin | Tianjin Univ. |
| <i>Modeling and Simulaiton of Turbulence EMMS Model Based on Non-cooperative Game Theory</i> | | ► MoB05-2 | 16:10–16:30 |
| | | ⁰⁷⁶⁵ <i>Energy Balance Based Power Generation Scheduling of Microgrid with</i> | |

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|---|---|--|--|--|--|
| <i>Nonanticipativity</i> | | | | | |
| | Zhao, Jiexing | | Xi'an Jiaotong Univ. | | |
| | Zhai, Qiaozhu | | Sys. Engineering Inst. | | |
| | Miao, Hongyi | | Xi'an Jiaotong Univ. | | |
| ▶ | MoB05-3 | | 16:30–16:50 | | |
| 1023 | <i>Optimization of Mechanized Construction Scheme of Overhead Transmission Line Based on Mechanization Rate</i> | | | | |
| | Xie, Dong | | State Grid Hubei Economic Research Inst. | | |
| | Guo, Ting | | State Grid Hubei Economic Research Inst. | | |
| | Zhou, Fangcheng | | State Grid Hubei Economic Research Inst. | | |
| | Wu, Yifei | | Wuhan Univ. | | |
| | Zhuan, Xiangtao | | Wuhan Univ. | | |
| ▶ | MoB05-4 | | 16:50–17:10 | | |
| 1111 | <i>An Optimization Method Based on Adaptive Dynamic Programming for Cleaning Photovoltaic Panels</i> | | | | |
| | Fan, Siyuan | | Northeast Electric Power Univ. | | |
| | Yao, Xianshuang | | Northeast Electric Power Univ. | | |
| | Cao, Shengxian | | Northeast Electric Power Univ. | | |
| | Zhao, Bo | | Northeast Electric Power Univ. | | |
| ▶ | MoB05-5 | | 17:10–17:30 | | |
| 1235 | <i>A Multi-level Two-stage Optimal Dispatch Model for Wind-storage Hybrid System</i> | | | | |
| | Fan, Rui | | State Grid Shanxi Electric Power Company | | |
| | Zhang, Min | | State Grid Shanxi Electric Power Company | | |
| | Xu, Yin | | Beijing Jiaotong Univ. | | |
| | Wu, Danman | | Tsinghua Univ. & Department of Electrical Engineering | | |
| | Qi, Lingxiao | | Beijing Jiaotong Univ. | | |
| | Mei, Shengwei | | Tsinghua Univ. | | |
| | Chang, Xiao | | State Grid Shanxi Electric Power Company | | |
| ▶ | MoB05-6 | | 17:30–17:50 | | |
| 0850 | <i>DNN Application Oriented Migration Scheduling Strategy Based on Genetic Algorithm</i> | | | | |
| | Yang, Hong | | China Electronics Standardization Inst. | | |
| | Guo, Xiong | | China Electronics Standardization Inst. | | |
| | Li, Mengliang | | China Electronics Standardization Inst. | | |
| MoB06 | | | 15:50–18:10 | | |
| Regular Session: Robust Control (2) | | | | | |
| | Chair: Zhang, Jun | | Jiangsu Univ. | | |
| | Co-Chair: Wen, Cheng | | South China Univ. of Tech. | | |
| ▶ | MoB06-1 | | 15:50–16:10 | | |
| 1339 | <i>Robust H^∞ Filtering for Uncertain Semi-Markov Jump Systems and Its Application</i> | | | | |
| | Zhang, Linchuang | | Bohai Univ. | | |
| | Sun, Yonghui | | Hohai Univ. | | |
| | Hou, Dongchen | | Hohai Univ. | | |
| | Wang, Jianxi | | Hohai Univ. | | |
| | Shen, Mouquan | | Nanjing Tech Univ. | | |
| ▶ | MoB06-2 | | 16:10–16:30 | | |
| 2110 | <i>Robust Multi-objective Control for Vehicle Active Suspension Systems with Structured Uncertainties</i> | | | | |
| | Cao, Zhong | | Guangzhou Univ. | | |
| | Wang, Sheng-Guo | | Univ. of North Carolina - Charlotte | | |
| | Chen, Zhaohui | | Chongqing Univ. of Sci. & Tech. | | |
| | Hou, Xiaorong | | Univ. of Electronic Sci. & Tech. of China | | |
| | Zhao, Wenjing | | Guangzhou Univ. | | |
| ▶ | MoB06-3 | | 16:30–16:50 | | |
| 2193 | <i>Robust and Optimal Disturbance Isolation Design for MSCA Servo Systems</i> | | | | |
| | Huang, Peng | | South China Univ. of Tech. | | |
| | Wen, Cheng | | South China Univ. of Tech. | | |
| | Weng, Chuanghong | | South China Univ. of Tech. | | |
| ▶ | MoB06-4 | | 16:50–17:10 | | |
| 2194 | <i>Optimal Tracking Design with Robust Observer Optimization</i> | | | | |
| | Weng, Chuanghong | | South China Univ. of Tech. | | |
| | Wen, Cheng | | South China Univ. of Tech. | | |
| ▶ | MoB06-5 | | 17:10–17:30 | | |
| 2206 | <i>Finite-time Stability of Networked Predictive Control Systems with Uncertainties</i> | | | | |
| | Zhao, Hairui | | Harbin Univ. of Sci. & Tech. | | |
| | Chen, Dongyan | | Harbin Univ. of Sci. & Tech. | | |
| ▶ | MoB06-6 | | 17:30–17:50 | | |
| 1528 | <i>Robust Control for A Quadrotor UAV Based on Linear Quadratic Regulator</i> | | | | |
| | Huang, Tianpeng | | Southwest Jiaotong Univ. | | |
| | Huang, Deqing | | Southwest Jiaotong Univ. | | |
| | Wang, Zhikai | | Southwest Jiaotong Univ. | | |
| | Qin, Na | | Southwest Jiaotong Univ. | | |
| | Shah, Awais | | Southwest Jiaotong Univ. | | |
| ▶ | MoB06-7 | | 17:50–18:10 | | |
| 0465 | <i>A Robust Finite Time-based Anti-pitching Control Method for A High-speed Multihull</i> | | | | |
| | Zhang, Jun | | Jiangsu Univ. | | |
| MoB07 | | | 15:50–17:50 | | |
| Regular Session: Fuzzy System and Fuzzy Control (2) | | | | | |
| | Chair: Dai, Yaping | | Beijing Inst. of Tech. | | |
| | Co-Chair: Li, Yuan Xin | | Liaoning Univ. of Tech. | | |
| ▶ | MoB07-1 | | 15:50–16:10 | | |
| 2022 | <i>State-Feedback Based Fuzzy Control Design for Discrete-Time Interval Type-2 Fuzzy Bilinear Delay Systems</i> | | | | |
| | Li, Lin | | Yanan Univ. | | |
| | Li, Jiangrong | | Yan'an Univ. | | |
| | Mao, Chen Fei | | Yanan Univ. | | |
| ▶ | MoB07-2 | | 16:10–16:30 | | |
| 2144 | <i>Event-triggered Adaptive Fuzzy Control for A Class of Fractional-Order Nonlinear Systems</i> | | | | |
| | Wei, Ming | | Liaoning Univ. of Tech. | | |
| | Li, Yuan Xin | | Liaoning Univ. of Tech. | | |
| ▶ | MoB07-3 | | 16:30–16:50 | | |
| 2152 | <i>DBFCM: A Density-Based Fuzzy C-Means with Self-Regulated Fuzzy Clustering Parameters</i> | | | | |
| | Sun, Jiayi | | Beijing Inst. of Tech. | | |
| | Dai, Yaping | | Beijing Inst. of Tech. | | |
| | Zhao, Kaixin | | Beijing Inst. of Tech. | | |
| ▶ | MoB07-4 | | 16:50–17:10 | | |
| 2398 | <i>Fuzzy Dynamic Matrix Predictive Control of Ammonia Injection Quantities in SCR Denitration Systems</i> | | | | |
| | Chi, Xiaobo | | Shanxi Univ. | | |
| | Zhao, Shenyang | | Shanxi Univ. | | |
| | Jia, Xinchun | | Shanxi Univ. | | |
| | Hou, Pengfei | | Shanxi Univ. | | |
| ▶ | MoB07-5 | | 17:10–17:30 | | |
| 1195 | <i>Robust Fuzzy Attitude Control of Sampled-Data Spacecraft with Actuator Saturation</i> | | | | |
| | Xu, Shidong | | Nanjing Univ. of Aeronautics & Astronautics | | |
| | Wen, Hao | | Nanjing Univ. of Aeronautics & Astronautics | | |
| MoB08 | | | 15:50–17:50 | | |
| Regular Session: Predictive Control (2) | | | | | |
| | Chair: Li, Liwei | | Qingdao Univ. | | |
| | Co-Chair: Xu, Fang | | Jilin Univ. | | |
| ▶ | MoB08-1 | | 15:50–16:10 | | |
| 1695 | <i>Nonlinear Model Predictive Control Based on Local Linearized Gaussian Process and Its Application to A Quadruple-Tank System</i> | | | | |
| | Zhang, Wuji | | Shanghai Jiaotong Univ. | | |
| | Li, Shaoyuan | | Shanghai Jiao Tong Univ. | | |
| ▶ | MoB08-2 | | 16:10–16:30 | | |
| 1738 | <i>A Study on Estimation of SOC of Emus Batteries</i> | | | | |
| | Li, Liwei | | Qingdao Univ. | | |
| ▶ | MoB08-3 | | 16:30–16:50 | | |
| 2011 | <i>Epidemic Modelling with Parameters Updating Based on Data-driven</i> | | | | |
| | Liu, Ming | | Nanjing Univ. of Sci. & Tech. | | |
| | Ning, Jing | | Nanjing Univ. of Sci. & Tech., | | |
| | Du, Yurui | | School of Nanjing Univ. of Sci. & Tech. | | |
| ▶ | MoB08-4 | | 16:50–17:10 | | |
| 2054 | <i>State Change Trend Prediction of Aircraft Pump Source System Based on GRU Network</i> | | | | |
| | Cui, Jianguo | | Shenyang Aerospace Univ. | | |
| | Cheng, Yifan | | Shenyang Aerospace Univ. | | |
| | Cui, Xiao | | Shenyang Aerodynamics Research Inst. | | |
| | Wang, Jinglin | | Aviation Key Laboratory of Sci. & Tech. on Fault Diagnosis & Health Management | | |

Final Program

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| Yu, Mingyue | Automatization Engineering Colledge Shenyang Aerospace Univ. LiaoNing Province | | |
| Jiang, Liying | Shenyang Aerospace Univ. | | |
| ► MoB08-5 | 17:10–17:30 | | |
| ²⁰⁵⁹ Support Vector Machine Based Model Predictive Control for Vehicle Path Tracking Control | | | |
| Xu, Fang | Jilin Univ. | | |
| Qu, Yi | Jilin Univ. | | |
| Qu, Ting | Jilin Univ. | | |
| Chen, Hong | Jilin Univ. | | |
| Liang, Dinan | JiLin Univ. | | |
| ► MoB08-6 | 17:30–17:50 | | |
| ²²⁴⁸ Research on Control of Oscillating Buoy Wave Power Generation System | | | |
| Hou, Lin | Ocean Univ. of China | | |
| Zhang, Qiang | Ocean Univ. of China | | |
| Chen, Zhen | Ocean Univ. of China | | |
| Li, Ming | Ocean Univ. of China | | |
| MoB09 | 15:50–18:10 | | |
| Regular Session: Signal Processing and Information Fusion (2) | | | |
| Chair: He, Wei | Univ. of Sci. & Tech. Beijing | | |
| Co-Chair: Ren, Shangjie | Tianjin Univ. | | |
| ► MoB09-1 | 15:50–16:10 | | |
| ⁰⁴⁸⁹ A Matrix-based Algorithm for the LS Design of Variable Fractional Delay FIR Filters with Constraints | | | |
| Liu, Yu | Shandong Univ., Weihai | | |
| Zhao, Ruijie | Shandong Univ., Weihai | | |
| Wang, Chong | Shandong Univ., Weihai | | |
| ► MoB09-2 | 16:10–16:30 | | |
| ⁰⁵⁷⁹ Ultrasound-Guided Weighting of Regularization Parameters for EIT Image Reconstruction | | | |
| Han, Jiaqi | Tianjin Univ. | | |
| Zhao, Shu | Chinese Acad. Medical Sci. | | |
| Ren, Shangjie | Tianjin Univ. | | |
| Dong, Feng | Tianjin Univ. | | |
| ► MoB09-3 | 16:30–16:50 | | |
| ⁰⁵⁹⁸ A Regularization Method for Deconvolution of Optical Coherence Tomography Image | | | |
| Du, Yina | Tianjin Univ. | | |
| Ren, Shangjie | Tianjin Univ. | | |
| Xu, Jingjiang | Foshan Univ. | | |
| Dong, Feng | Tianjin Univ. | | |
| ► MoB09-4 | 16:50–17:10 | | |
| ⁰⁶¹⁹ Stacked Sparse Autoencoder Based Automatic Detection of Ripples and Fast Ripples in Epilepsy | | | |
| Qin, Hongzhen | China Univ. of GeoSci. | | |
| Wu, Min | China Univ. of GeoSci. | | |
| Wan, Xiongbo | China Univ. of GeoSci. | | |
| Du, Yuxiao | Guangdong Univ. of Tech. | | |
| ► MoB09-5 | 17:10–17:30 | | |
| ⁰⁶³² Unscented Particle Filtering Based on Particle Selection and Weight Optimization for Nonlinear Estimation | | | |
| Zhao, Fangfang | Univ. of Electronic Sci. & Tech. of China | | |
| Ge, Shuzhi Sam | National Univ. of Singapore | | |
| He, Wei | Univ. of Sci. & Tech. Beijing | | |
| ► MoB09-6 | 17:30–17:50 | | |
| ⁰⁶⁶⁴ An Automatic Stent Detection for Intravascular Optical Coherence Tomography | | | |
| Guo, Yifan | Tianjin Univ. | | |
| Ren, Shangjie | Tianjin Univ. | | |
| Jia, Haibo | The 2nd Affiliated Hospital of Harbin Medical Univ. | | |
| Yu, Bo | The 2nd Affiliated Hospital of Harbin Medical Univ. | | |
| Dong, Feng | Tianjin Univ. | | |
| ► MoB09-7 | 17:50–18:10 | | |
| ⁰⁷¹⁰ A Dynamic Adaptive Indoor Ranging Model Based on RSSI | | | |
| Li, Hengfei | School of Electronic Sci. & Tech., Xiamen Univ. | | |
| Huang, Zuhui | School of Information Sci. & Tech., Xiamen Univ. | | |
| Sun, Haixin | School of Information Sci. & Tech., Xiamen Univ. | | |
| Wang, Xiaozhong | School of Electronic Sci. & Technolog, Xiamen Univ. | | |
| Qi, Jie | School of Electronic Sci. & Technolog, Xiamen Univ. | | |
| MoB10 | 15:50–17:50 | | |
| Regular Session: Big Data Analysis and Control (2) | | | |
| Chair: Wang, Bing | Hohai Univ. | | |
| Co-Chair: Liu, Jun | Beijing Inst. of Tech. | | |
| ► MoB10-1 | 15:50–16:10 | | |
| ¹⁴⁴⁸ Comparative Analysis of Pre-process Pipelines for Automatic Retinal Vessel Segmentation | | | |
| Lei, Gaoyi | Beijing Inst. of Tech. | | |
| Xia, Yuanqing | Beijing Inst. of Tech. | | |
| Zhang, Wei | Zaozhuang Univ. | | |
| Chen, Duanduan | Beijing Inst. of Tech. | | |
| Wang, Defeng | Beihang Univ. | | |
| ► MoB10-2 | 16:10–16:30 | | |
| ¹⁵¹⁶ Direct Learning Control for An Aero-engine Base on Adaboost-LSSVM | | | |
| Han, Yingju | Dalian Univ. of Tech. | | |
| Ma, Yanhua | Dalian Univ. of Tech. | | |
| Zhao, Xudong | Dalian Univ. of Tech. | | |
| Sun, Xi-Ming | Dalian Univ. of Tech. | | |
| ► MoB10-3 | 16:30–16:50 | | |
| ⁰⁵⁹⁵ Chicken Swarm Optimization Algorithm Based on Quantum Behavior and Its Convergence Analysis | | | |
| Zhang, Qiuqiao | Hohai Univ. | | |
| Wang, Bing | Hohai Univ. | | |
| Wei, Lingyan | Hohai Univ. | | |
| Wang, Hai Shan | Hohai Univ. | | |
| ► MoB10-4 | 16:50–17:10 | | |
| ⁰⁶⁷⁸ Modeling, Analysis and Simulation on Cloud Optimization Algorithm | | | |
| Liu, Jun | Beijing Inst. of Tech. | | |
| ► MoB10-5 | 17:10–17:30 | | |
| ¹⁹⁷⁷ Research and Implementation of Intelligent Question Answering System Based on Knowledge Graph of Traditional Chinese Medicine | | | |
| Zou, Yan | ChiFeng Univ. | | |
| He, Ying | ChiFeng Univ. | | |
| Liu, Yan | ChiFeng Univ. | | |
| ► MoB10-6 | 17:30–17:50 | | |
| ²²²⁷ Computer Vision-Based Online Heterogeneity Assessment of the Sintering Transversal Thermal State | | | |
| Qi, Yudong | Central South Univ. | | |
| Wang, Ya-Lin | Central South Univ. | | |
| Yuan, Xiaofeng | Central South Univ. | | |
| Teng, Jing | North China Electric Power Univ. | | |
| Yang, Chunhua | Central South Univ., China | | |
| MoB11 | 15:50–18:10 | | |
| Regular Session: Control Design (2) | | | |
| Chair: Liu, Fuchun | South China Univ. of Tech. | | |
| Co-Chair: Niu, Dan | Southeast Univ. | | |
| ► MoB11-1 | 15:50–16:10 | | |
| ¹³⁰⁸ Research on Optimized Technology for Aeronautic DC Starter Generator Control Unit with High Performance | | | |
| Zhao, Jun | Xi An Aviation Inst. of Computing Tech. | | |
| Yan, Wen | AVIC Computing Technique Research Inst. | | |
| Wang, Changyu | Shenyang Aircraft Corporation, Shenyang | | |
| Zhang, Qianqian | AVIC Computing Technique Research Inst. | | |
| Li, Lunsheng | AVIC Computing Technique Research Inst. | | |
| ► MoB11-2 | 16:10–16:30 | | |
| ¹³³⁶ An Anti-sway Positioning Algorithm of Unmanned Crane Based on AN-FIS | | | |
| Chen, Youcheng | Southeast Univ. | | |
| Niu, Dan | Southeast Univ. | | |
| Li, Qi | Southeast Univ. | | |
| Chen, Xisong | Southeast Univ. | | |
| Ding, Li | Southeast Univ. | | |
| Liu, Jinbo | Nanjing Sciyou Automation Group Co., Ltd | | |
| ► MoB11-3 | 16:30–16:50 | | |
| ¹⁶⁴¹ A Hybrid PID Controller for Flexible Joint Manipulator Based on State Observer and Singular Perturbation Approach | | | |
| Hong, Mengqing | Nanjing Univ. of Sci. & Tech. | | |
| Yao, Wei | Nanjing Univ. of Sci&Tech | | |
| Zhu, Zhihao | Yancheng Inst. of Tech. | | |
| Guo, Yu | Nanjing Univ. of Sci. & Tech. | | |
| ► MoB11-4 | 16:50–17:10 | | |

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|---|--|--|--|-------------|---|
| 1835 | <i>Optimization of Reference Input of Maximum Power Point Tracking Control for Wind Turbine</i> | Guo, Liansong Yin, Minghui Cai, Chenxiao Zou, Yun | Nanjing Univ. of Sci. & Tech. Nanjing Univ. of Sci. & Tech. Nanjing Univ. of Sci. & Tech. Nanjing Univ. of Sci. & Tech., China | | |
| ► | MoB11-5 | | | 17:10–17:30 | |
| 2190 | <i>Design and Implementation of An Ultrasonic Surgical System Based on Transducer Admittance Analysis</i> | Liu, Fuchun Wang, Songbo Li, Bin Deng, Haixing Lan, Tao | South China Univ. of Tech. South China Univ. of Tech. South China Univ. of Tech. South China Univ. of Tech. South China Univ. of Tech. | | |
| ► | MoB11-6 | | | 17:30–17:50 | |
| 2237 | <i>An On-line Adaptive Hybrid PID Autopilot of Ship Heading Control Using Auto-tuning BP & RBF Neurons</i> | Zhang, Guichen Chen, Mengwei Lu, Run | Shanghai Maritime Univ. Shanghai Maritime Univ. Shang Hai Maritime Univ. | | |
| ► | MoB11-7 | | | 17:50–18:10 | |
| 2312 | <i>Improved Current-based Droop Control Strategy for Microgrids Inverter</i> | Li, Dan-Yun Li, Jiawei | China Univ. of GeoSci. China Univ. of GeoSci., Wuhan | | |
| MoB12 | | | | 15:50–17:50 | |
| Regular Session: Intelligent Robots (2) | | | | | |
| Chair: Chen, Xin | | | China Univ. of GeoSci. | | |
| Co-Chair: Shi, Buhai | | | South China Univ. of Tech. | | |
| ► | MoB12-1 | | | 15:50–16:10 | |
| 0395 | <i>Improved Potential Field Method Path Planning Based on Genetic Algorithm</i> | Liu, Feng He, Hualing Li, Zhihua Guan, Zhi-Hong Wang, Hua O. | China Univ. of GeoSci. China Univ. of GeoSci. China Univ. of GeoSci. Huazhong Univ. of Sci. & Tech. Boston Univ. | | |
| ► | MoB12-2 | | | 16:10–16:30 | |
| 0396 | <i>Research on Path Planning of Robot Based on Deep Reinforcement Learning</i> | Liu, Feng Chen, Chang Li, Zhihua Guan, Zhi-Hong Wang, Hua O. | China Univ. of GeoSci. China Univ. of GeoSci. China Univ. of GeoSci. Huazhong Univ. of Sci. & Tech. Boston Univ. | | |
| ► | MoB12-3 | | | 16:30–16:50 | |
| 0679 | <i>Fuzzy-Based Shared Control for Brain-controlled Mobile Robot</i> | Razzaq, Zahid Bi, Luzheng | Beijing Inst. of Tech., Beijing Beijing Inst. of Tech. | | |
| ► | MoB12-4 | | | 16:50–17:10 | |
| 0722 | <i>Positioning Method of Insulator Sheds Based on Depth Information</i> | Gong, Xuan Chen, Xin Jian, Xu He, Wenpeng | China Univ. of GeoSci. China Univ. of GeoSci. China Univ. of GeoSci. (Wuhan) China Univ. of GeoSci. | | |
| ► | MoB12-5 | | | 17:10–17:30 | |
| 0749 | <i>Dynamic Balance and Trajectory Tracking Control of Quadraped Robots Based on Virtual Model Control</i> | Chen, Guangrong Hou, Bowen Guo, Sheng Wang, Junzheng | Beijing Jiaotong Univ. Beijing Jiaotong Univ. Beijing Jiaotong Univ. Beijing Inst. of Tech. | | |
| ► | MoB12-6 | | | 17:30–17:50 | |
| 0908 | <i>An Optimized Turning Gait Strategy for Walking Quadraped Robot</i> | Wang, Yanqin Liu, Yong Xu, Wei Guo, Jian Zhou, Chuan | Nanjing Univ. of Sci. & Tech. Nanjing Univ. of Sci. & Tech. North Vehicle Research Inst. Nanjing Univ. of Sci. & Tech. Nanjing Univ. of Sci. & Tech. | | |
| MoB13 | | | | 15:50–18:10 | |
| Regular Session: Control of Network Systems and Networked Control Systems (2) | | | | | |
| Chair: Zhang, Yijun | | | Nanjing Univ. of Sci. & Tech. | | |
| Co-Chair: Yan, Jing | | | Yanshan Univ. | | |
| ► | MoB13-1 | | | 15:50–16:10 | |
| 0807 | <i>Event-triggered LOS Guidance for Path Following of An Unmanned Surface Vehicle over Wireless Network</i> | Wu, Wentao Wang, Dan Lv, Mingao Jiang, Jizhou Liu, Lu Peng, Zhouhua | | | Dalian Maritime Univ. Dalian Maritime Univ. Dalian Maritime Univ. DaLian Maritime Univ. Dalian Maritime Univ. Dalian Maritime Univ. |
| ► | MoB13-2 | | | 16:10–16:30 | |
| 0843 | <i>Privacy Preserving Localization Algorithm for Underwater Sensor Networks</i> | Meng, Yuan Yan, Jing Yang, Xian Luo, Xiaoyuan | | | Yanshan Univ. Yanshan Univ. Inst. of Information Sci. & Engineering Yanshan Univ. |
| ► | MoB13-3 | | | 16:30–16:50 | |
| 1015 | <i>Event-Triggered Fault Estimation for Networked Systems with Redundant Channels</i> | Zhao, Zhongyi Wang, Zidong Zou, Lei Wang, Yezheng Guo, Jiyue | | | Shandong Univ. of Sci. & Tech. Tsinghua Univ. Brunel Univ. London Shandong Univ. of Sci. & Tech. Shandong Univ. of Sci. & Tech. |
| ► | MoB13-4 | | | 16:50–17:10 | |
| 1456 | <i>An Obstacle Avoiding Method of Autonomous Underwater Vehicle Based on the Reinforcement Learning</i> | Li, Wenbiao Yang, Xian Yan, Jing Luo, Xiaoyuan | | | YanShan Univ. Inst. of Information Sci. & Engineering Yanshan Univ. Yanshan Univ. |
| ► | MoB13-5 | | | 17:10–17:30 | |
| 1685 | <i>Quasi-Synchronization in Heterogeneous Delayed Multiplex Networks via Impulsive Control</i> | Jin, Xin Wang, Zhengxin Lu, Yanling Feng, Yuanzhen Zheng, Cong | | | Nanjing Univ. of Posts & Telecommunications Nanjing Univ. of Posts & Telecommunications Nanjing Univ. of Posts & Telecommunications Nanjing Univ. of Posts & Telecommunications Nanjing Univ. of Posts & Telecommunications |
| ► | MoB13-6 | | | 17:30–17:50 | |
| 1724 | <i>Guaranteed Cost Synchronization of Discrete-time Chaotic Neural Networks with Missing Measurements and Randomly Occurring Sensor Nonlinearity</i> | Zhang, Hao Wang, Tong Zeng, Qingshuang Qiu, Jianbin | | | Harbin Inst. of Tech. Harbin Inst. of Tech. Harbin Inst. of Tech. Harbin Inst. of Tech. |
| ► | MoB13-7 | | | 17:50–18:10 | |
| 1770 | <i>Adaptive Control of Bilateral Teleoperation System under Denial of Service Attacks</i> | Jiang, Zhenpeng Zhang, Yijun Cai, Xinyu | | | Nanjing Univ. of Sci. & Tech. Nanjing Univ. of Sci. & Tech. Nanjing Univ. of Sci. & Tech. |
| MoB14 | | | | 15:50–17:50 | |
| Regular Session: Multi-Agent Systems and Distributed Control (2) | | | | | |
| Chair: Liu, Wei | | | Naval Aviation Univ. | | |
| Co-Chair: Zheng, Shiqi | | | China Univ. of GeoSci., Wu Han | | |
| ► | MoB14-1 | | | 15:50–16:10 | |
| 1065 | <i>Finite-time Surrounding Control of Agents Based on Velocity Field</i> | Cui, Ye-Xian Luo, Jie Cao, Ke-Cai Chen, Yu Wang, Jie | | | Nanjing Univ. of Posts & Telecommunications Beijing Univ. of Tech. Nanjing Univ. of Posts & Telecommunications Nanjing Univ. of Posts & Telecommunications Nanjing Univ. of Posts & Telecommunications |
| ► | MoB14-2 | | | 16:10–16:30 | |
| 1120 | <i>Scale-free Linear Observer-based Protocol Design for Global Regu-</i> | | | | |

Final Program

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| <i>lated State Synchronization of Homogeneous Multi-agent Systems with Non-introspective Agents Subject to Input Saturation</i> | | <i>Energy Converter</i> | |
| Liu, Zhenwei | Northeastern Univ. | Wang, Zhaoyan | Hohai Univ. |
| Nojavanzadeh, Donya | School of Electrical Engineering & Computer Sci. | Hu, Yinlong | HoHai Univ. |
| | | Xiong, Sijie | Hohai Univ. |
| Saberi, Ali | Washington State Univ. | Zheng, Feixiang | Hohai Univ. |
| Stoorvogel, Anton | Univ. of Twente | Wang, Haoyu | Hohai Univ. |
| ► MoB14-3 | 16:30–16:50 | ► MoB15-5 | 17:10–17:30 |
| ¹¹⁶⁸ <i>Two Consensus Problems of Homogenous Multi-Agent Systems with Directed Topology: A Unified Viewpoint</i> | | ²⁰³⁵ <i>Adaptive Near-Optimal Control for Maximum Net Output Power of PEMFC System</i> | |
| Liu, Wei | Naval Aviation Univ. | Zhu, Yun | Univ. of Electronic Sci. & Tech. of China |
| Dai, Hongde | Naval Aviation Univ. | Zou, Jianxiao | Univ. of Electronic Sci. & Tech. of China |
| Shi, Yan | Naval Aeronautical & Astronautical Univ. | Peng, Chao | Univ. of Electronic Sci. & Tech. of China |
| ► MoB14-4 | 16:50–17:10 | Xie, Yucen | Univ. of Electronic Sci. & Tech. of China |
| ¹³⁰⁷ <i>FlexRay Bus-Based Integrated Technology on Airborne Utility Management Computer</i> | | ► MoB15-6 | 17:30–17:50 |
| Zhao, Jun | Xi An Aviation Inst. of Computing Tech. | ²²⁶⁹ <i>Short-term Wind Power Prediction Based on Multiple Least Squares Support Vector Machines</i> | |
| Wang, Changyu | Shenyang Aircraft Corporation, Shenyang | Chen, Zhe | China Univ. of GeoSci. (Wuhan) |
| Zhang, Qianqian | AVIC Computing Technique Research Inst. | Ding, Min | China Univ. of GeoSci. (Wu Han) |
| Yan, Wen | AVIC Computing Technique Research Inst. | Zhou, Hao | China Univ. of GeoSci. |
| Xu, Yaxing | AVIC Computing Technique Research Inst. | Tan, Zhili | China Univ. of GeoSci. (Wuhan) |
| ► MoB14-5 | 17:10–17:30 | Fang, Zhijian | China Univ. of GeoSci. (Wuhan) |
| ¹³⁷⁷ <i>Finite-time Time-varying Formation Tracking for Second-order Multi-agent Systems with A Leader of Fully Unknown Input</i> | | MoB16 | 15:50–17:50 |
| Liao, Ruiwen | Beihang Univ. | Regular Session: Vehicle Control and Transportation Systems (2) | |
| Han, Liang | Beihang Univ. | Chair: Cui, Naxin | Shandong Univ. |
| Dong, Xiwang | Beihang Univ. | Co-Chair: Yuan, Hongliang | Tongji Univ. |
| Liu, Fei | Civil Aviation Management Inst. of China | ► MoB16-1 | 15:50–16:10 |
| Li, Qingdong | Beihang Univ. | ⁰⁶³⁹ <i>Consensus-Based Dynamic Boundary Observer Design for Freeway Traffic Networks</i> | |
| Ren, Zhang | Beihang Univ. | Lu, Yusheng | Beijing Univ. of Tech. |
| ► MoB14-6 | 17:30–17:50 | Luan, Haoran | Beijing Univ. of Tech. |
| ¹⁴⁸⁰ <i>Adaptive Control for Asynchronously Switched Fractional-order Multi-agent Systems</i> | | Zhang, Liguo | Beijing Univ. of Tech. |
| Zhang, Xiongliang | China Univ. of GeoSci. (Wuhan) | ► MoB16-2 | 16:10–16:30 |
| Zheng, Shiqi | China Univ. of GeoSci., Wu Han | ⁰⁶⁴⁰ <i>Robust Control of Farm Tractors on Variable Sloped Terrains Based on Sliding-mode Observers</i> | |
| Liu, Feng | China Univ. of GeoSci. | Sun, Xuwei | Tongji Univ. |
| Zhao, Mingyuan | China Univ. of GeoSci., Wuhan | Yuan, Hongliang | Tongji Univ. |
| Sun, Yuan | The Univ. of Adelaide | ► MoB16-3 | 16:30–16:50 |
| MoB15 | 15:50–17:50 | ⁰⁶⁹⁴ <i>Energy Management Strategy Based on Dynamic Programming Considering Engine Dynamic Operating Conditions Optimization</i> | |
| Regular Session: New Energy Technology and Control in Environment (2) | | Wang, Xu | Beijing Inst. of Tech. |
| Chair: Hu, Yinlong | HoHai Univ. | Huang, Ying | Beijing Inst. of Tech. |
| Co-Chair: Liang, Siming | Zhejiang Univ. | Guo, Fen | Beijing Inst. of Tech. |
| ► MoB15-1 | 15:50–16:10 | Zhao, Wenqiang | Beijing Benz Automotive Co., Ltd |
| ¹²³² <i>A State Feedback Voltage Controller for Inverter-based Islanded Micro-grid</i> | | ► MoB16-4 | 16:50–17:10 |
| Jiao, Yuqiao | China Univ. of GeoSci. (Wuhan) | ⁰⁹⁰¹ <i>Energy Management Strategy Based on Driving Style Recognition for Plug-in Hybrid Electric Bus</i> | |
| Ding, Min | China Univ. of GeoSci. (Wu Han) | Shi, Yuemei | Shandong Univ. |
| Li, Dan-Yun | China Univ. of GeoSci. | Cui, Naxin | Shandong Univ. |
| Wang, Qingyi | China Univ. of GeoSci. | Du, Yi | Shandong Univ. |
| Fang, Zhijian | China Univ. of GeoSci. (Wuhan) | ► MoB16-5 | 17:10–17:30 |
| ► MoB15-2 | 16:10–16:30 | ⁰⁹²³ <i>An Improved Velocity Forecasts Method Considering the Speed and Following Distance of Two Vehicles</i> | |
| ¹⁴⁰⁶ <i>Mask R-CNN Based Segmentation Method for Satellite Imagery of Photovoltaics Generation Systems</i> | | Nie, Hao | Shandong Univ. |
| Liang, Siming | Zhejiang Univ. | Cui, Naxin | Shandong Univ. |
| Qi, Fengyang | Zhejiang Univ. | Du, Yi | Shandong Univ. |
| Ding, Yifan | Zhejiang Univ. | Wang, Ming | Shandong Univ. |
| Cao, Rui | Zhejiang Univ. | ► MoB16-6 | 17:30–17:50 |
| Yang, Qiang | Zhejiang Univ. | ⁰⁹²⁵ <i>Active Deceleration Control of Brake-By-Wire System</i> | |
| Yan, Wenjun | CEE, Zhejiang Univ. | Long, Mohan | SUZHOU ZHITO Tech. CO.,LTD |
| ► MoB15-3 | 16:30–16:50 | Jing, Houhua | Harbin Inst. of Tech. |
| ¹⁵²⁷ <i>Reliability Assessment of Wind, Solar and Hydropower Combined System</i> | | MoB17 | 15:50–18:10 |
| Xie, Xiaojun | Xi'an Thermal Power Research Inst. Company Ltd | Regular Session: Aircraft Control (2) | |
| Wu, Qiong | Xi'an Thermal Power Research Inst. Company Ltd | Chair: Liu, Hao | Beihang Univ. |
| Zhang, Ruigang | Xi'an Thermal Power Research Inst. Company Ltd | Co-Chair: Shen, Kai | Beijing Inst. of Tech. |
| Shao, Zhentong | Xi'an Jiaotong Univ. | ► MoB17-1 | 15:50–16:10 |
| Zhai, Qiaozhu | Sys. Engineering Inst. | ⁰⁵⁵⁴ <i>Incremental Learning-based Land Mark Recognition for Mirco-UAV Autonomous Landing</i> | |
| ► MoB15-4 | 16:50–17:10 | Shen, Kai | Beijing Inst. of Tech. |
| ¹⁹²⁵ <i>Application of Semi-active Inerter in A Two-body Point Absorber Wave</i> | | Yu, Zhuang | Beijing Inst. of Tech. |
| | | Zhu, Yixiao | Beijing Insitute of Tech. |

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| ▶ MoB17-2 0683 <i>Output Regulation for Quadrotor UAV by Event-Triggered Mechanism</i> Che, Shixing Gao, Qiang Ji, Yuehui | 16:10–16:30 Tianjin Univ. of Tech. Tianjin Univ. of Tech. Tianjin Univ. of Tech. | Yan, Liping Xia, Yuanqing Xiao, Bo | Beijing Inst. of Tech. Beijing Inst. of Tech. Beijing Univ. of Posts & Telecommunications |
| MoB19 15:50–17:50 | | | |
| Regular Session: Neural Networks and Deep Learning (2) | | | |
| Chair: Jin, Xiao-Zheng Qilu Univ. of Tech. | | Co-Chair: Wang, Xiaoping Huazhong Univ. of Sci. & Tech. | |
| ▶ MoB17-3 0726 <i>Control of Quadrotor Slung Load System Based on Double ADRC</i> Wang, Zhibao Qi, Juntong Wu, Chong Wang, Mingming Ping, Yuan Xin, Ji | 16:30–16:50 Tianjin Univ. Tianjin Univ. EFY Intelligent Control Tianjin Univ. Tianjin Univ. China Helicopter Research & Development Inst. | ▶ MoB19-1 0387 <i>Convolutional Neural Network for Determining Sensitivity Matrix in ETI</i> Ma, Haitao Yue, Shihong Lu, Jian Yem, Sidolla Wang, Huaxiang | 15:50–16:10 Tianjin Univ. Tianjin Univ. Tianjin Univ. Tianjin Univ. Tianjin Univ. |
| ▶ MoB17-4 0825 <i>Data-based Formation Control Protocol Design for Underactuated Quadrotor Team via Reinforcement Learning</i> Liu, Hao Zhao, Wanbing Lewis, Frank Jiang, Zhong-Ping | 16:50–17:10 Beihang Univ. Beihang University Univ. of Texas at Arlington New York Univ. | ▶ MoB19-2 0540 <i>Resolution Effect of Training Sets in Several Super-resolution Algorithms</i> Huang, Xiangdong Wen, Fan Pan, Hongguang Wang, Zheng | 16:10–16:30 Xi'an Univ. of Sci. & Tech. Xi'an Univ. of Sci. & Tech. Xi'an Univ. of Sci. & Tech. Xi'an Univ. of Sci. & Tech. |
| ▶ MoB17-5 0881 <i>Robust Attitude Control for Hypersonic Vehicles with Coupling Analysis</i> Cao, Ruihao Xi, Yong Hu, Qinglei Han, Tuo | 17:10–17:30 Beihang Univ. Shanghai Aerospace Control Tech. Inst. Beihang Univ. Beihang Univ. | ▶ MoB19-3 0778 <i>A Memristor-based Generalization and Differentiation Circuit Design and the Application in Recognition</i> Shang, Meijia Wang, Xiaoping Li, Mian | 16:30–16:50 Huazhong Univ. of Sci. & Tech. Huazhong Univ. of Sci. & Tech. Huazhong Univ. of Sci. & Tech. |
| ▶ MoB17-6 0948 <i>Air Traffic Network Generation for UAVs at A Low Altitude Based on Digital Maps</i> He, Xin Quan, Quan | 17:30–17:50 Beihang Univ. Beihang Univ. | ▶ MoB19-4 0891 <i>High-precision Intelligent Track Prediction under Multi-dimensional Conditions</i> Yang, Yilin Zhu, Qinghua Hu, Qinglei Wen, Xin | 16:50–17:10 Beihang Univ. Shanghai Aerospace Control Engineering Inst. Beihang Univ. Beihang Univ. |
| ▶ MoB17-7 1348 <i>A Multi-UAVs' Trajectory data Compression Method Based on 3D-SPM Algorithm</i> Yuan, Dongdong Wang, Yankai | 17:50–18:10 Beijing Inst. of Tech. Beijing Inst. of Tech. | ▶ MoB19-5 0938 <i>Robust Adaptive Fixed-time Trajectory Tracking Control of Manipulator Based on Extreme Learning Machine</i> Gao, Miao-Miao Jin, Xiao-Zheng Ding, Li-Jian | 17:10–17:30 HeFei Univ. of Tech. Qilu Univ. of Tech. HeFei Univ. of Tech. |
| MoB18 15:50–17:50 | | | |
| Regular Session: Pattern Recognition (2) | | | |
| Chair: Deng, Liwei Harbin Univ. of Sci. & Tech. | | Co-Chair: Wang, Yaoxiang Jilin Univ. | |
| ▶ MoB18-1 0426 <i>Line Laser Point Cloud Segmentation Based on the Combination of RANSAC and Region Growing</i> Yuan, Henan | 15:50–16:10 Hunan Univ. | ▶ MoB19-6 0942 <i>VTD-Net: Depth Face Forgery Oriented Video Tampering Detection Based on Convolutional Neural Network</i> Yang, Tongfeng Wu, Jian Liu, Lihua Chang, Xu Feng, Guorui | 17:30–17:50 Shandong Univ. of Political Sci. & Law Shandong Univ. of Political Sci. & Law Shandong Univ. of Political Sci. & Law Shandong Univ. of Political Sci. & Law Shandong Univ. of Political Sci. & Law |
| ▶ MoB18-2 0588 <i>A Self-identifying Checkerboard-like Pattern for Camera Calibration</i> Gao, Zhang Zhu, Mingzhu Yu, Junzhi | 16:10–16:30 Inst. of Automation, Chinese Acad. of Sci. Peking Univ. Inst. of Automation, Chinese Acad. of Sci. | MoB20 15:50–17:50 | |
| ▶ MoB18-3 0738 <i>Research on Face Recognition under Complex Illumination Conditions for Express Cabinet Applications</i> Dang, Yuanming Qi, Juntong Wang, Mingming | 16:30–16:50 Tianjin Univ. Tianjin Univ. Tianjin Univ. | Invited Session: Fault Diagnosis and Fault Tolerance Control of Aerospace Vehicle | |
| ▶ MoB18-4 0878 <i>ECO-HC Based Tracking for Ground Moving Target Using Single UAV</i> Wang, Yaoxiang Xing, Huang Huang, Haiyang Tian, Yantao | 16:50–17:10 Jilin Univ. Jilin Univ. Jilin Univ. Jilin Univ. | Organizer: Liu, Wenjing Beijing Inst. of Control Engineering Organizer: Li, Zhibin Shandong Univ. of Sci. & Tech. Organizer: Yu, Xiang Beihang Univ. Chair: Liu, Wenjing Beijing Inst. of Control Engineering Co-Chair: Xie, Rong Northwestern Polytechnical Univ. | |
| ▶ MoB18-5 0916 <i>A New Fracture Image Segmentation Method Based on MSA-k Clustering Algorithm</i> Deng, Liwei Wang, Xiaofei Ai, Ling | 17:10–17:30 Harbin Univ. of Sci. & Tech. Harbin Univ. of Sci. & Tech. Harbin Univ. of Sci. & Tech. | ▶ MoB20-1 0282 <i>Fault-Tolerant Tracking Control of Quadrotor Aircrafts with Actuator Faults and External Disturbances</i> Ma, Renyue Zhang, Ke Jiang, Bin | 15:50–16:10 Nanjing Univ. of Aeronautics & Astronautics Nanjing Univ. of Aeronautics & Astronautics Nanjing Univ. of Aeronautics & Astronautics |
| ▶ MoB18-6 0956 <i>Image Fusion Based on Variational Method for Maintenance of Gradient and Intensity</i> Bai, Jinglan | 17:30–17:50 Beijing Inst. of Tech. | ▶ MoB20-2 0648 <i>Deep Transfer Learning-based Fault Diagnosis of Spacecraft Attitude System</i> Tang, Yifan Dou, Liqian Zhang, Ruilong Zhang, Xiuyun Liu, Wenjing | 16:10–16:30 Tianjin Univ. Tianjin Univ. Tianjin Univ. Tianjin Univ. Beijing Inst. of Control Engineering |

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| ▶ MoB20-3 | 16:30–16:50 | ▶ MoB21-7 | 17:50–18:10 |
| ⁰⁷²¹ <i>Active Fault Detection for Spacecraft Attitude Control System</i> | | ¹⁸³³ <i>Security of Networked Control Systems with Incomplete Information Based on Game Theory</i> | |
| Yang, Xicheng | Tianjin Univ. | Gao, Lei | Beijing Inst. of Tech. |
| Zong, Qun | Tianjin Univ. | Sun, Jian | Beijing Inst. of Tech. |
| Zhang, Xiuyun | Tianjin Univ. | Li, Jun | Beijing Inst. of Tech. |
| Liu, Wenjing | Tianjin Univ. | | |
| ▶ MoB20-4 | 16:50–17:10 | MoB22 | 15:50–17:50 |
| ⁰⁹⁹⁴ <i>Research on Fault Diagnosis Method of Control Moment Gyroscope Based on K-means Algorithm</i> | | Invited Session: Advanced Control of Robotic System and Its Applications | |
| Liu, Wenjing | Beijing Inst. of Control Engineering | Organizer: Wang, Wenxue | Shenyang Inst. of Automation Chinese Acad. of Sci. |
| Yuan, Li | Beijing Inst. of Control Engineering | Organizer: Hu, Jiangping | Univ. of Electronic Sci. & Tech. of China |
| Wang, Shuyi | Beijing Inst. of Control Engineering | Chair: Wang, Wenxue | Shenyang Inst. of Automation Chinese Acad. of Sci. |
| Liu, Chengrui | Beijing Inst. of Control Engineering | Co-Chair: Hu, Jiangping | Univ. of Electronic Sci. & Tech. of China |
| ▶ MoB20-5 | 17:10–17:30 | ▶ MoB22-1 | 15:50–16:10 |
| ⁰³⁴⁰ <i>Quantitative Estimation of Wing Damage for Fixed-wing Aircraft</i> | | ⁰⁵³² <i>A Real-time Human Activity Recognition Approach with Generalization Performance</i> | |
| Xie, Rong | Northwestern Polytechnical Univ. | Wei, Shijie | Northeastern Univ. |
| Zhao, Kairui | Northwestern Polytechnical Univ. | Zhang, Bi | Northeastern Univ. |
| Cao, Yuyan | Northwestern Polytechnical Univ. | Tan, Xiao-Wei | Shenyang Inst. of Automation, Chinese Acad. of Sci., Shenyang |
| Li, Ting | Northwestern Polytechnical Univ. | Zhao, Xingang | Shenyang Inst. of Automation, Chinese Acad. of Sci. |
| ▶ MoB20-6 | 17:30–17:50 | Ye, Dan | Northeastern Univ. |
| ¹⁶⁴⁸ <i>Fault Diagnosis and Reconstruction for Sensor of Aeroengine Control System Based on AANN Network</i> | | ▶ MoB22-2 | 16:10–16:30 |
| Li, Huihui | Northwestern Poly-Technical Univ. | ⁰⁸³⁵ <i>Multi-modal Intent Recognition Method for the Soft Hand Rehabilitation Exoskeleton</i> | |
| Gou, Linfeng | Northwestern Poly Technique Univ. | Chen, Wenyuan | Chinese Acad. of Sci. Univ. |
| Li, Huacong | Northwestern Polytechnical Univ. | Yu, Peng | Shenyang Inst. of Automation Chinese Acad. of Sci. |
| Sun, Ruiqian | Northwestern Polytechnical Univ. | Li, Guangyong | Univ. of Pittsburgh |
| Yang, Jiang | Northwestern Polytechnical Univ. | Wang, Wenxue | Shenyang Inst. of Automation Chinese Acad. of Sci. |
| | | Yao, Chen | Shenyang Inst. of Automation, Chinese Acad. of Sci. |
| MoB21 | 15:50–18:10 | Liu, Lianqing | Chinese Acad. of Sci. (CAS) |
| Invited Session: Analysis and Control of Networked Systems (2) | | ▶ MoB22-3 | 16:30–16:50 |
| Organizer: Sun, Jian | Beijing Inst. of Tech. | ⁰⁸⁴² <i>Learning Control for Robotic Manipulator with Free Energy</i> | |
| Organizer: Pang, Zhonghua | North China Univ. of Tech. | Hu, Yazhou | Shenyang Inst. of Automation |
| Organizer: Liu, Guoping | Univ. of South Wales | Wang, Wenxue | Shenyang Inst. of Automation Chinese Acad. of Sci. |
| Chair: Zhang, Tianyong | Harbin Univ. of Sci. & Tech. | Yu, Peng | Shenyang Inst. of Automation Chinese Acad. of Sci. |
| Co-Chair: Hu, Wenshan | Wuhan Univ. | Yao, Chen | Shenyang Inst. of Automation, Chinese Acad. of Sci. |
| ▶ MoB21-1 | 15:50–16:10 | Liu, Lianqing | Chinese Acad. of Sci. (CAS) |
| ⁰⁷⁶⁹ <i>Design and Implementation of An Android-based Control Laboratory</i> | | ▶ MoB22-4 | 16:50–17:10 |
| Cao, Lei | Harbin Inst. of Tech. | ⁰⁸⁹⁰ <i>Personalized Assistive Strategy of Soft Exoskeleton Robot for Rehabilitation Based on Meta Learning</i> | |
| Liu, Guoping | Univ. of South Wales | Li, Ning | Shenyang Inst. of Automation Chinese Acad. of Sci. |
| Hu, Wenshan | Wuhan Univ. | Yang, Tie | Shenyang Inst. of Automation Chinese Acad. of Sci. |
| Bhatti, Jahan Zaib | Harbin Inst. of Tech., Harbin China | Yang, Yang | Shenyang Inst. of Automation Chinese Acad. of Sci. |
| ▶ MoB21-2 | 16:10–16:30 | Yu, Peng | Shenyang Inst. of Automation Chinese Acad. of Sci. |
| ⁰⁷⁷⁴ <i>Design and Implementation of Mobile Terminal Supervisory System Based on Networked Control Systems</i> | | Wang, Wenxue | Shenyang Inst. of Automation Chinese Acad. of Sci. |
| Chi, Chuanguo | Harbin Inst. of Tech. | Xi, Ning | Shenyang Inst. of Automation Chinese Acad. of Sci. |
| Liu, Guoping | Univ. of South Wales | Liu, Lianqing | Chinese Acad. of Sci. (CAS) |
| Hu, Wenshan | Wuhan Univ. | ▶ MoB22-5 | 17:10–17:30 |
| ▶ MoB21-3 | 16:30–16:50 | ¹¹⁹⁰ <i>Optimal Walking Assistance Control of Lower Limb Exoskeleton Using Adaptive Learning Approach</i> | |
| ⁰⁹⁶⁴ <i>Design of Collaborative Transportation System via Multiple Mobile Manipulators</i> | | Peng, Zhanan | Univ. of Electronic Sci. & Tech. of China |
| You, Bo | Harbin Univ. of Sci. & Tech. | Luo, Rui | Univ. of Electronic Sci. & Tech. of China |
| Liu, Siyuan | Harbin Univ. of Sci. & Tech. | Hu, Jiangping | Univ. of Electronic Sci. & Tech. of China |
| Zhang, Tianyong | Harbin Univ. of Sci. & Tech. | Ghosh, Bijoy | Texas Tech Univ. |
| Pang, Zhonghua | North China Univ. of Tech. | | |
| Li, Xiaohu | North China Univ. of Tech. | | |
| ▶ MoB21-4 | 16:50–17:10 | | |
| ¹⁵⁰⁰ <i>Output Formation Tracking Control for Multiple Second-ordered Integrator Systems: A Novel Modularized Approach</i> | | | |
| Liu, Xi | None | | |
| Zhao, Jun | Sichuan Univ. of Sci. & Engineering | | |
| Hou, Jin | Sichuan Univ. of Sci. & Engineering | | |
| Liu, Yong | Sichuan Univ. of Sci. & Engineering | | |
| ▶ MoB21-5 | 17:10–17:30 | | |
| ¹⁶⁴⁰ <i>Research on WSN Topology Algorithm Based on Greedy Shortest Paths</i> | | | |
| Wang, Xiaogang | Sichuan Univ. of Sci. & Engineering | | |
| ▶ MoB21-6 | 17:30–17:50 | | |
| ¹⁶⁹⁶ <i>Dynamic Consensus of Third-Order Networked Multi-agent System with Switching Topology</i> | | | |
| Li, Chang-Jiang | Jiangsu Univ. of Sci. & Tech. | | |
| Yang, Xin-Rong | Heilongjiang Univ. | | |
| Zhao, Jun | Sichuan Univ. of Sci. & Engineering | | |

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|---|---|--|--|---|----------------------------------|
| Nguang, Sing Kiong Univ. of Auckland | | | <i>Storage</i> | | |
| ▶ MoB22-6 | 17:30–17:50 | | Zhu, Dafeng | | Shanghai Jiao Tong Univ. |
| ¹³⁴⁴ Dynamic Movement Primitives Based Parametric Gait Model for Lower Limb Exoskeleton | | | Yang, Bo | | Shanghai Jiao Tong Univ. |
| Ma, Wenhao | Univ. of Electronic Sci. & Tech. of China | | Liu, Qi | | Shanghai Jiaotong Univ. |
| Huang, Rui | Univ. of Electronic Sci. & Tech. of China | | Ma, Kai | | Yanshan Univ. |
| Chen, Qiming | Univ. of Electronic Sci. & Tech. of China | | Zhu, Shanying | | Shanghai Jiao Tong Univ. |
| Song, Guangkui | Univ. of Electronic Sci. & Tech. of China | | Guan, Xinping | | Shanghai Jiao Tong Univ. |
| Li, Cong | Univ. of Electronic Sci. & Tech. of China | | | | |
| MoB23 | 15:50–17:50 | | | | |
| Invited Session: Active Disturbance Rejection Control: Methodology, Practice and Analysis (2) | | | | | |
| Organizer: Huang, Yi | Chinese Acad. of Sci. | | | | |
| Organizer: Gao, Zhiqiang | Cleveland State Univ. | | | | |
| Organizer: Chen, Sen | Shaanxi Normal Univ. | | | | |
| Chair: Gao, Zhiqiang | Cleveland State Univ. | | | | |
| Co-Chair: Chen, Sen | Shaanxi Normal Univ. | | | | |
| ▶ MoB23-1 | 15:50–16:10 | | ▶ MoB24-3 | 16:30–16:50 | |
| ¹⁹⁴⁴ Load Frequency Control for Power Systems with Wind Turbine via Active Disturbance Rejection | | | ¹⁷³⁶ Online Clustering Based Fault Data Detection Method for Distributed PV Sites | | |
| Wang, Yutong | North China Electric Power Univ., Beijing | | Wang, Shujie | | Xi'an Jiaotong Univ. |
| Cui, Wenqing | North China Electric Power Univ. | | Gao, Feng | | Xi'an Jiaotong Uni |
| Tan, Wen | North China Electric Power Univ. | | Wu, Jiang | | Xi'an Jiaotong Univ. |
| ▶ MoB23-2 | 16:10–16:30 | | Zheng, Chao | | Xi'an Jiaotong Univ. |
| ²²⁹¹ 基于 Ziegler-Nichols 规则的一阶线性自抗扰控制参数整定 Tuning of First-Order Linear Active Disturbance Rejection Control Based on Ziegler-Nichols Rules | | | Fu, Xingbo | | Xi'an Jiaotong Univ. |
| Ni, Gang | Xiamen Univ. | | Duan, Fangwei | State Grid Liaoning Electric Power Co.Ltd | |
| Jin, Huiyu | Xiamen Univ. | | | | |
| Lan, Weiyao | Xiamen Univ. | | ▶ MoB24-4 | 16:50–17:10 | |
| ▶ MoB23-3 | 16:30–16:50 | | ¹⁷⁹¹ Automated Data Cleaning for Data Centers: A Case Study | | |
| ²⁴⁷⁰ On Observability Analysis for A Class of Uncertain Systems with Coupling Dynamics of Rigid Body and Elastic Vibration | | | Haider, Syed Naeem | | Tsinghua Univ. |
| Zhang, Xiaoyan | Chinese Acad. of Sci. | | Zhao, Qianchuan | | Tsinghua Univ. |
| Pan, Hao | Acad. of Mathematics & Sys. Sci., Chinese Acad. of Sci. | | Meran, Bushra | | North China Electric Power Univ. |
| Bai, Wenyan | Acad. of Mathematics & Sys. Sci., UCAS | | | | |
| Zhong, Sheng | Acad. of Mathematics & Sys. Sci. | | ▶ MoB24-5 | 17:10–17:30 | |
| Huang, Yi | Chinese Acad. of Sci. | | ¹⁸⁶⁶ Model-Free Wind Farm Power Optimization Based on Hybrid Nelder-Mead-Gradient Projection | | |
| Xue, Wenchao | Chinese Acad. of Sci. | | Xu, Zhiwei | | Tsinghua Univ. |
| ▶ MoB23-4 | 16:50–17:10 | | Geng, Hua | | Tsinghua Univ |
| ⁰⁴³⁵ Control Design for Current Loop of PMSM Using A Modified Model-Compensation ADRC Controller | | | Chu, Bing | | Univ. of Southampton |
| Gao, Yingning | Harbin Inst. of Tech. | | ▶ MoB24-6 | 17:30–17:50 | |
| Zhao, Hui | Harbin Inst. of Tech. | | ²¹⁶⁰ Hierarchical Multi-agent Learning for the Energy Dispatch Optimization of the Multiarea IES | | |
| Ma, Kemao | Harbin Inst. of Tech. | | Li, Yijin | | Hefei Univ. of Tech. |
| Huo, Xin | Harbin Inst. of Tech. | | Tang, Hao | | Hefei Univ. of Tech. |
| ▶ MoB23-5 | 17:10–17:30 | | ▶ MoB24-7 | 17:50–18:10 | |
| ¹⁰⁶² Attitude Adjustment of A Multi-joint AUV Using An Improved LADRC | | | ²²⁶² 城市多压力级制燃气管网分层优化调度 Hierarchical Optimization of Urban Natural Gas Network with Multi-Pressure Range | | |
| Yu, Lin | Tianjin Univ. | | Jia, Qing-Shan | | Tsinghua Univ. |
| Liu, Kexian | Tianjin Univ. | | Long, Teng | | Tsinghua Univ. |
| Meng, Qing-Hao | Tianjin Univ. | | Cui, Gaochen | | Tsinghua Univ. |
| ▶ MoB23-6 | 17:30–17:50 | | Jin, Xiaoqiang | | Tsinghua Univ. |
| ⁰²⁸⁷ Rotorcraft Aerial Manipulator Control Based on Improved ADRC | | | Liu, Qing | | Beijing Gas |
| Wang, Mingming | TianJin Univ. | | ▶ MoB24-8 | 18:10–18:30 | |
| Qi, Juntong | Tianjin Univ. | | ²²⁹⁹ 面向大型燃气管网的智能调控系统架构设计与实现 Architecture Design and Implementation of Intelligent Control System for Large Gas Network | | |
| Kang, Jinan | Tianjin Univ. | | Jin, Xiaoqiang | | Tsinghua Univ. |
| Wu, Chong | EFY Intelligent Control | | Jia, Qing-Shan | | Tsinghua Univ. |
| Wang, Zhibao | Tianjin Univ. | | Cui, Gaochen | | Tsinghua Univ. |
| | | | Long, Teng | | Tsinghua Univ. |
| | | | Zhao, Qianchuan | | Tsinghua Univ. |
| MoB24 | 15:50–18:30 | | | | |
| Invited Session: Optimization and Control for Cyber Physical System | | | | | |
| Organizer: Jia, Qing-Shan | Tsinghua Univ. | | | | |
| Chair: Jia, Qing-Shan | Tsinghua Univ. | | | | |
| Co-Chair: Tang, Hao | Hefei Univ. of Tech. | | | | |
| ▶ MoB24-1 | 15:50–16:10 | | | | |
| ¹¹⁰⁵ Performance Loss Bound for State Aggregation in A Class of Supply Demand Matching Systems | | | | | |
| Wu, Junjie | Tsinghua Univ. | | | | |
| Jia, Qing-Shan | Tsinghua Univ. | | | | |
| ▶ MoB24-2 | 16:10–16:30 | | | | |
| ¹⁴³⁵ Joint Energy Trading and Scheduling for Multi-Energy Microgrids with | | | | | |

Final Program

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|--|--|--|--|
| Li, Li | Tongji Univ. | | |
| ► MoB25-4 | 16:50–17:10 | | |
| ¹³¹¹ <i>Asymptotic Properties of Cross Validation for Regularization Parameter Tuning of Impulse Response Identification</i> | | | |
| Mu, Biqiang | Chinese Acad. of Sci. | | |
| ► MoB25-5 | 17:10–17:30 | | |
| ¹³²⁰ <i>Collaborative Tracking Systems Using Decentralized Iterative Learning Control</i> | | | |
| Shen, Dong | Renmin Univ. of China | | |
| Liu, Yanze | Beijing Univ. of Chemical Tech. | | |
| Song, Qijiang | Renmin Univ. of China | | |
| ► MoB25-6 | 17:30–17:50 | | |
| ¹⁰⁰¹ <i>Efficient Recursive Implementation of Spatial-Temporal Gaussian Process Regression</i> | | | |
| Zhang, Junpeng | The Chinese Univ. of Hong Kong, Shenzhen | | |
| Kuang, Ye | The Chinese Univ. of Hong Kong, Shenzhen | | |
| Chen, Tianshi | The Chinese Univ. of Hong Kong, Shenzhen | | |
| Lu, Xiaochen | Guangzhou Yunchuang Data Sci. & Tech. Co. Ltd | | |
| Yin, Feng | The Chinese Univ. of Hong Kong, Shenzhen, Shenzhen | | |
| Zhong, Renxin | Sun Yat-Sen Univ. | | |
| ► MoB25-7 | 17:50–18:10 | | |
| ¹³⁹³ <i>Distributed System Identification with Binary Observations</i> | | | |
| Fu, Kewei | Institute of Sys. Sci., Chinese Acad. of Sci. | | |
| Chen, Han-Fu | Chinese Acad. of Sci. | | |
| Zhao, Wen-Xiao | Chinese Acad. of Sci. | | |
| MoB26 | 15:50–17:50 | | |
| Invited Session: Distributed Control and Optimization of Multiagent Systems | | | |
| Organizer: Xia, Weiguo | Dalian Univ. of Tech. | | |
| Organizer: Dong, Xiwang | Beihang Univ. | | |
| Chair: Xia, Weiguo | Dalian Univ. of Tech. | | |
| Co-Chair: Dong, Xiwang | Beihang Univ. | | |
| ► MoB26-1 | 15:50–16:10 | | |
| ¹¹⁶⁶ <i>Exponentially Convergent Algorithm Design for Constrained Distributed Optimization</i> | | | |
| Li, Weijian | Univ. of Sci. & Tech. of China | | |
| Zeng, Xianlin | Beijing Inst. of Tech. | | |
| Liang, Shu | Univ. of Sci. & Tech. Beijing | | |
| Hong, Yiguang | Chinese Acad. of Sci. | | |
| ► MoB26-2 | 16:10–16:30 | | |
| ¹¹⁷⁵ <i>Decentralized Event-triggered Circle Formation Control for Multi-agent Systems via Synchronous Periodic Event Detection</i> | | | |
| Wen, Jiayan | PEKING Univ. | | |
| Wang, Chen | Peking Univ. | | |
| Xu, Peng | Dalian Maritime Univ. | | |
| Xie, Guangming | Peking Univ. | | |
| ► MoB26-3 | 16:30–16:50 | | |
| ¹²¹² <i>Time-varying Formation Tracking Control with Guaranteed Cost Performance</i> | | | |
| Yu, Jianglong | Beihang Univ. | | |
| Dong, Xiwang | Beihang Univ. | | |
| Li, Qingdong | Beihang Univ. | | |
| ► MoB26-4 | 16:50–17:10 | | |
| ¹²⁶¹ <i>Robust Cooperative Optimal Control of Multiple USVs</i> | | | |
| Zhang, Zhuo | Northwestern Polytechnical Univ. | | |
| Li, Huiping | Northwestern Polytechnical Univ. | | |
| ► MoB26-5 | 17:10–17:30 | | |
| ¹⁸¹¹ <i>Synchronization of Multi-agent Systems with Matrix-weighted Couplings</i> | | | |
| Li, Shuang | Dalian Univ. of Tech. | | |
| Xia, Weiguo | Dalian Univ. of Tech. | | |
| ► MoB26-6 | 17:30–17:50 | | |
| ¹⁸¹⁶ <i>Fully Distributed Event-Triggered Consensus with Discrete Communication and Control Updating</i> | | | |
| Cheng, Bin | College of Engineering, Peking Univ. | | |
| Lv, Yuezu | Southeast Univ. | | |
| Li, Zhongkui | Peking Univ. | | |
| MoB27 | 15:50–17:50 | | |
| Invited Session: Analysis and Control of Networked System | | | |
| Organizer: Wang, Lin | Shanghai Jiao Tong Univ. | | |
| Organizer: Liu, Zhi-Xin | Chinese Acad. of Sci. | | |
| Chair: Wang, Lin | Shanghai Jiao Tong Univ. | | |
| Co-Chair: Wang, Jinhuan | Hebei Univ. of Tech. | | |
| ► MoB27-1 | 15:50–16:10 | | |
| ¹²⁸⁵ <i>On the Nonexistence of Event Triggers That Preserve Gaussian State in Presence of Packet-Drop</i> | | | |
| Kung, Enoch | Univ. College London | | |
| Wang, Jiazheng | HONG KONG Univ. OF Sci. & Tech. | | |
| Wu, Junfeng | KTH, Royal Inst. of Tech. | | |
| Shi, Dawei | Beijing Inst. of Tech. | | |
| Shi, Ling | Hong Kong Univ. of Sci. & Tech. | | |
| ► MoB27-2 | 16:10–16:30 | | |
| ¹⁴¹⁹ <i>Interplay between Complex Contagion of Awareness and Epidemic Spreading in Two-layer Network</i> | | | |
| Wang, Yuyang | Shanghai Jiao Tong Univ. | | |
| Wang, Lin | Shanghai Jiao Tong Univ. | | |
| ► MoB27-3 | 16:30–16:50 | | |
| ¹⁵²² <i>Intermittent Control for Evolutionary Weighted Congestion Games with Agent-specific Utility and Resource Failure</i> | | | |
| Jiang, Kaichen | Hebei Univ. of Tech. | | |
| Wang, Jinhuan | Hebei Univ. of Tech. | | |
| ► MoB27-4 | 16:50–17:10 | | |
| ¹⁶⁵⁷ <i>Predicting the Robustness of Undirected Network Controllability</i> | | | |
| Lou, Yang | City Univ. of Hong Kong | | |
| He, Yaodong | City Univ. of Hong Kong | | |
| Wang, Lin | Shanghai Jiao Tong Univ. | | |
| Chen, Guanrong | City Univ. of Hong Kong | | |
| ► MoB27-5 | 17:10–17:30 | | |
| ¹⁷²⁹ <i>Water Quality Evolution Mechanism Modeling and Estimation Based on Fruit Fly Optimization Algorithm and Particle Filter</i> | | | |
| Zhou, Yuqin | Beijing Tech. & Business Univ. | | |
| Zhao, Zhiyao | Beijing Tech. & Business Univ. | | |
| Wang, Xiaoyi | Beijing Tech. & Business Univ. | | |
| Sun, Qian | Beijing Tech. & Business Univ. | | |
| ► MoB27-6 | 17:30–17:50 | | |
| ¹⁸⁷² <i>Stability of the Distributed Kalman Filter with General Random Coefficients</i> | | | |
| Gan, Die | Chinese Acad. of Sci. | | |
| Liu, Zhi-Xin | Chinese Acad. of Sci. | | |
| Poster Session PMoA July 27, 13:30–15:30 | | | |
| ▷ PMoA-01 | | | |
| ⁰⁰⁷⁴ <i>Improvement of Response Speed Characteristics of Fast Steering Mirror Based on Zero Phase Error Tracking Controller</i> | | | |
| Lin, Wang | Changchun Univ. of Sci. & Tech. | | |
| Liang, Shuning | Changchun Univ. of Sci. & Tech. | | |
| Wang, Chunyang | Changchun Univ. of Sci. & Tech. | | |
| ▷ PMoA-02 | | | |
| ⁰¹⁰¹ <i>Air Pollution Lidar Echo Signals Preprocessing and Classification</i> | | | |
| Pei, Lihong | Univ. of Sci. & Tech. of China | | |
| Xu, Zhenyi | Univ. of Sci. & Tech. of China | | |
| Kang, Yu | Univ. of Sci. & Tech. of China | | |
| Cao, Yang | Univ. of Sci. & Tech. of China | | |
| Liu, Binkun | Univ. of Sci. & Tech. of China | | |
| ▷ PMoA-03 | | | |
| ⁰¹⁰² <i>Air Pollution Lidar Signals Classification Based on Machine Learning Methods</i> | | | |
| Liu, Binkun | Univ. of Sci. & Tech. of China | | |
| Xu, Zhenyi | Univ. of Sci. & Tech. of China | | |
| Kang, Yu | Univ. of Sci. & Tech. of China | | |
| Cao, Yang | Univ. of Sci. & Tech. of China | | |
| Pei, Lihong | Univ. of Sci. & Tech. of China | | |
| ▷ PMoA-04 | | | |
| ⁰²¹¹ <i>Stability Analysis for A Class of Stochastic Nonlinear Systems Based on the Approximate Discrete-Time Models</i> | | | |
| Zhang, Niankun | Univ. of Sci. & Tech. of China | | |
| Kang, Yu | Univ. of Sci. & Tech. of China | | |
| Yu, Peilong | Univ. of Sci. & Tech. of China | | |

- ▷ PMoA-05
0223 *L(p, q)-label Coloring Problem via the Semi-tensor Product Method*
Liu, Zhenbin Qingdao Agraicultural Univ.
Wu, Yuqiang Qufu Normal Univ.
- ▷ PMoA-06
0376 *Why Finite-Time Stability is So Special: Operator Norm and Multivariate Eigenvalue Problem Behind the Curtain*
Yao, Lusheng Nanjing Univ. of Sci. & Tech.
- ▷ PMoA-07
0545 *Research on the Virtual Height of Urban Haze Index Measurement Based on Data Mining Technology*
Yao, Chen Shenyang Univ.
Yue, Xiaoning Shenyang Univ.
Song, Yujia Shenyang Univ.
- ▷ PMoA-08
0590 *Hardware-in-the-loop Simulation Platform for Unmanned Aerial Vehicle Swarm System: Architecture and Application*
Zhang, Zonggang Tsinghua Univ.
Yang, Wenlong Tsinghua Univ.
Shi, Zongying Tsinghua Univ.
Zhong, Yisheng Tsinghua Univ.
- ▷ PMoA-09
0911 *An Improved Approximation Method with Adjustable Zero and Pole Distributions for Fractional Order Systems*
Shi, Wenqi Univ. of Sci. & Tech. of China
Li, Ang Univ. of Sci. & Tech. of China
Liu, Chang Univ. of Sci. & Tech. of China
Li, Xianlong Univ. of Sci. & Tech. of China
Wang, Yong Univ. of Sci. & Tech. of China
- ▷ PMoA-10
0946 *An On-line Data-driven Control Method for Nonlinear System on Deterministic Interval Hull Scheme*
Li, Yuhang Harbin Univ. of Sci. & Tech.
Cao, He Harbin Univ. of Sci. & Tech.
Liu, Jiaqi Harbin Univ. of Sci. & Tech.
- ▷ PMoA-11
1036 *A Method of Multi-USV Hunting Based on Extended Kalman Filter*
Lin, Xiaogong Harbin Engineering Univ.
Guo, Fei Harbin Engineering Univ.
- ▷ PMoA-12
1203 *Graph Theory-based Projective Synchronization of Coupled Systems on Network via Fractional Sliding Mode Control*
Meng, Xin Ocean Univ. of China
Gao, Cunchen Ocean Univ. of China
- ▷ PMoA-13
1427 *Distributed Finite-time Consensus Control for Surface Vehicles with Bounded Input and Fixed-time Observer*
Wang, Bo Beijing Inst. of Tech.
Fei, Qing Beijing Inst. of Tech.
Huang, Xiaosong Chinese Acad. of Sci.
- ▷ PMoA-14
1511 *State Estimation of Hybrid Data-driven Control System via Zonotopic Bounding Set Computation*
Zhang, Shaotong Harbin Univ. of Sci. & Tech.
Li, Yuhang Harbin Univ. of Sci. & Tech.
Liu, Jiaqi Harbin Univ. of Sci. & Tech.
- ▷ PMoA-15
1625 *Optimal Linear State Estimation for Discrete-time Systems with Time-correlated Multiplicative Noises and Delays*
Kong, Lili Shandong Univ.
Wang, Wei Shandong Univ.
- ▷ PMoA-16
1689 *Analysis and Control of the Unmanned Bicycle with Crank Slider Mechanism*
Liu, Peipei Beijing Information Sci. & Tech. Univ.
Zhou, Yali Beijing Information Sci. & Tech. Univ.
Zhang, Qizhi Beijing Information Sci. & Tech. Univ.
- ▷ PMoA-17
1720 *Finite-time Control Based on Linear Quadratic Performance Index*
Wang, Di Beijing Univ. of Posts & Telecommunications
Liu, Can Beijing Univ. of Posts & Telecommunications
- Gao, Suixiang Univ. of Chinese Acad. of Sci.
Chu, Ming Beijing Univ. of Posts & Telecommunication
- ▷ PMoA-18
1722 *Input-output Finite Time Stability for Discrete Switched Networked Control Systems*
Zhang, Guangchen North Minzu Univ.
Xia, Yuanqing Beijing Inst. of Tech.
- ▷ PMoA-19
1892 *TOPSIS Threat Assessment Based on Coefficient of Variation*
Wang, Jun Nanjing Univ. of Sci. & Tech.
- ▷ PMoA-20
1957 *Optimal Design for Multiple Variable Steam Temperature System Based on Auto Disturbance Rejection Control*
Hou, Weizhen North China Electric Power Univ.
Li, Jiayu North China Electric Power Univ.
Xu, Jing North China Electric Power Univ.
Li, Shuqin North China Electric Power Univ.
- ▷ PMoA-21
2169 *Observer-based Distributed Event-triggered Control of Markov Linear System over Saturation Sensor Network*
Li, Qing Nanjing Univ. of Finance & Economics
Liu, Qingyi Nanjing Univ. of Finance & Economics
Tan, Yushun Nanjing Univ. of Finance & Economic
- ▷ PMoA-22
2214 *Study on Demodulation Model and Peak Searching Algorithm of Fiber Bragg Grating*
Guo, Xifeng Information & Control Engineering Faculty
Shenyang Jianzhu Univ.
- Wang, Handi Shenyang Jianzhu Univ.
Gao, Zhijun Shenyang Jianzhu Univ.
Wang, Siqi Shenyang Jianzhu Univ.
- ▷ PMoA-23
2417 *An Optimization Method for Static Output Feedback Stabilization of Linear Control Systems*
Hu, Renhong Univ. of Sci. & Tech. Beijing
Shao, Lizhen Univ. of Sci. & Tech. Beijing
- ▷ PMoA-24
0018 *Sub-fixed-time Control of A Class of Nonlinear System with Disturbance*
Jiang, Boyan Hohai Univ., Changzhou Campus
Miao, Huanyu Hohai Univ., Changzhou Campus
Zhang, Xuewu Hohai Univ., Changzhou Campus
Chen, Hua Hohai Univ., Changzhou Campus
- ▷ PMoA-25
0122 *Simultaneous Dynamic Controller and Anti-windup Synthesis for Systems with Sector-bounded and Slope Restrictions*
Wang, Naizhou South China Univ. of Tech.
Pei, Hailong South China Univ. of Tech.
Jin, Lianwen South China Univ. of Tech.
Liang, Tiancai South China Univ. of Tech.
- ▷ PMoA-26
0165 *Identification of Non-uniformly Sampled Nonlinear Systems Based on Hybrid Signal Source*
Wang, Hongwei Dalian Univ. of Tech., China
Hou, Yuwen Xinjiang Univ.
Zhang, Qian Xinjiang-Univ.
- ▷ PMoA-27
0228 *Prescribed Performance Attitude Tracking Control for Spacecraft under Multi-Constraint*
Shi, Xiao-Ning Harbin Inst. of Tech.
Chen, Xinwei Minjiang Univ.
Li, Ruifeng Harbin Inst. of Tech.
Zhou, Zhi-Gang Harbin Inst. of Tech.
Wen, Kuanchang Fujian(Quanzhou)-HIT Research Inst. of Engineering & Tech.
- ▷ PMoA-28
0232 *Neuro-adaptive Tracking Control for Uncertain Euler-Lagrange Systems with Time-varying Output Constraints and Obstacle Avoidance*
Zhou, Zhi-Gang Harbin Inst. of Tech.
Li, Ruifeng Harbin Inst. of Tech.
Chen, Xinwei Minjiang Univ.
Shi, Xiao-Ning Harbin Inst. of Tech.

Final Program

- Wen, Kuanchang Fujian(Quanzhou)-HIT Research Inst. of Engineering & Tech.
- Liao, Xiaoxin Huazhong Univ. of Sci. & Tech.
Zhou, Guopeng Hubei Univ. of Sci. & Tech.
Xin, Xia Hubei Univ. of Sci. & Tech.
Luo, Qi Nanjing Univ. of Information Sci. & Tech.
- ▷ PMoA-29
0255 *High-Gain Disturbance Observer-Based Backstepping Control For Dynamic Positioning Ships Using Contraction Theory*
Zhang, Yufang Wuxi Inst. of Tech.
Liu, Changde China Ship Scientific Research Center
- ▷ PMoA-30
0338 *Novel DOB Identification and Control Algorithm for Hypersonic Flight Vehicles with DNNs Models*
Xu, Lubing Yangzhou Univ.
Ye, Yangfei Yangzhou Univ.
Yi, Yang Yangzhou Univ.
- ▷ PMoA-31
0509 *Multi-objective Constrained Robust Variable Gain Control for Supercavitating Vehicle*
Han, Yuntao Harbin Engineering Univ.
He, Yulin Harbin Engineering Univ.
Guo, Hao Harbin Engineering Univ.
- ▷ PMoA-32
0527 *Stability and Neimark-Sacker Bifurcation of Leslie-Gower Predator-Prey System with Two Delays*
Yin, Wei China Univ. of GeoSci. (Wuhan)
Qin, Weiqi Affiliated Hospital of Shandong Medical College
Jiang, Xiao-Wei Huazhong Univ. of Sci. & Tech.
Chen, Xiangyong Linyi Univ.
Chi, Ming Huazhong Univ. of Sci. & Tech.
- ▷ PMoA-33
0564 *Active Disturbance Rejection Adaptive Control of Tank Turret-gun Control Systems*
Yuan, Shusen Nanjing Univ. of Sci. & Tech.
Yao, Jianyong Nanjing Univ. of Sci. & Tech.
Deng, Wenxiang Nanjing Univ. of Sci. & Tech.
Yang, Guolai Nanjing Univ. of Sci. & Tech.
Ma, Xiang Nanjing Univ. of Sci. & Tech.
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0582 *Characterizations of Input-to-State Stability for A Class of Switched Discrete Systems with Nonlinear Disturbance*
Liu, Mengliang Shandong Agriculture Univ.
Feng, Wei Shandong Agricultural Univ.
- ▷ PMoA-35
0629 *Adaptive Fast Non-singular Terminal Sliding Mode Control for Robotic Manipulators with Deadzone*
Xu, Gui SouthEast Univ.
Zhai, Junyong Southeast Univ.
- ▷ PMoA-36
0689 *Adaptive Dynamic Surface Control for Simultaneous Stabilization and Tracking of Wheeled Mobile Robot*
Shi, Wenrui Sichuan Agricultural Univ.
Xu, Lijia Sichuan Agricultural Univ.
Chen, Sanyan Sichuan Agricultural Univ.
- ▷ PMoA-37
0698 *Position Control of Planar Three-link Underactuated Manipulator Based on Wavelet Neural Network Model*
Wang, Yawu China Univ. of GeoSci.
Yang, Huiqing China Univ. of GeoSci., Wuhan
Zhang, Pan China Univ. of GeoSci.
- ▷ PMoA-38
0742 *Control Problems of A New Lorenz-Stenflo System by Single Input Controllers*
Peng, Runlong Qilu Univ. of Tech.
Li, Bin Qilu Univ. of Tech. (Shandong Acad. of Sci.)
Guo, Rongwei Qilu Univ. of Tech.
- ▷ PMoA-39
0788 *Finite-Time Disturbance Observer Design and Attitude Tracking Control of A Rigid Spacecraft*
Lan, Qi-Xun Henan Univ. of Urban Construction
Li, Yajie Henan Univ. of Urban Construction
- ▷ PMoA-40
0822 *Chaotic Control of Several Kinds of One Equilibrium Chaotic Systems with Linear Feedback*
- ▷ PMoA-41
0840 *Existence of Solutions for Sequential Fractional Differential Equations with Boundary Conditions*
Sun, Ying Univ. of Jinan
Han, Zhenlai Univ. of Jinan
- ▷ PMoA-42
0913 *A Multivariable Robust Adaptive Control Scheme for Aero-engines*
Wen, Si-Xin Dalian Univ. of Tech.
Li, Yan Northwestern Polytechnical Univ.
Du, Xian Dalian Univ. of Tech.
Sun, Xi-Ming Dalian Univ. of Tech.
Liu, Xiao-Yu Dalian Univ. of Tech.
- ▷ PMoA-43
0978 *Global Finite-time Chaos Synchronization between the Loren System and the Chen System via A Simple Controller*
Chen, Yun Naval Univ. of Engineering
- ▷ PMoA-44
1024 *Fixed-Time Stabilization for A Class of Time-Varying Constrained Nonholonomic Systems*
Gao, Fangzheng Nanjing Inst. of Tech.
Yang, Runjiang Nanjing Inst. of Tech.
Huang, Jiakai Nanjing Inst. of Tech.
Shi, Xinxin Nanjing Inst. of Tech.
Wu, Yuqiang Qufu Normal Univ.
- ▷ PMoA-45
1031 *Robust Stability Criteria of the Nonlinear Fuzzy System with Two Additive Time-varying Delay Components*
Li, Qian Qilu Univ. of Tech.
Lu, Hong Qian Qilu Univ. of Tech.
Wang, Renren Qilu Univ. of Tech., Jinan
Chen, Hongwei Ji Nan Building Source Cement Products Co.LTD, Jinan, China
- ▷ PMoA-46
1128 *Sampled-Data Stabilization of State-Dependent Delayed Boolean Networks with State Constraints*
Kong, Xiangshan Shandong Normal Univ.
Li, Ping Shandong Normal Univ.
Wang, Shuling Shandong Normal Univ.
Li, Haitao Shandong Normal Univ.
- ▷ PMoA-47
1165 *A Novel Active Queue Management Algorithm: Finite-Time H^∞ Congestion Tracking Control*
Liu, Yang Guangdong Univ. of Tech.
Yao, Deyin Bohai Univ.
Li, Hongyi Guangdong Univ. of Tech.
Lu, Renquan Hangzhou Dianzi Univ.
- ▷ PMoA-48
1173 *Global Asymptotic Stabilizing Control of Nonholonomic Systems with Dynamic Uncertainty*
Zhao, Yan Shandong Jianzhu Univ.
Tian, Jie Qufu Normal Univ.
Yu, Jiangbo Shandong Jianzhu Univ.
- ▷ PMoA-49
1217 *Dynamic Analysis of High-dimensional Fractional-order Gene Regulation Networks with Time Delay*
Zhang, Zhe Hunan Univ.
Ding, Can Hunan Univ.
- ▷ PMoA-50
1371 *Adaptive Neural Network Finite-Time Dynamic Surface Control for Nonlinear Systems*
Li, Kewen Qufu Normal Univ.
Li, Yongming Liaoning Univ. of Tech.
- ▷ PMoA-51
1556 *Dissipativity Analysis of Time-delayed Neural Networks Using A Vector Zero-value Method and Generalized Reciprocally Convex Combination Techniques*
Wang, Chen-Rui China Univ. of GeoSci.

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| He, Yong | China Univ. of GeoSci. | Zhang, Lei | Nanjing Univ. of Posts & Telecommunications |
| ▷ PMoA-52 | | ▷ PMoA-63 | |
| ¹⁵⁹⁹ <i>Walking Control of A Variable Stiffness Biped Robot with A Swing Torso</i> | | ²²¹² <i>Extended State Observer-based Backstepping Sliding Mode Controller for DMS Heading Control</i> | |
| Wang, Shan | Beijing Information Sci. & Tech. Univ. | Lan, Ying | China Ship Scientific Research Center |
| Zhou, Yali | Beijing Information Sci. & Tech. Univ. | Hu, Zhen | China Ship Scientific Research Center |
| Zhang, Qizhi | Beijing Information Sci. & Tech. Univ. | Wang, Lei | China Ship Scientific Research Center |
| Liu, Peipei | Beijing Information Sci. & Tech. Univ. | Yang, Shenshen | China Ship Scientific Research Center |
| Zhi, Jingde | Beijing Information Sci.&Tech. Univ. | Shen, Dan | China Ship Scientific Research Center |
| ▷ PMoA-53 | | ▷ PMoA-64 | |
| ¹⁷⁸⁰ <i>Adaptive Tracking Control for Pure-feedback Nonlinear Systems with Semi-bounded Non-affine Functions and Dead-zone</i> | | ²⁴⁰⁰ <i>Stability Analysis and Bifurcation Control for A Fractional Order SIR Epidemic Model with Delay</i> | |
| Zhang, Wenqian | Air Force Engineering Univ. | Liu, Feng | China Univ. of GeoSci. |
| Dong, Wenhan | Air Force Engineering Univ. | Huang, Shuxian | China Univ. of GeoSci. |
| Liu, Zongcheng | Air Force Engineering Univ. | Zheng, Shiqi | China Univ. of GeoSci., Wu Han |
| Zhou, Yang | Air Force Engineering Univ. | Wang, Hua O. | Boston Univ. |
| Feng, Haoming | Air Force Engineering Univ. | | |
| ▷ PMoA-54 | | ▷ PMoA-65 | |
| ¹⁷⁸¹ <i>基于广义非线性干扰观测器的有限时间视线法制导策略</i> | | ⁰⁴⁷⁸ <i>Link Prediction Based on Graph Embedding Method in Unweighted Networks</i> | |
| <i>Finite-time Line-of-sight Guidance Methodology via Nonlinear Generalized Disturbance Observer</i> | | Wu, Chencheng | Hangzhou Normal Univ. |
| Li, Jiashuai | Harbin Engineering Univ. | Zhou, Yinzuo | Hangzhou Normal Univ. |
| Xu, Changkui | Harbin Engineering Univ. | Tan, Lulu | Hangzhou Normal Univ. |
| Wang, Lu | Harbin Engineering Univ. | Teng, Cong | Hangzhou Normal Univ. |
| Li, Bing | Harbin Engineering Univ. | | |
| ▷ PMoA-55 | | ▷ PMoA-66 | |
| ¹⁸⁴² <i>Fuzzy Adaptive Tracking Control of High-order Nonlinear Dynamics with Mixed Control Directions</i> | | ⁰⁵⁸⁹ <i>K-Means Clustering Method Based on Node Similarity in Traditional Chinese Medicine Efficacy</i> | |
| Lv, Maolong | Delft Univ. of Tech. | Tan, Lulu | Hangzhou Normal Univ. |
| Yu, Wenwu | Southeast Univ. | Gu, Shanbao | Hangzhou Normal Univ. |
| Baldi, Simone | Southeast Univ. | Wu, Chencheng | Hangzhou Normal Univ. |
| | | Huang, Jianping | Hangzhou Normal Univ. |
| | | Zhou, Yinzuo | Hangzhou Normal Univ. |
| ▷ PMoA-56 | | ▷ PMoA-67 | |
| ¹⁸⁹⁵ <i>Passive Localization Method Based on Cubature Kalman Filter</i> | | ¹³⁸⁴ <i>Finite-time Pinning Synchronization and Parameters Identification of Markovian Switching Complex Delayed Network with Stochastic Perturbations</i> | |
| Wang, Shoufeng | Jiangsu Automation Research Inst. | Xie, Qian | Xi'an Univ. of Tech. |
| Zhang, Hui | Jiangsu Automation Research Inst. | Guo, Duo | Xi'an Univ. of Tech. |
| Zhang, Shihui | Jiangsu Automation Research Inst. | Wang, Tong | Shaanxi Gas Group Co.,Ltd |
| Wang, Baobao | Jiangsu Automation Research Inst. | Mei, Yifeng | Xi'an Univ. of Tech., Xi'an |
| | | Yang, Xiaoping | Xi'an Univ. of Tech. |
| ▷ PMoA-57 | | ▷ PMoA-68 | |
| ¹⁹¹¹ <i>Trajectory Tracking Control of Underactuated Ship Based on Backstepping and Dynamic Surface Control Method</i> | | ²³⁶⁹ <i>Prediction of COVID-19 Spread via LSTM and the Deterministic SEIR Model</i> | |
| Liu, Yong | Dalian Maritime Univ. | Yang, Yifan | Southeast Univ. |
| Li, Qiang | Dalian Maritime Univ. | Yu, Wenwu | Southeast Univ. |
| Gao, Xiaori | Dalian Maritime Univ. | Chen, Duxin | Southeast Univ. |
| ▷ PMoA-58 | | ▷ PMoA-69 | |
| ¹⁹²² <i>Active Variable-Impedance Based Compliant Landing Control for A Hydraulically-Actuated Articulated Robotic Leg</i> | | ¹⁸²⁶ <i>Performance Comparison of Data Classification Based on Modern Convolutional Neural Network Architectures</i> | |
| An, Honglei | National Univ. of Defense Tech. | Tan, Yuchen | Univ. of Sci. & Tech. Beijing |
| Lian, Yao | Logistical Research Inst. of Sci. & Tech. in Inst. of Sys. Engineering | Li, Yanxiang | Univ. of Sci. & Tech. Beijing |
| | | Liu, Han | Univ. of Sci. & Tech. Beijing |
| Li, Yun | National Univ. of Defense Tech. | Wang, Lu | Henan Museum |
| Ma, Hongxu | Nudt | Xiao, Xiaowu | Beijing Inst. of Tech. |
| Wei, Qing | College of Mechatronics Engineering & Automation, nation Univ. of Defense Tech. | | |
| ▷ PMoA-59 | | ▷ PMoA-70 | |
| ²⁰¹⁶ <i>Robust H^∞ Consensus Control for a Class of Nonlinear Multi-agent Systems with Similar Structure</i> | | ⁰⁰¹³ <i>Effects of Combined Time Delays on Vibration Suppression of Building Structures</i> | |
| Fan, Yongqing | Xi'an Univ. of Posts & Telecommunications | Zheng, Yuanguang | Nan Chang Hang Kong Univ. |
| An, Yue | Xi'an Univ. of Posts & Telecommunications | | |
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| ²¹⁸¹ <i>Cluster-Delay Consensus for the Second-Order Nonlinear Multi-Agent Systems with Random Noises</i> | | ⁰⁰²⁵ <i>Stability and Stabilization for Discrete-time Markovian Jump Quadratic Systems with Incomplete Knowledge of Transition Probabilities</i> | |
| Huang, Jun | Beijing Jiaotong Univ. | Chen, Fu | Shanxi Datong Univ. |
| Huang, Mianliang | Guiyang Yunyan Yansongfuzhuang | | |
| ▷ PMoA-61 | | ▷ PMoA-72 | |
| ²¹⁹⁸ <i>Robust Fuzzy Sliding Mode Control for the Bio-economic Singular Stochastic Markov Jump System</i> | | ⁰⁵²³ <i>Exponential Stability for Delayed Neural Networks Using Extended Reciprocally Convex Matrix Inequality</i> | |
| Song, Ziyu | Bohai Univ. | Peng, Xiaojie | China Univ. of GeoSci. |
| Li, Li | Bohai Univ. | He, Yong | China Univ. of GeoSci. |
| ▷ PMoA-62 | | ▷ PMoA-73 | |
| ²²⁰⁷ <i>Comparison among Gap-based Weighting for Multi-model Control of A TITO System</i> | | ⁰⁶⁹⁷ <i>Synchronization of A Class of Chaotic Systems with Both Uncertainty and Disturbance by the UDE-based Control Method</i> | |
| Du, Jingjing | Hohai Univ. | Sha, Hongsheng | Qilu Univ. of Tech. (Shandong Acad. of Sci.) |

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| | Wang, Zuoxun Wang, Guijuan | Qilu Univ. of Technology Shandong Jianzhu Univ. | Ning, Chongyang | Central South Univ. of Forestry & Tech. |
| | ▷ PMoA-74 | | ▷ PMoA-86 | |
| 0727 | <i>Guaranteed Cost Control for Uncertain Gene Regulatory Networks with Interval Time-Varying Discrete Delays and Constant Distributed Delays</i> | | 0955 | <i>Output Feedback Tracking Control of High-order Stochastic Nonlinear Time-delay Systems with Markovian Switching</i> |
| | Zhang, Zhiwei Liu, Heng Zhang, Xinyue Wang, Yantao Zhang, Xian | Heilongjiang Univ. Heilongjiang Univ. Heilongjiang Univ. Heilongjiang Univ. Heilongjiang Univ. | You, Yuyao Li, Wuquan Yao, Xiaoxiao | Ludong Univ. Ludong Univ. Ludong Univ. |
| | ▷ PMoA-75 | | ▷ PMoA-87 | |
| 1184 | <i>On Integral Input-to-State Stability Analysis for A Class of Switched Bilinear Control Systems</i> | | 1293 | <i>Robust Steady-state Kalman Filter for Descriptor System with Random One-step Measurement Delays and Uncertain Noise Variances</i> |
| | Yu, Ruilin Feng, Wei Liu, Mengliang | Shandong Agricultural Univ. Shandong Agricultural Univ. Shandong Agriculture Univ. | Dou, Yinfeng Ran, Chenjian Gao, Yuan | Heilongjiang Univ. Heilongjiang Univ. Heilongjiang Univ. |
| | ▷ PMoA-76 | | ▷ PMoA-88 | |
| 1220 | <i>Global Ultimate Mittag-Leffler Lag Quasi-Synchronization of Delayed Fractional-Order Memristive Neural Networks with Switching Jumps Mismatch via Pinning Control</i> | | 2079 | <i>Dual Control for Stochastic Systems with Multiple Uncertainties</i> |
| | Jia, Jia Zeng, Zhigang | Huazhong Univ. of Sci. & Tech. Huazhong Univ. of Sci. & Tech. | Ma, Xuehui Qian, Fucui Zhang, Shiliang | Xi'an Univ. of Tech. Xi'an Univ. of Tech. Xi'an Jiaotong Univ. |
| | ▷ PMoA-77 | | ▷ PMoA-89 | |
| 1227 | <i>Stability of Difference-Integral Delay Equations</i> | | 2445 | <i>Leader-Follower Mean Field Linear Quadratic Games</i> |
| | Li, Hongfei Zhang, Lijun | Shaanxi Xueqian Normal Univ. Northwestern PolyTech. Univ. | Wang, Bingchang Zhang, Huanshui | Shandong Univ. Shandong Univ. |
| | ▷ PMoA-78 | | ▷ PMoA-90 | |
| 1700 | <i>Stabilization Analysis of Actuator Saturated Switched Systems with Time-varying Delays under Observer-based Event-triggered Sampling Control</i> | | 0300 | <i>Aerodynamic Modeling and Parameter Estimation for Large Amplitude Maneuver Aircrafts Using Orthogonal Least Square Algorithm</i> |
| | Zhang, Liangda Wu, Baowei | Shaanxi Normal Univ. Shaanxi Normal Univ. | Yan, Chuxiong Tong, Yinan Song, Jiahong Zhang, Zhongzhi | Beijing Inst. of Space Long March Vehicle Beijing Inst. of Space Long March Vehicle Beijing Inst. of Space Long March Vehicle Beijing Inst. of Space Long March Vehicle |
| | ▷ PMoA-79 | | ▷ PMoA-91 | |
| 1934 | <i>On Stability for Conformable Fractional Linear System</i> | | 0079 | <i>Variable Selection Method Based on Partial Mutual Information and Its Application to NOx Emission Prediction</i> |
| | Zhao, Hongguo Li, Tongzhao Cui, Peng | Taishan Univ. Beijing Jiaotong Univ. Shandong Univ. | Qin, Tianmu Zhang, Jinzhe You, Mo Yang, Tingting | North China Electric Power Research Inst. North China Electric Power Research Inst. North China Electric Power Research Inst. North China Electric Power Univ. |
| | ▷ PMoA-80 | | ▷ PMoA-92 | |
| 0307 | <i>Study on Stochastic Nonlinear Observer in Ship Dynamic Positioning System</i> | | 0167 | <i>Reduction Modeling of Three-Phase Uncontrolled Rectifier Generator under Different Load Factor</i> |
| | Song, Yanan Xu, Ronghua Wang, Qinruo Song, Zi-Yin | Guangdong Univ. of Tech. Guangdong Univ. of Tech. Guangdong Univ. of Tech. GUANGDONG Univ. OF Tech. | Li, Fan Chen, Tianyi Cao, Yang | Tsinghua Univ. Tsinghua Univ. State Grid Economic & Technological Research Inst. Co., LTD |
| | ▷ PMoA-81 | | Zhu, Chengzhi | State Grid Zhejiang Electric Power Co., Ltd |
| 0495 | <i>A Short Review of Stochastic Global Maximum Principle</i> | | ▷ PMoA-93 | |
| | Lou, Zhihui Cheng, Yanran | Yiwu Industrial & Commercial College Yiwu Industrial & Commercial College | 0326 | <i>DFNN Based Information Fusion Technology for Early Warning of Marine Organism Detection in Nuclear Power Plant</i> |
| | ▷ PMoA-82 | | Liu, Yang Meng, Wei Zong, Humin | Dalian Jiaotong Univ. Dalian Maritime Univ. National Marine Environmental Monitoring Center |
| 0512 | <i>Discrete-Time H^∞ Control for Infinite Markov Jump Systems with Uncertainty</i> | | ▷ PMoA-95 | |
| | Hu, Jing | State Grid Jiangxi Electric Power Co., Ltd. Electric Power Research Inst. | 0534 | <i>Personalized Closed-loop Brain Stimulation System Based on Linear State Space Model Identification</i> |
| | Liu, Yueying Gao, Xiaowei Wu, Hefeng | Shandong Univ. of Sci. & Tech. Beijing Imperial Image Intelligent Tech. Beijing Imperial Image Intelligent Tech. | Wei, Xile Huang, Moyuan Lu, Meili Chang, Siyuan Wang, Jiang Deng, Bin | Tianjin Univ. School of Electrical & Information Engineering Tianjin Univ. of Tech. & Education Tianjin Univ. Tianjin Univ. Tianjin Univ. |
| | ▷ PMoA-83 | | ▷ PMoA-96 | |
| 0599 | <i>Robust H^∞ Filtering for Discrete-time Markovian Jump Systems with Time-varying Delay and Parametric Uncertainties</i> | | 0558 | <i>基于混合分布鲁棒随机配置网络的区间预测方法 Mixed-Distribution-Based Robust Stochastic Configuration Networks for Construction of Prediction Intervals</i> |
| | Wang, Wenxiao Kong, Shulan Cui, Guozeng | Qufu Normal Univ. Qufu Normal Univ. Suzhou Univ. of Sci. & Tech. | Lu, Jun Ding, Jinliang | Northeastern Univ. Northeastern Univ. |
| | ▷ PMoA-84 | | ▷ PMoA-97 | |
| 0654 | <i>Stochastic Input-to-state Stability of Stochastic Nonlinear Systems with Markovian Switching</i> | | 0604 | <i>Modeling and Kinematics Analysis of A Novel 5-DOF Upper Limb Exoskeleton Rehabilitation Robot</i> |
| | Zhao, Guihua | Univ. of Shanghai for Sci. & Tech. | Xu, Ningcun Peng, Xiwei Peng, Liang | Beijing Inst. of Tech. Beijing Institute of Tech. Inst. of Automation, Chinese Acad. of Sci. |
| | ▷ PMoA-85 | | | |
| 0863 | <i>Indefinite Lyapunov functions for p-th moment input-to-state stability of stochastic systems with Markovian switching</i> | | | |
| | Liu, Qian He, Yong | Chinese Univ. of GeoSci. China Univ. of GeoSci. | | |

- Hou, Zengguang Inst. of Automation Chinese Acad. of Sci.
Gui, Meijiang Chinese Acad. of Sci.
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0871 *Orthogonal Matching Pursuit Algorithm for Two-input Signal-output Hammerstein Finite Impulse Response Systems*
Kang, Zhen Qingdao Univ. of Sci. & Tech.
Ji, Yan Qingdao Univ. of Sci. & Tech.
Liu, Haibo Qingdao Univ. of Sci. & Tech.
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0922 *An Improved PSO Algorithm for Parameter Identification of Bouc-Wen Model for Piezoelectric Actuator*
Shao, Muyao Shanghai Univ.
Huang, Jiaqi Shanghai Univ.
Wei, Shuaihao Shanghai Univ.
Gao, Zhiyuan Shanghai Univ.
- ▷ PMoA-100
1114 *Nonlinear Analysis of Period Pulse Load for Phased Array Radar*
Sun, Yong China Electronics Tech. Group Corporation
Lin, Song China Electronics Tech. Group Corporation
- ▷ PMoA-101
1140 *A Packet Loss Probability-Based Compensation Identification Method for Systems with Missing Binary-Valued Observations*
Cheng, Jing Univ. of Sci. & Tech. Beijing
Guo, Jin Univ. of Sci. & Tech. Beijing
- ▷ PMoA-102
1141 *Identification of FIR Systems with Quantized Input and Binary-Valued Observations under A Priori Parameter Constraint*
Yuan, Tian Univ. of Sci. & Tech. Beijing
Guo, Jin Univ. of Sci. & Tech. Beijing
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1259 *Identification of Drilling Stick-slip Vibration Conditions Based on Empirical Mode Decomposition Threshold Denoising and Support Vector Machine*
Zhang, Ke China Univ. of GeoSci. (wuhan)
Cao, Weihua China Univ. of GeoSci.
Gan, Chao China Univ. of GeoSci.
Hu, Wenkai China Univ. of GeoSci.
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1387 *Electromagnetic Field Calculation of Stator Slot and Operation Simulation for Salient Pole Synchronous Machine*
Qiang, Dazhuang Chaoyang Teachers College
Yu, Mingxing Chaoyang Teachers College
Yang, Li Shenyang Ligong Univ.
- ▷ PMoA-105
1424 *COVID-19 Outbreak Prediction Based on SEIQR Model*
Zhao, Yuankang Wuhan Univ. of Sci. & Technology
He, Yi Univ. of California, Davis
Zhao, Xiaosong Huazhong Univ. of Sci. & Tech.
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1470 *Weighted Complex Network Based on Visibility Angle Measurement*
Zeng, Ming Tianjin Univ.
Xu, Wenkang Tianjin Univ.
Zhao, Chunyu Tianjin Univ.
Li, Qi Tianjin Univ.
Han, Jingjing Tianjin Univ.
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1496 *Review of NAND Flash Information Erasure Based on Overwrite Technology*
Wang, Dandan Beijing Univ. of Tech.
Tang, Jian Beijing Univ. of Tech.
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1504 *Numerical Simulation Method of Municipal Solid Waste Incineration Process Based on for Grate Furnace: A Survey*
Zhuang, Jiabin Beijing Univ. of Tech.
Tang, Jian Beijing Univ. of Tech.
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1523 *Development of A Soft Sensor Using Subspace Identification*
Guo, Wei Jiangsu Univ.
Pan, Tian-Hong Anhui Univ.
Li, Zhengming Jiangsu Univ.
Shan, Chen Jiangsu Univ.
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1713 *Speaker Recognition Based on Dynamic Time Warping and Gaussian Mixture Model*
Zhang, Nannan China Univ. of Petroleum
Yao, Yanru China Univ. of Petroleum (east China)
- ▷ PMoA-111
1817 *Review of Waste Plastic Bottle Recycling Equipment Research Status*
Cui, Chengyu Beijing Univ. Df Tech.
Tang, Jian Beijing Univ. of Tech.
Qiao, Junfei Beijing Univ. of Tech.
Wang, Zixuan Beijing Univ. of Tech.
Sun, Zijian Beijing Univ. of Tech.
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1905 *含高比例变频空调负荷综合等效建模方法研究
Research on Synthesis Equivalent Modeling Method of High Proportion Inverter Air Conditioner Load*
Kang, Zhongjian China Univ. of Petroleum
Chang, Zheng China Univ. of Petroleum
Li, Kaiji China Univ. of Petroleum
Zhao, Bing China Electric Power Research Inst.
- ▷ PMoA-113
1946 *Research on Double Buck Inverter Based on Double Closed-loop Control*
Yue, Zhou Hunan Univ. of Humanities, Sci. & Tech.
- ▷ PMoA-114
2051 *A Novel Fuzzy Model Identification Approach Based on FCM and Gaussian Membership Function*
Ren, Yaxue Yanshan Univ.
Lv, Jinfeng Yanshan Univ.
Liu, Fucai YanShan Univ.
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2104 *航天器活动载荷残余力矩测量标定技术研究
Research on Calibration Technique of Space Vehicle Active Load Residual Torque Measurement*
Li, Zening Harbin Inst. of Tech.
Ma, Guangcheng Harbin Inst. of Tech.
Xia, Hongwei Harbin Inst. of Tech.
Zhang, Dali Harbin Inst. of Tech.
Meng, Xiangrui HIT
- ▷ PMoA-116
2196 *Modeling and Simulation of Detonation Wave Based on Mine Protected Seat Test*
Ren, Jia AVIC Aircraft Strength Research Inst.
Yang, Jianbo Aircraft Strength Research Inst. of China
- ▷ PMoA-117
1124 *对转发动机平滑切换控制
Smooth Switching Control on Engine*
Liu, Xiaofeng Beihang Univ.
- ▷ PMoA-118
1862 *Identification of Switched Nonlinear Systems Based on EM Algorithm*
Chai, Xiujun Xinjiang Univ.
Wang, Hongwei Dalian Univ. of Tech., China
Wang, Lin Xinjiang Univ.
Xiao, Zhengqing Xinjiang Univ.
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1884 *Exponentially Almost Sure Stability of Dual Switching Discrete-time Linear Positive System**
Hu, Yina Guizhou Univ.
Long, Fei Guizhou Univ.
- ▷ PMoA-120
0390 *Thrust Allocation of Dynamic Positioning Based on Improved Differential Evolution Algorithm*
Ding, Fuguang Harbin Engineering Univ.
Gao, Pengju College of Automation, Harbin Engineering Univ.
Zhang, Xiaoyun Harbin Marine Boiler & Turbine Research Inst., Harbin 150078, China
Wang, Yuanhui Harbin Engineering Univ.
- ▷ PMoA-121
1216 *Sub-pixel Registration and Stitching Technology Based on Interpolation and Iterative Optimization Algorithm*
Dong, Lin Beijing Inst. of Tech.

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| Xu, Xiangyang | Beijing Inst. of Tech. | Guo, Shunsheng | Wuhan University of Tech. |
| Shen, Yexiong | Beijing Institute of Tech. | Luo, Wei | Wuhan Univ. of Tech. |
| ▷ PMoA-122 | | Xu, Wenxiang | Wuhan Univ. of Tech. |
| ¹³⁴³ <i>A Hybrid Pigeon Inspired Optimization Algorithm Based on Nelder-Mead Simplex Operations</i> | | Wang, Lei | Wuhan Univ. of Tech. |
| Zhong, Yi | Southwest China Research Inst. of Electronic Equipment | ▷ PMoA-132 | |
| Zhang, Yaping | Southwest China Research Inst. of Electronic Equipment | ⁰⁶⁴⁴ <i>An Iterated Greedy Algorithm for the Distributed Permutation Flowshop Scheduling Problem with Preventive Maintenance</i> | |
| Liao, Kaisheng | SouthWest China Research Inst. of Electronic Equipment | Mao, Jiayang | Shanghai Univ. |
| Zhang, Zhenghong | Southwest China Research Inst. of Electronic Equipment | Hu, Xiaolu | China Rural Tech. Development Center |
| | | Pan, Quan-Ke | Shanghai Univ. |
| | | Tasgetiren, M. Fatih | Yasar Univ. |
| | | Miao, Zhonghua | Shanghai Univ. |
| | | He, Chuangxin | Shanghai Univ. |
| ▷ PMoA-123 | | ▷ PMoA-133 | |
| ¹⁴⁰⁷ <i>Optimal Constrained Control Allocation for Multiple Thrusters in Dynamic Positioning System</i> | | ⁰⁸³² <i>An Iterated Greedy Algorithm for Distributed Blocking Flowshop Problems with Makespan Minimization</i> | |
| Liu, Changde | China Ship Scientific Research Center | Chen, Shuai | Shanghai Univ. |
| Zhang, Yufang | Wuxi Inst. of Tech. | Pan, Quan-Ke | Shanghai Univ. |
| ▷ PMoA-124 | | Hu, Xiaolu | China Rural Tech. Development Center |
| ¹⁶⁸² <i>Alpine Skiing Trajectory Optimization Based on Radau Pseudospectral Method</i> | | Tasgetiren, M. Fatih | Yasar Univ. |
| Li, Pengcheng | Beijing Institute of Tech. | ▷ PMoA-134 | |
| Yao, Xiaolan | Beijing Inst. of Tech. | ⁰⁸⁷⁰ <i>Cooperative Tactical Planning Method for UAV Formation</i> | |
| Xu, Ning | Beijing Inst. of Tech. | Zhang, Zhe | Nanchang Hangkong Univ. |
| ▷ PMoA-125 | | Wu, Jian | Nanchang Hangkong Univ. |
| ²⁴⁴² <i>H Infinite Control for Markovian Jump Systems with Partly Known Transition Probabilities in Discrete-time Domain</i> | | Dai, Jiyang | Nanchang Hangkong Univ. |
| Sun, Hui-Jie | Harbin Inst. of Tech.(Shenzhen) | Ying, Jin | NanChang Hang Kong University |
| Wu, Ai-Guo | Harbin Inst. of Tech. Shenzhen Graduate School | He, Cheng | Nanchang Aviation Univ. |
| Liu, Can | PLA LandForce Equipment Department | ▷ PMoA-135 | |
| ▷ PMoA-126 | | ⁰⁸⁸⁷ <i>An Iterated Local Search Algorithm for Distributed Assembly Permutation Flowshop Problem</i> | |
| ⁰⁰³⁶ <i>Vocabulary Learning Scheduling by Solving An Assignment Problem</i> | | Huang, Yingying | Shanghai Univ. |
| Lai, Zefeng | Univ. of Sci. & Tech. of China | Pan, Quan-Ke | Shanghai Univ. |
| Wei, Xupeng | Univ. of Sci. & Tech. of China | Hu, Xiaolu | China Rural Tech. Development Center |
| Long, Fei | Chinaso Inc | Tasgetiren, M. Fatih | Yasar Univ. |
| Wang, Xinlei | Southern Methodist Univ. | Huang, Jiang-Ping | Shanghai Univ. |
| Ling, Qiang | Univ. of Sci. & Tech. of China | ▷ PMoA-136 | |
| ▷ PMoA-127 | | ¹⁰⁵² <i>Mobile Robot Path Planning Based on Improved Ant Colony Optimization Algorithm</i> | |
| ⁰¹⁹⁷ <i>A Collaborative Optimization Approach for Multi-Train in URT</i> | | Jing, Yanshu | Northeastern Univ. |
| Chen, Mo | Southwest Jiaotong Univ. | Jiao, Minghai | Northeastern Univ. |
| Sun, Pengfei | Southwest Jiaotong Univ. | Chen, Yukun | Northeastern Univ. |
| Rao, Yu | Southwest Jiaotong Univ. | Zheng, Wenbo | Northeastern Univ. |
| Chai, Yang | Southwest Jiaotong Univ. | Huang, Jie | NEU |
| Liu, Cheng | Southwest Jiaotong Univ. | Niu, Bowen | Northeastern Univ. |
| ▷ PMoA-128 | | ▷ PMoA-137 | |
| ⁰³⁶⁰ <i>风电机组塔筒结构健康监测的传感器优化布置</i> | | ¹¹¹² <i>Energy Efficiency Optimization of Belt Conveyors with Bias Noise Based on Beetle Antennae Search Algorithm</i> | |
| <i>Optimal Placement of Sensors for Structural Health Monitoring of Wind Tower</i> | | Miao, Peng | Zhengzhou Univ. of Sci. & Tech. |
| Wu, Ji | North China Electric Power Univ. | Fan, LiuJun | Zhengzhou Univ. of Sci. & Tech. |
| Zhou, Chuandi | North China Electric Power Univ. | ▷ PMoA-138 | |
| Cao, Xin | China Suntien Green Energy Co., LTD | ¹¹¹⁶ <i>Light Source Optimization Scheme for Paper Defect Detection System Based on the Uniform Illumination of the Near-field</i> | |
| Jing, Yanwei | China Suntien Green Energy Co., LTD | Feng, Bo | Shaanxi Univ. of Sci. & Tech. |
| Liu, Yibing | North China Electric Power Univ. | Tang, Wei | Shaanxi Univ. of Sci. & Tech. |
| ▷ PMoA-129 | | Cheng, Shuangshuang | Shaanxi Univ. of Sci. & Tech. |
| ⁰⁴⁶⁸ <i>Energy Management of A Residential Consumer with Uncertain Renewable Generation: A Robust Dual Dynamic Programming Approach</i> | | Qu, Yunhui | Shaanxi Univ. of Sci. & Tech. |
| Liu, Dangwu | Anhui | ▷ PMoA-139 | |
| Guo, Zhongjie | Tsinghua Univ. | ¹¹⁹⁸ <i>A Novel Hybrid Optimization Algorithm Combined with BBO and ACO</i> | |
| Chen, Feng | State Grid Corporation of China | Dai, Zhuo | Lanzhou Univ. |
| Xue, Xiaodai | Tsinghua Univ. | Ma, Qian | Lanzhou Univ. |
| Mei, Shengwei | Tsinghua Univ. | Zhao, Dongdong | Lanzhou Univ. |
| ▷ PMoA-130 | | Yan, Shi | Lanzhou Univ. |
| ⁰⁵¹⁰ <i>A New Heuristic for Grouping PCBs with Minimum Setup Time</i> | | ▷ PMoA-140 | |
| Huang, Jiang-Ping | Shanghai Univ. | ¹²⁵⁷ <i>Solving Multi-Stage Weapon Target Assignment Problems by C-TAEA</i> | |
| Pan, Quan-Ke | Shanghai Univ. | Zou, Shiqi | Harbin Inst. of Tech. |
| Tasgetiren, M. Fatih | Yasar Univ. | Shi, Xiaoping | Harbin Inst. of Tech. |
| Huang, Yingying | Shanghai Univ. | Guo, Rui | Harbin Inst. of Tech. |
| ▷ PMoA-131 | | Lin, Xiaohan | Harbin Inst. of Tech. |
| ⁰⁵⁶⁵ <i>Research on Distributed Flexible Job Shop Scheduling Problem for Large Equipment Manufacturing Enterprises Considering Energy Consumption</i> | | ▷ PMoA-141 | |
| | | ¹³⁸⁰ <i>基于分布估计算法的聚合过程最大完工时间优化研究</i> | |
| | | <i>Optimization of Maximum Completion Time in Polymerization Process Based on Estimation of Distribution Algorithm</i> | |

- Zhang, Su China Univ. of Petroleum
Wang, Yuhong China Univ. of Petroleum
Gao, Xiaoyong China Univ. of Petroleum, Beijing
- ▷ PMoA-142
1391 *Cooperative Multi-task Assignment of Multiple UAVs with Improved Genetic Algorithm Based on Beetle Antennae Search*
Wang, Ziye Univ. of Sci. & Tech. Beijing
Wang, Bing Tianjin Zhongwei Aerospace Data Sys. Tech. Co., Ltd
- Wei, Yali Univ. of Sci. & Tech. Beijing
Liu, Pengfei Univ. of Sci. & Tech. Beijing
Zhang, Lan Univ. of Sci. & Tech. Beijing
- ▷ PMoA-143
1524 *The Optimal Control of Grid-connected and Isolated Microgrid Using Genetic Operators Based Bat Algorithm*
Cao, Zhiao Northeastern Univ.
Wang, Jinkuan Northeastern Univ.
Yin, Chunhui Northeastern Univ. at Qinhuangdao
Han, Yinghua Northeastern Univ. at Qinhuangdao
Zhao, Qiang Northeastern Univ.
- ▷ PMoA-144
1597 *Target Assignment Optimization of Heterogeneous Sensor Networks in Urban Environment*
Chen, Chen Beijing Inst. of Tech.
Cheng, Zihao Beijing Inst. of Tech.
Xu, Wei Beijing Inst. of Tech.
- ▷ PMoA-145
1613 *Improved Simulated Annealing Algorithm for Vehicle Routing Problem with Multiple Time Windows Using Column Generation*
Tu, Siqi Beijing Univ. of Posts & Telecommunications
Li, Shurong Beijing Univ. of Posts & Telecommunications
Liu, Zhe Beijing Univ. of Posts & Telecommunications
Zeng, Derui Beijing Univ. of Posts & Telecommunications
- ▷ PMoA-146
1656 *Multi-UAV Cooperative Multi-Target Allocation Method Based on Differential Evolutionary Algorithm*
Song, Yuanjie Northwestern Polytechnical Univ.
Xi, Qingbiao Northwestern Polytechnical Univ.
Xing, Xiaojun Northwestern Polytechnical Univ.
Yang, Bing Northwestern Polytechnical Univ.
- ▷ PMoA-147
1691 *An Improved Particle Swarm Optimization Particle Filter Algorithm Based on Harmony Search*
Liu, Zhendong Yanshan Univ.
Fang, Yi Ming Yanshan Univ.
Liu, Le Yanshan Univ.
Zhao, Xiao-Dong Yanshan Univ.
- ▷ PMoA-148
1755 *稀疏A*框架下基于几何法的无人机快速避障航迹规划*
Fast Obstacle Avoidance Path Planning of UAV Based on Geometric Method in Sparse A Search Frame*
Wen, Yonglu Beijing Inst. of Tech.
Huang, Bei China Acad. of Launch Vehicle Tech.
Ma, Jun China Acad. of Launch Vehicle Tech.
Xu, Nuo China Acad. of Launched Vehicle Tech.
Li, Qiang China Acad. of Launch Vehicle Tech.
- ▷ PMoA-149
1955 *Robust Placement of Mobile Wireless Sensors in An Uncertain Water Distribution System*
Hu, Chengyu China Univ. of GeoSci.
Yan, Xuesong China Univ. of GeoSci.
- ▷ PMoA-150
1983 *An Improved Discrete Artificial Bee Colony Algorithm for the Distributed Permutation Flowshop Scheduling Problem with Preventive Maintenance*
Mao, Jiayang Shanghai Univ.
Hu, Xiaolu China Rural Tech. Development Center
Pan, Quan-Ke Shanghai Univ.
Miao, Zhonghua Shanghai Univ.
He, Chuangxin Shanghai Univ.
Tasgetiren, M. Fatih Yasar Univ.
- ▷ PMoA-151
2053 *Multi-level Evolutionary Genetic Algorithm for Solving VRPSD Problem*
Hu, Maoting Beijing Univ. of Posts & Telecommunications
Deng, Zhongliang Beijing Univ. of Posts & Telecommunications
Yang, Fuxing Beijing Univ. of Posts & Telecommunications
Liu, Xiu Beijing National Accounting Inst.
- ▷ PMoA-152
2101 *Optimization Strategy for New Energy Consumption Based on Intuitionistic Fuzzy Rough Set Theory*
Liu, Xinrui Northeastern Univ.
Zhao, Xinying Northeastern Univ.
Jin, Peng Liaoning Provincial Power Grid Corp
Lu, Tianqi State Grid Liaoning Electric Power Company Limited Economic Research Inst.
- ▷ PMoA-153
2154 *NEH-Based Heuristics for the Distributed Blocking Flowshop with Makespan Criterion*
Chen, Shuai Shanghai Univ.
Pan, Quan-Ke Shanghai Univ.
Hu, Xiaolu China Rural Tech. Development Center
Tasgetiren, M. Fatih Yasar Univ.
- ▷ PMoA-154
2209 *Multi-objective optimization of integrated energy system based on improved NSGA-II algorithm*
Mei, Rui Jiangsu Frontier Electric Tech. Co., Ltd
Wu, Tao Jiangsu Frontier Electric Tech. Co., Ltd
Geng, Deji Taizhou Power Supply Company of State Grid
Zhang, Minzi Taizhou Power Supply Company of State Grid
Liu, Yanan Jiangsu Frontier Electric Tech. Co. Ltd
Qian, Xusheng State Grid Jiangsu Electric Power Co., Ltd. Marketing Service Center
Sun, Yonghui Hohai Univ.
- ▷ PMoA-155
2344 *Optimal Scheduling of Regional Integrated Energy Systems under Chance Constraint Rules*
Guo, Xifeng Information & Control Engineering Faculty
Shenyang Jianzhu Univ.
Gao, Ye Shenyang Jianzhu Univ.
Zheng, Di Shenyang Jianzhu Univ.
Cong, Wenzhuo Linhai Cloudentropy Tech. Co., Ltd
Jiang, Shiwei Shenyang Weichuang High Tech Co., Ltd
- ▷ PMoA-156
2452 *A Power System Fault Alarm Processing Method Based on ANN and FSM*
Zhou, Boxi Department of Electric Power Marketing Training
- ▷ PMoA-157
0183 *Tension Control of Web Winding System for Speed-up Phase*
Chu, Xiaoyan Southwest Jiaotong Univ.
Nian, Xiaohong Central South Univ.
Fu, Xinran Central South Univ.
- ▷ PMoA-158
0695 *Anti-synchronization of Chaotic Systems with Uncertainty and Disturbance Using the UDE-based Control Method*
Yu, Xiaotong Qilu Univ. of Tech.
Wang, Zuoxun Qilu Univ. of Technology
Wang, Guijuan Shandong Jianzhu Univ.
- ▷ PMoA-159
0879 *Projection Synchronization of A Class of Complex Chaotic Systems with Both Uncertainty and Disturbance*
Sha, Hongsheng Qilu Univ. of Tech. (Shandong Acad. of Sci.)
Wang, Zuoxun Qilu Univ. of Technology
Wang, Guijuan Shandong Jianzhu Univ.
- ▷ PMoA-160
1916 *Robust H_∞ Control Based on Dynamic Compensation for Rectangular Descriptor Systems*
Wang, Wugui China State Shipbuilding Corporation Limited
Zhang, He China State Shipbuilding Corporation Limited
Zhang, Zhe China State Shipbuilding Corporation Limited

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- Long, Jing HUBEI ELECTRIC POWER EQUIPMENT CO. LTD
- ▷ PMoA-161
1974 频率加权模型降阶的一种新方法
A New Method for Frequency-Weighted Model Reduction
Li, Xiumin Shandong Univ. of Sci. & Tech.
Zhou, Keming Shandong Univ. of Sci. & Tech.
- ▷ PMoA-162
2004 *Fractional-order ADRC Framework for Fractional-order Parallel Systems*
Li, Zongyang Univ. of Sci. & Tech. of China
Wei, Yiheng Univ. of Sci. & Tech. of China
Wang, Jiachang Univ. of Sci. & Tech. of China
Li, Ang Univ. of Sci. & Tech. of China
Wang, Jianli Changchun Inst. of Optics, Fine Mechanics & Physics, Chinese Acad. of Sci.
Wang, Yong Univ. of Sci. & Tech. of China
- ▷ PMoA-163
2030 *Robust Eigenstructure Assignment in A Class of Second-order Linear Systems*
Liu, Yin-Dong Northeast Electric Power Univ.
Wang, Limei Shenyang Univ. of Tech.
- ▷ PMoA-164
0421 *L1 Adaptive Control for Systems with Integral Feedback Augmentation*
Zhu, Rusong China Aerodynamics Research & Development Center
- ▷ PMoA-165
0627 *Reliable Control for A Class of MIMO Nonlinear Systems with Time-Delay by Adaptive Iterative Learning Control*
Liu, Heng Qingdao Univ. of Sci. & Tech.
Wang, Yanjie Qingdao Univ. of Sci. & Tech.
Zhang, Ruikun Qingdao Univ. of Sci. & Tech.
- ▷ PMoA-166
0637 *Design of MRAC and Modified MRAC for the Turntable*
Zhao, Changchen Harbin Inst. of Tech. Control & Simulation Center
Ma, Jie Harbin Inst. of Tech.
Fan, Xuwei Shanghai Electro-mechanical Engineering Inst.
Ji, Ruihang Harbin Inst. of Tech.
- ▷ PMoA-167
0876 *A Novel On-line Value Iteration Based ADP Algorithm for Nonlinear Discrete-time Systems*
Li, Chun Northeastern Univ.
Ding, Jinliang Northeastern Univ.
Liu, Changxin Northeastern Univ.
Lewis, Frank Univ. of Texas at Arlington
- ▷ PMoA-168
0995 *Optimal Robust Control of Nonlinear Uncertain System via Off-Policy Integral Reinforcement Learning*
Wang, Xiaoyang Harbin Engineering Univ.
Ye, Xiufen Harbin Engineering Univ.
- ▷ PMoA-169
1119 *An Improved Model-Free Adaptive Control Algorithm and the Application in Aero-engines*
Liu, Xiao-Yu Dalian Univ. of Tech.
Sun, Xi-Ming Dalian Univ. of Tech.
Zhang, Yongliang BeijingPowerMachineryInst.
Wang, Xuefang Dalian Univ. of Tech.
Wen, Si-Xin Dalian Univ. of Tech.
- ▷ PMoA-170
1139 *Computationally Inexpensive Robust Adaptive Control of Nonlinear Systems*
Zhou, Yongcheng Zhuzhou CRRC Times Electric Co., Ltd
Zhou, Mingliang Chongqing Univ.
Zhao, Kai Univ. of Macau
Chen, Long Univ. of Macau
- ▷ PMoA-171
1801 遥操作系统中基于Smith预估控制的自适应控制方法
An Adaptive Control Method Based on Smith Predictive Control in Tele-operation System
Xu, Wentao Shanghai Aerospace Control Tech. Inst. Tutor
- ▷ PMoA-172
1860 *Adaptive Neural Control of Uncertain MIMO Nonlinear Systems with Time-Varying Output Constraints*
Hua, Yu Yangzhou Univ.
Zhang, Tianping Yangzhou Univ.
Xia, Meizhen College of Information Engineering, Yangzhou Univ.
Wu, Ziwen Yangzhou Univ.
- ▷ PMoA-173
1912 *A New Reinforcement Learning Algorithm Based on Counterfactual Experience Replay*
Li, Meng-Lin National Univ. of Defence Tech.
Chen, Jing National Univ. of Defense Tech.
Chen, Shaofei National Univ. of Defence Tech.
Gao, Wei National Univ. of Defense & Tech.

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- ▷ PMoB-01
1958 *Finite-time Reduced Order Synchronization of Uncertain Chaotic Systems with Input Nonlinearities via Adaptive Control*
Luo, Jing Central China Normal Univ.
Chen, Xue Hubei Univ.
Zhang, Hongrui Central China Normal Univ.
Tian, Yuan Jingchu Univ. of Tech.
- ▷ PMoB-02
2208 *Stewart Platform Vibration Isolation Control Method Based on Momentum Compensation Adaptive Filter*
Ma, Liling Beijing Inst. of Tech.
Wen, Chengxin Beijing Inst. of Tech.
Wang, Shou Kun Beijing Inst. of Tech.
- ▷ PMoB-03
2253 *Adaptive Control for A Class of Nonlinear Parabolic Systems via Strict Lyapunov Function*
He, Chao Xidian Univ.
Li, Junmin Xidian Univ.
Wang, Jiaxian Xidian Univ.
- ▷ PMoB-04
2287 *Research on Measurement Method of Ultrasonic Transit Time Based on Automatic Gain Control*
Ma, Qinyong China Coal Tech. Engineering Group Chongqing Research Inst.
Zhang, Yuanzheng China Coal Tech. Engineering Group Chongqing Research Inst.
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0154 *Quasi-time-dependent Static Output Feedback Control of 2-D Switched Systems with Mode-dependent Persistent Dwell-time*
Fan, Yougao Harbin Inst. of Tech.; Beijing Inst. of Spacecraft Environment Engineering
Wang, Mao Harbin Inst. of Tech.
Liu, Guangtong Beijing Inst. of Spacecraft Environment Engineering
Guo, Tao China Acad. of Space Tech.
Sun, Guanghui Harbin Inst. of Tech.
- ▷ PMoB-06
0466 *Admissible Consensus of Uncertain Continuous Singular Multi-agent Systems*
Li, Min Qilu Univ. of Tech.,
Ma, Shuping Shandong Univ.
Kulan, Zhumahan Changji College
- ▷ PMoB-07
0720 *A Maneuvering Penetration Guidance Law Based on Variable Structure Control*
Liang, Zhuonan Beijing Inst. of Tech.
Xiong, Fenfen Beijing Institute of Tech.
- ▷ PMoB-08
2014 基于改进型趋近律的燃料电池-超级电容复合储能系统积分滑模控制
Integrated Sliding Mode Control of Fuel Cell-Supercapacitor Hybrid Energy Storage System Based on Improved Reaching Law
Lu, Zhangyu Hunan Inst. of Engineering
- ▷ PMoB-09
2099 高压大功率脉冲放电电频率控制
Control of High Voltage and High Power Pulse Discharge Frequency

- Kang, Zhongjian China Univ. of Petroleum
Wang, Zenghong China Univ. of Petroleum
Gong, Dajian Guizhou Tongren Zhongneng Co. LTD
Zhai, Gangyi China Geological Survey, Ministry of Natural Resources
- ▷ PMoB-10
0682 *Molecular Design Based on Q-learning and Maximum Likelihood Estimation*
Liu, Ying Dalian Univ. of Tech.
Zhang, Bingfeng Dalian Univ. of Tech.
Zhao, Jun Dalian Univ. of Tech.
Wang, Wei Dalian Univ. of Tech.
Lv, Zheng Dalian Univ. of Tech.
- ▷ PMoB-11
1239 *An Improved Biology Migration Algorithm with Von Neumann Structure*
Zhu, Jing An Shan Normal Univ.
Zhang, Yong Univ. of Sci. & Tech. Liaoning
Sun, Pu Liaoning Univ. of Sci. & Tech.
- ▷ PMoB-12
1476 *Solution of Fire Coordination Scheme of Equipment System Based on Fuzzy Clustering-auction Mechanism*
Xu, Ke-Hu Army Acad. of Armored Force
Wang, Guo-Sheng Army Acad. of Armored Force
- ▷ PMoB-13
2326 *基于混合优化算法的 FCCU 主分馏塔建模方法
Modeling Method of FCCU Main Fractionator Based on Hybrid Optimization Algorithm*
Zhang, Zijia Liaoning Shihua Univ.
Su, Chengli Liaoning Shihua Univ.
Wang, Ning Zhejiang Univ.
Shi, Huiyuan Northwestern Polytechnical Univ.
- ▷ PMoB-14
0303 *Research on Speed Tracking of Asynchronous Motor Based on Fuzzy Control and Vector Control*
Liu, Qian Yanshan Univ.
Zhang, Zhuxin Yanshan Univ.
Zhao, Dingxuan Yanshan Univ.
Wang, Lixin Yanshan Univ.
Meng, Fanliang Yanshan Univ.
Liu, Chenhua Yanshan Univ.
- ▷ PMoB-15
0875 *The Trading Strategy of Inflection Point Futures Analysis Based on AFS Theory*
Liu, Mengmeng Dalian Univ. of Tech.
Liu, Xiaodong Dalian Univ. of Tech.
Jia, Wenjuan Dalian Univ. of Tech.
Du, Yabing Dalian Univ. of Tech.
- ▷ PMoB-16
0885 *Longitudinal Speed Control Based on Fuzzy Logic Controller for Trams*
Chen, Honghui Southwest Jiaotong Univ.
Xiao, Zhuang Southwest Jiaotong Univ.
Zhao, Zining Southwest Jiaotong Univ.
Sun, Pengfei Southwest Jiaotong Univ.
Wang, Qingyuan Southwest Jiaotong Univ.
- ▷ PMoB-17
1627 *Low-altitude Aircraft Interception Decision Based on Self-optimizing Fuzzy Inference*
Shi, Jinxu Beihang Univ.
Deng, Lin Beihang Univ.
Gao, Xin Beihang Univ.
Liu, Yipeng BUAA
Wu, Jiang Beihang Univ.
- ▷ PMoB-18
1726 *Unmeasurable Premise Avoidance in T-S Fuzzy Observer for BAB Model*
Zhang, Weiwei North Minzu Univ.
Pan, Juntao North Minzu Univ.
Zhang, Bai North Minzu Univ.
Shi, Hongtao North Minzu Univ.
Han, Chunsong Qiqihar Univ.
- ▷ PMoB-19
1779 *Research on Thread Tightening Torque Control Method Based on Fuzzy Algorithm*
Liu, Ronghua Beijing Inst. of Tech.
Pan, Feng Beijing Inst. of Tech.
Diao, Qi Beijing Inst. of Tech.
- ▷ PMoB-20
0106 *Impact of Model-Plant Mismatch to Minimum Variance Benchmark in Control Performance Assessment*
Chen, Ming Zhejiang Univ.
Xie, Lei Zhejiang Univ.
Su, Hongye Zhejiang Univ., China
- ▷ PMoB-21
0320 *Study on Optimization of PID for Feed-water Control System of RB Test in PWR Nuclear Power Station*
Liu, Dao Guang North China Electric Power Univ.
Wang, Gaixia Guangdong Nuclear Power
Luan, Zhenhua China Nuclear Power Engineering Co., Ltd,
Liang, Jun Zhejiang Univ.
- ▷ PMoB-22
0322 *Research and Practice of Overpressure Protection System for EPR Primary Hydrostatic Test*
Yuan, Xiaoning China Nuclear Power Engineering Co. Ltd
Zhou, Kejing China Nuclear Power Engineering Co.Ltd
Yan, Xiangqian I&C Management
Liang, Jun Zhejiang Univ.
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0782 *Inverse Control for the Coordination System of Supercritical Power Unit Based on Dynamic Fuzzy Neural Network Modeling*
Ma, Liangyu North China Electric Power Univ.
Zheng, Jiayi North China Electric Power Univ.
- ▷ PMoB-24
0809 *Distribution Adaptation Local Outlier Factor for Multimode Process Monitoring*
Xiao, Yutang East China Univ. of Sci. & Tech.
Tao, Yang East China Univ. of Sci. & Tech.
Shi, Hongbo East China Univ. of Sci. & Tech.
- ▷ PMoB-25
1076 *An Improved Simplex Search Based Quality Control Method for Medium Voltage Insulators*
Guo, Jiaming Xiamen Inst. of Tech.
Zhang, Ji Xiamen Univ. of Tech.
Zheng, Dongbin Xiamen Univ. of Tech.
Xu, Min Xiamen Univ. of Tech.
Kong, Xiangsong Xiamen Univ. of Tech.
- ▷ PMoB-26
1978 *Operating Performance Assessment Based on Performance-Relevant Independent Component Analysis for Non-Gaussian Batch Processes*
Liu, Yan Northeastern Univ.
Nie, Hang Northeastern Univ.
Wang, Fuli Northeastern Univ., China
- ▷ PMoB-27
2032 *Superheated Steam Temperature Control Optimization Using Outsourced LABVIEW DMC Controller*
Yuan, Xiao-Lei Hebei Electrical Power Research Inst.
- ▷ PMoB-28
2066 *超参数智能设定的宽度学习软测量系统
Broad Learning Soft Sensor System with Intelligent Setting of Hyper-parameters*
Lu, Ruiwei Beijing Univ. of Tech.
Chang, Peng Beijing Univ. of Technology
Wang, Pu Beijing Univ. of Tech., China
- ▷ PMoB-29
2378 *一种求解化工动态优化问题的非均匀CVP方法
A Non-uniform CVP Approach for Solving Dynamic Optimization Problems in Chemical Engineering*
Shi, Bowen Jiangnan Univ.
Yin, Yanyan Inst. of Automation, Jiangnan Univ.
Liu, Yanqing Inst. of Automation, Jiangnan Univ.
Liu, Fei Jiangnan Univ., China
- ▷ PMoB-30
0142 *Influence of Preview Distance on LMPC-Based Path Tracking*

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|------------------|--|-----------------|--|
| Bai, Guoxing | Univ. of Sci. & Tech. Beijing | Tang, Ziqi | China Aerodynamics Research & Development Center |
| Meng, Yu | Univ. of Sci. & Tech. Beijing | Huang, Xin | Northeastern Univ. |
| Gu, Qing | Univ. of Sci. & Tech. Beijing | ▷ PMoB-41 | |
| Gan, Xin | Univ. of Sci. & Tech. Beijing | 2114 | <i>Growth Stage Prediction of Haematococcus Pluvialis Based on GRNN and PNN Neural Networks</i> |
| Li, Kailun | Univ. of Sci. & Tech. Beijing | Cui, Shigang | Tianjin Univ. of Tech. & Education |
| ▷ PMoB-31 | | Yang, Mengyu | Tianjin Univ. of Tech. & Education |
| 0164 | <i>The Temperature Controller Design Based on Model Predictive Control</i> | Zhang, Yongli | Tianjin Univ. of Tech. & Education |
| Bai, Yiming | Dalian Maritime Univ. | He, Lin | Tianjin Univ. of Tech. & Education |
| Zhao, Yongsheng | Dalian Maritime Univ. | Wu, Xingli | Tianjin Univ. of Tech. & Education |
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| 0321 | <i>Deadbeat Predictive Current Control for PMSM Based on Improved Lu-engerberger Observer</i> | 2257 | <i>Temperature Prediction for Finish Entry of Hot Strip Mill Based on Data-driven</i> |
| Wang, Pengfei | Shandong Univ. of Sci. & Tech. | Hu, Bo | Univ. of Sci. & Tech. Beijing |
| Li, Na | Shandong Univ. of Sci. & Tech. | Zhang, Yongjun | Univ. of Sci. & Tech. Beijing |
| Sun, Xiujian | Shandong Univ. of Sci. & Tech. | Zhang, Fei | Univ. of Sci. & Tech. Beijing |
| Wang, Chuanjiang | Shandong Univ. of Sci. & Tech. | Guo, Qiang | Univ. of Sci. & Tech. Beijing |
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| 0459 | <i>Firepower Compatibility Control Method of Formation HPM Weapon and Shipgun Informationized Ammunition</i> | 0602 | <i>State Estimation for Induction Motor Speed-sensorless Control Based on Strong Tracking Filter</i> |
| Wang, Chong | Naval Univ. of Engineering | Zhang, Zhonglei | Tianjin Research Acad. of Electric Sci. |
| Shi, Zhangsong | Naval Univ. of Engineering | Bo, Tingting | State Grid Tianjin Electric Power Company Overhaul Company |
| ▷ PMoB-34 | | Sun, Chuanjie | Tianjin Research Inst. of Electric Sci. |
| 0884 | <i>Speed Tracking Control with Smoothing Notches Based on DMC Algorithm for Freight Trains</i> | Wang, Ziman | Tianjin Research Acad. of Electric Sci. |
| Guo, Jinsong | Southwest Jiaotong Univ. | Jiang, Yida | Tianjin Research Acad. of Electric Sci. |
| Xiao, Zhuang | Southwest Jiaotong Univ. | Yang, Jingran | Tianjin Research Acad. of Electric Sci. |
| Fang, Qian | Southwest Jiaotong Univ. | Li, Nan | Tianjin Research Acad. of Electric Sci. |
| Wang, Qingyuan | Southwest Jiaotong Univ. | ▷ PMoB-44 | |
| Sun, Pengfei | Southwest Jiaotong Univ. | 0109 | <i>Design of Multi-station Bar Code Scanning System Based on NJ Controller</i> |
| ▷ PMoB-35 | | Shi, Shiliang | Qingdao Univ. |
| 0939 | <i>Optimization of Coordinated Control System Considering On-line Correction of Coal Quality</i> | ▷ PMoB-45 | |
| Ping, Boyu | North China Electric Power Univ. | 0299 | <i>Linear Active Disturbance Rejection Control for Hydraulic Position Servo System</i> |
| Zeng, De-Liang | North China Electric Power Univ. | Wang, Lixin | Yanshan Univ. |
| Liu, Gongqing | North China Electric Power Univ. | Zhao, Dingxuan | Yanshan Univ. |
| Sun, Pengfei | North China Electric Power Univ. | Zhang, Zhuxin | Yanshan Univ. |
| Kong, Shuo | North China Electric Power Univ. | Liu, Qian | Yanshan Univ. |
| Li, Gengda | Guodian New Energy Tech. Research Inst. Co.,Ltd | Meng, Fanliang | Yanshan Univ. |
| Chen, Baowei | Guodian New Energy Tech. Research Inst. Co.,Ltd | ▷ PMoB-46 | |
| ▷ PMoB-36 | | 0327 | <i>Research on collision detection of ship' s hull outer surface curved forming double mechanical arms</i> |
| 1575 | <i>A Novel Approach to Forecast Electricity Consumption Based on Fractional Grey Model</i> | Wang, Wei | Jiangsu Univ. of Sci. & Tech. |
| Wang, Hongwei | Qinhuangdao Branch, Northeastern Univ. | Qi, Liang | Jiangsu Univ. of Sci. & Tech. |
| Yan, Ruoxuan | Northeastern Univ. | Ge, Chengwei | Jiangsu Univ. of Sci. & Tech. |
| Wang, Qianyu | Northeastern Univ. | ▷ PMoB-47 | |
| Zhang, Huajian | Northeastern Univ. | 0415 | <i>Numerical Modeling and Trajectory Tracking Experiment of Motion Control for 3D Bio-printing Device</i> |
| ▷ PMoB-37 | | Wu, Xiao-Yan | Hubei Polytechnic Univ. |
| 1633 | <i>Research on Combination Forecast of Ultra-short-term Wind Speed Based on CEEMDAN-PSO-NNCT Multi-model</i> | ▷ PMoB-48 | |
| Zhao, Zheng | North China Electric Power Univ. | 0688 | <i>Correctional Deflection Control of Rubber Tire Gantry A Direction Switch Strategy</i> |
| Nan, Honggang | North China Electric Power Univ. | Shao, En | Seu |
| Qiao, Jintao | North China Electric Power Univ. | Chen, Congyan | Southeast Univ. |
| Yu, Yuebo | North China Electric Power Univ. | Yang, Jun | Southeast Univ. |
| ▷ PMoB-38 | | Feng, Zhi | Southeast Univ. |
| 1973 | <i>MPC Control and Simulation of A Mixed Recovery Dual Channel Closed-Loop Supply Chain with Lead Time</i> | ▷ PMoB-49 | |
| Guo, Haifeng | Shenyang Ligong Univ. | 0690 | <i>The Research on Load Balance Controller of Single Roller Transmission System of Rolling Mill Based on Load Observer</i> |
| Li, Bai | Shenyang Ligong Univ. | Liang, Weizheng | North China Univ. of Sci. & Tech. |
| ▷ PMoB-39 | | Shang, Ying | North China Univ. of Sci. & Tech. |
| 2061 | <i>MPC-based Low-thrust Orbit Transfer under J2 Perturbation</i> | Zhao, Ming | North China Univ. of Sci. & Tech. |
| Shen, Haoyi | Shanghai Jiao Tong Univ. | Zhang, Ruicheng | North China Univ. of Sci. & Tech. |
| Xue, Shibei | Shanghai Jiao Tong Univ. | ▷ PMoB-50 | |
| Li, Dewei | Shanghai Jiao Tong Univ. | 0775 | <i>Coexistence of Anti-phase and Complete Synchronization in the Chen-Lee System</i> |
| ▷ PMoB-40 | | Hu, Yaping | Qilu Univ. of Tech. |
| 2063 | <i>Static Pressure Control of Wind Tunnel System Based on DMC</i> | Zhang, Yaru | Qilu Univ. of Tech. |
| Yu, Feng | Northeastern Univ. | Guo, Rongwei | Qilu Univ. of Tech. |
| Yan, Cheng | China Aerodynamics Research & Development Center | | |
| Qin, Jianhua | China Aerodynamics Research & Development Center | | |

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0930 *A Strategy of Suppressing Torque Ripple in PMSM Drive System with Open-Phase Fault*
Fang, Wenjing Univ. of Jinan
Wang, Zhonghua Univ. of Jinan
Wang, Dongxue Univ. of Jinan
Li, Rongwei Jinan Univ.
Li, Meng Univ. of Jinan
- ▷ PMoB-52
0976 *On Stability Analysis of Varying-speed Tilting Flywheel under Two Distinct Control Schemes*
Wang, Zhe Harbin Inst. of Tech.
Zhang, Yuanyuan Harbin Inst. of Tech.
Huo, Xin Harbin Inst. of Tech.
Zhao, Qing Harbin Inst. of Tech.
Zhao, Hui Harbin Inst. of Tech.
Chen, Songlin Harbin Inst. of Tech.
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1026 *Active Disturbance Rejection Sliding Mode Control for USV Path Tracking*
Fu, Mingyu Harbin Engineering Univ.
Song, Wu Harbin Engineering Univ.
Xu, Yujie Harbin Engineering Univ.
- ▷ PMoB-54
1145 *Finite-time Steering Method for Path Following Control of Surface Vehicles with Input Saturation*
Liang, Jianjian BIT
Wang, Shou Kun Beijing Inst. of Tech.
Wang, Bo Beijing Inst. of Tech.
- ▷ PMoB-55
1361 *Research on Trajectory Tracking Control for SCARA Manipulator of Tea Picking Robot*
Wang, Lin Univ. of Sci. & Tech. of China
Guan, Shengxiao Univ. of Sci. & Tech. of China
- ▷ PMoB-56
1665 *Research on Chasing Algorithm Based on Motion Control of Cutting Machine*
Zhang, Xianzhong Qingdao Univ.
Xu, Shixu Qingdao Univ.
Zhang, Shizong Qingdao Univ.
Bian, Changan Qingdao Univ.
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1750 *Modeling and Control for Gas-lubricated Systems with Linear Motors*
Sui, Yanfei Dalian Univ. of Tech.
Li, Xu Dalian Univ. of Tech.
Li, Te Dalian Univ. of Tech.
Liu, Haibo Dalian Univ. of Tech.
Wang, Yongqing Dalian Univ. of Tech.
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1967 *Design of Observer-Based Path Following Controllers for Autonomous Vehicles*
Wang, Heng Univ. of Sci. & Tech. Beijing
Zhang, Tengfei Univ. of Sci. & Tech. Beijing
Li, Qing Univ. of Sci. & Tech. Beijing
Cui, Jiarui Univ. of Sci. & Tech. Beijing
Zhang, Zhaolong Univ. of Sci. & Tech. Beijing
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2091 *Research on Travel Control Method of Field Inspection Robot*
Zhang, Bochuan Beijing Aerospace Automatic Control Inst.
Wei, Haiping Beijing Aerospace Automatic Control Inst.
Hu, Ruiquan Beijing Aerospace Automatic Control Inst.
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2103 *Research on Stepper Motor Servo Controller Based on Pan-Boolean PID Control*
Shi, Jiashun Shanghai Univ. of Tech.
Chen, Jin Shanghai Second Polytechnic Univ.
Wen, Qi Shanghai Second Polytechnic Univ.
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2109 *Modeling and Rotating Speed Control of the Sun-Tracking System with Flexible Solar Arrays*
Wang, Meng Univeisity of Chinese Acad. of Sci.
- Li, Xin Univeisity of Chinese Acad. of Sci.
Wang, Chen Univ. of Chinese Acad. of Sci.
- ▷ PMoB-62
2320 *Low Speed Control of Hybrid Excitation Synchronous Machines Based on A Novel Load Torque Sliding Mode Observer*
Liu, Bingchu Liaoning Univ. of Tech.
Guo, Dong Liaoning Univ. of Tech.
Liu, Jieqi Beijing Inst. of Space Launch Tech.
Zhao, Yueling Liaoning Univ. of Tech.
Wang, Wei Liaoning Univ. of Univ.
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2401 *High Speed Train Tracking Controller Based on Kalman Filter*
Liu, Yang Dalian Jiaotong Univ.
Uugantsetseg, Tserenbat Dalian Jiaotong Univ.
Zong, Humin National Marine Environmental Monitoring Center
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0052 *Linear Optimal Estimators for Systems with Multiplicative Noises and Time-Correlated Additive Noise*
Song, Ziyang Heilongjiang Univ.
Yang, Xiaomei Heilongjiang Univ.
Ma, Jing Heilongjiang Univ.
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0054 *Distributed Fusion Filter for Systems with Time-Correlated Multiplicative Noise*
Yang, Xiaomei Heilongjiang Univ.
Song, Ziyang Heilongjiang Univ.
Ma, Jing Heilongjiang Univ.
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0055 *Forward Modeling of Shallow Transient Electromagnetic Method under Ramp Turn-off Current*
Wang, Guangjun China Univ. of GeoSci.
Song, Menglan China Univ. of GeoSci.
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0105 *Guaranteed Cost Robust Centralized Fusion Kalman Estimators with Uncertain Noise Variances and Missing Measurements*
Yang, Chunshan Guilin Univ. of Aerospace Tech.
Ji, Jianbo Guilin Univ. of Aerospace Tech.
Chen, Shaohang Guilin Univ. of Aerospace Tech.
Wang, Xuemei Heilongjiang Univ.
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0475 *Identification of Dynamic Load on Cantilever Beam Using Green's Function Method and Regularization Technique*
Zhang, Long Shanghai Univ.
Zhu, Yiyun Shanghai Univ.
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Zhu, Xiaojin Shanghai Univ.
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0505 *Cognition-based Evaluation of Commercial Advertisement Videos Using Functional Near-Infrared Spectroscopy*
Qing, Kunqiang Pusan National Univ.
Yang, Dalin Pusan National Univ.
Huang, Ruisen Pusan National Univ.
Hong, Keum-Shik Pusan National Univ.
- ▷ PMoB-70
0569 *Particle Filter for Nonlinear Systems with Multi-Step Randomly-Delayed and Missing Measurements*
Chen, Yunqi Harbin Inst. of Tech.
Yan, Zhibin Harbin Inst. of Tech.
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0596 *Design of Intelligent Air Cooling Radiator System Based on TMS320C6748*
Du, Peige Northeastern Univ.
She, Lihuang Northeast Univ.
Wang, Yiming Northeastern Univ.
Chang, Shiyu Northeastern Univ.
Li, Houchuan Northeastern Univ.
- ▷ PMoB-72
0821 *Standard and Gaussian Particle Filters for Nonlinear System with Missing Measurements*
Zhang, Xing Harbin Inst. of Tech.
Yan, Zhibin Harbin Inst. of Tech.

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⁰⁹³² *Classification of Acoustic Emission Signals from Rail Cracks by Binary Particle Swarm Optimization Combined with SVM*
 Song, Shuzhi Harbin Inst. of Technology Harbin Engineering Univ.
 Zhang, Xin Harbin Inst. of Tech. Harbin Engineering Univ.
 Sun, Tiantian Harbin Inst. of Tech.
 Feng, Naizhang Harbin Inst. of Tech. at Weihai
 Shen, Yi Harbin Inst. of Tech.
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⁰⁹⁶⁵ *Robust Centralized Fusion Kalman Predictor for Networked Multisensor Systems with Packet Dropouts and Uncertain-variance Linearly Correlated White Noises*
 Tao, Guili Communication Univ. of Zhejiang
 Zhang, Xinghua Heilongjiang Univ. of Sci. & Tech.
 Liu, Wenqiang Zhejiang Gongshang Univ.
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⁰⁹⁹¹ *Small Target Detection Algorithm in Sea-Sky-Line Area Based on Lifting Wavelet Mutual Energy*
 Su, Li Harbin Engineering Univ.
 Suo, Yuhan Harbin Engineering Univ.
 Wen, Shihui Harbin Engineering Univ.
 Zhang, Ruizhe Harbin Engineering Univ.
 Pang, Di Harbin Engineering Univ.
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¹²⁴⁹ *An End-to-end Speech Recognition Algorithm Based on Attention Mechanism*
 Chen, Jia-Nan Northeastern Univ., China
 Gao, Shuang Northeastern Univ., Shenyang
 Sun, Hanzhe Northeastern Univ.
 Liu, Xiaohui Northeastern Univ.
 Wang, Zining Northeastern Univ.
 Zheng, Yan Northeastern
- ▷ PMoB-77
¹²⁹² *Determination of Basic Probability Assignment Based on Probability Distribution*
 Chen, Hongfeng Heilongjiang Univ.
 Wang, Xin Heilongjiang Univ.
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¹³⁰¹ *State Estimation for the System with Unknown Sensor Inputs, Asynchronous Correlated Noises and Packet Loss Compensation*
 Zhao, Xin Sys. Engineering Research Inst.,CSSC
 She, Sihong Sys. Engineering Research Inst., CSSC
 Li, Yuansheng Sys. Engineering Research Inst.,CSSC,
 Zhao, Kai Harbin Inst. of Tech.
 Song, Shenmin Harbin Inst. of Tech.
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¹³¹⁵ *Adaptive Distributed State and Input Estimation Using Retrospective-Cost-Based Information Filter*
 Wang, Hong Beihang Univ.
 Han, Liang Beihang Univ.
 Liang, Yuan Beihang Univ.
 Dong, Xiwang Beihang Univ.
 Li, Qingdong Beihang Univ.
 Ren, Zhang Beihang Univ.
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¹³³⁵ *Combined-step-size Proportionate Decorrelation NLMS Algorithm for Adaptive Echo Cancellation*
 Peng, Yi Shu Southwest Jiaotong Univ.
 Zhang, Sheng Southwest Jiaotong Univ.
 Zhang, Jia Shu Southwest Jiaotong Univ.
 Huang, Fu Yi Southwest Jiaotong Univ.
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¹³⁵⁵ *Comparative Analysis of Phase Difference Estimation Methods Based on Hilbert Transform with or without Endpoint Effect*
 Yang, Huiyue Army Logistics Univ. of PLA
 Tu, Yaqing Logistical Engineering Univ.
 Peng, Yuqin Army Logistics Univ.
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¹⁴⁹² *Research on Power Harmonic Reconstruction Using Compressed Sensing*
 Zhong, Fei Changchun Inst. of Tech.
 Liu, Yang Changchun Inst. of Tech.
- ▷ PMoB-83
¹⁵¹⁴ *Virtual Uniform Linear Iterative Adaptive Approach for Robust Adaptive Beamforming*
 Meng, Zhen Harbin Engineering Univ.
 Zhou, Weidong Harbin Engineering Univ.
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¹⁵³² *Multiple Fault Diagnosis for Hydraulic Systems Using Nearest-centroid-with-DBA and Random-Forest-based-time-series-classification*
 Peng, Zhijie Key Laboratory of Complex Sys. Safety & Control, Ministry of Education, School of Automation, Chongqing 400044
 Zhang, Ke Chongqing Univ.
 Chai, Yi Chongqing Univ.
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²⁴⁵⁵ *Contactless Power Supply Method for Rail Transit Based on Multi-parallel Primary Coils*
 Liu, Shuguang Huangshan Univ.
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¹⁶²⁶ *Low Illumination Color Image Enhancement Based on Dynamic Bistable Stochastic Resonance*
 Huang, Weichao Xian Univ. of Tech.
 Wang, Jing Xi'an Univ. of Tech.
 Jiao, Shangbin Xi'an Univ. of Tech.
 Liu, Ding Xi'an Univ. of Tech.,China
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¹⁶⁴⁶ *Odor Evaluation of Vehicle Interior Materials Based on Portable E-nose*
 Sun, Zehua Tianjin Univ.
 Cheng, Lu Tianjin Univ.
 Xu, Xuehan Tianjin Univ.
 Meng, Qing-Hao Tianjin Univ.
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¹⁶⁵⁸ *An Improved State-Independent Fusion Algorithm Based on the Federated Kalman Filters*
 Xiao, Xuan Beijing Inst. of Tech.
 Liu, Jiabin Beijing Inst. of Tech.
 Xu, Chao Beijing Inst. of Tech.
 Wang, Chen Beijing Inst. of Tech.
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¹⁷⁶⁶ *Analysis of the Design and Testing Methods of High-Speed Data Transmission Optical Link*
 Wang, Kunda 723 Inst. of CSIC
 Zhang, Shengfeng 723 Inst. of CSIC
 Zhu, Yeteng 723 Inst. of CSIC
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¹⁷⁸⁶ *P300 Recognition Based on Ensemble of SVMs - BCI Controlled Robot Contest of 2019 World Robot Conference*
 Wang, Qianwen Pattern Recognition & Intelligent Sys.
 Lu, Guanyong Wuyi Univ.
 Pei, Zian Wuyi Univ.
 Tang, Cong Wuyi Univ.
 Xu, Linfeng Wuyi Univ.
 Wang, Zhikun Wuyi Univ.
 Wang, Hongtao Wuyi Univ.
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¹⁸⁴³ *Underwater Sonar Visual Tracking with Obstacle Solving Method*
 Li, Wenge Zhe Jiang Univ.
 Liu, Meiqin Zhejiang Univ.
 Zhang, Senlin Zhejiang Univ.
 Zheng, Ronghao Zhejiang Univ.
 Lan, Jian Xi'an Jiaotong Univ.
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¹⁹³⁶ *Improved Kalman Algorithm for Vertical Height and Velocity Information Fusion of Multi-rotor Unmanned Aerial Vehicle*
 Zhang, Xin Changchun Inst. of Tech.
- ▷ PMoB-93
¹⁹⁸⁹ *Ultrasonic Gas Flowmeter Based on Dynamic Reference Waveform Cross-Correlation Algorithm*
 Ma, Qinyong China Coal Tech. Engineering Group Chongqing Research Inst.
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¹⁹⁹¹ *A New Method for Single-phase Grounding Fault Line Selection Based on Fuzzy Fusion*

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| Jiao, Shangbin | Xi'an Univ. of Tech. | Li, Jiaqi | Bowen College of Management Guilin Univ. of Tech. |
| Xiao, Ting | Xi'an Univ. of Tech. | Ye, Jun | Bowen College of Management Guilin Univ. of Tech. |
| Zhang, Qing | Xi'an Univ. of Tech. | | |
| Wang, Qing | Xi'an Univ. of Tech. | | |
| Wen, Sicheng | Xi'an Univ. of Tech. | | |
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| ¹⁹⁹² <i>Identification and Classification of Rail Damage Based on Ultrasonic Echo Signals</i> | | ⁰⁴⁸⁴ <i>Characterization of Spatial Temporal Dynamic of Brain Network in Disorder of Consciousness via Community Analysis</i> | |
| Li, Yujun | Xi'an Univ. of Tech. | Wei, Xile | Tianjin Univ. |
| Yao, Fengtao | Xi'an Univ. of Tech. | Lin, Dong | Tianjin Univ. |
| Jiao, Shangbin | Xi'an Univ. of Tech. | Cai, Lihui | Tianjin Univ. |
| Huang, Weichao | Xian Univ. of Tech. | Lu, Meili | Tianjin Univ. of Tech. & Education |
| Zhang, Qing | Xi'an Univ. of Tech. | Wang, Jiang | Tianjin Univ. |
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| ²⁰⁰² <i>FFT Angle Measurement Method Based on Sparse Line Array</i> | | ⁰⁴⁹⁸ <i>Two-Step Non-Intrusive Load Monitoring Based on High-Frequency Current Data</i> | |
| Yang, Meijuan | Chinese Flight Test Establishment | Du, Zhouye | Zhejiang Univ. |
| Li, Wenlong | Chinese Flight Test Establishment | Yan, Gangfeng | Zhejiang Univ. |
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| Zhang, Huiqing | Beijing Univ. of Tech. | Xiong, Peichen | Social Computing, Computer Sci. & Software Engineering |
| Li, Donghao | Beijing Univ. of Tech. | | |
| Xia, Zhifang | Beijing Univ. of Tech. | Wei, Ping | Ningbo Univ. |
| Wang, Zichen | Beijing Univ. of Tech. | | |
| Wang, Guangcheng | Wuhan Univ. | | |
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| Wang, Zhichun | Information Engineering | Liu, Peng | Southeast Univ. |
| Pan, Tingting | Inner Mongolia Univ. of Sci. & Tech. | Fei, Shumin | Southeast Univ. |
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| Tian, Liguo | Tianjin Univ. of Tech. & Education | Song, Jiaxin | Harbin Inst. of Tech. |
| Liu, Chuang | Tianjin Univ. of Tech. & Education | Zhao, Zhiyuan | Harbin Inst. of Tech. |
| Li, Meng | Tianjin Univ. of Tech. & Education | Xia, Hongwei | School of Astronautics |
| Liu, Yue | Tianjin Modern Vocational Tech. College | Ma, Guangcheng | Harbin Inst. of Tech. |
| Sun, Yu | Tianjin Univ. of Tech. & Education | | |
| Liu, Zilu | Tianjin Univ. of Tech. & Education | ▷ PMoB-110 | |
| ▷ PMoB-100 | | ⁰¹⁸⁰ <i>Canny Edge Detection Algorithm Based on Improved Sequential Statistical Filter</i> | |
| ²²²¹ <i>Estimating Red Noise Spectrum of Time Series Using Bayesian Inference</i> | | Liu, Zhiying | Dalian Naval Acad. |
| Yu, Lan | Yunnan Land & Resources Vocational College | Xie, Chunsi | Dalian Naval Acad. |
| | | Li, Jinjun | Dalian Naval Acad. |
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| ²²⁴⁷ <i>Research on Detection Method of UAV Based on Micro-Doppler Effect</i> | | Wu, Shuai | Dalian Naval Acad. |
| Li, Shuo | Chongqing Univ. | ▷ PMoB-111 | |
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| ²³³⁷ <i>Distributed State Estimation for Heterogeneous Mobile Sensor Networks with Varying Nodes</i> | | Tian, Bailing | Tianjin Univ. |
| Yu, Yingrong | Beijing Univ. of Aeronautics & Astronautics | ▷ PMoB-112 | |
| Ren, Jie | Beijing Aerospace Sys. Engineering Research Inst. | ⁰²⁴⁹ <i>Tightly-coupled Lidar-inertial Odometry and Mapping in Real Time</i> | |
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| Li, Qingdong | Beihang Univ. | Tian, Bailing | Tianjin Univ. |
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| ²³⁷⁴ <i>An Improved Digital Demodulation Algorithm in Low Sampling Frequency</i> | | ▷ PMoB-113 | |
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| Diao, Fengdan | Northeastern Univ. | Yang, Jie | Xian Satellite Control Center |
| Yang, Gang | Northeastern Univ. | Ma, Pengbin | Xi'an Satellite Control Center |
| Wei, Xichen | Northeastern Univ. | Ye, Nan | Xi'an Satellite Control Center |
| Wang, Zhong | Chinese Acad. of Sci. | ▷ PMoB-114 | |
| Luo, Yu | Chinese Acad. of Sci. | ⁰³³⁶ <i>Research on Height Constraint Algorithm Based on Hidden Markov Model</i> | |
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| ⁰¹³⁰ <i>Design of Big Data Compatible Storage System Based on Cloud Computing Environment</i> | | Song, Chunlei | Beijing Inst. of Tech. |
| Zhou, Min | Bowen College of Management Guilin Univ. of Tech. | Wei, Chenchen | Beijing Inst. of Tech. |
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| | | ⁰³⁴⁷ <i>A Trajectory Tracking Method Using Convex Optimization</i> | |
| | | An, Ze | Beijing Inst. of Tech. |
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| | Li, Chao | Beijing Inst. of Tech. | Liu, Lei | Huazhong Univ. of Sci. & Tech. | |
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| | He, Li | The 28th Research Inst. of China Electronics Tech. Group Corporation | 1513 | <i>Cooperative Optimal Mid-course Guidance Laws with Parameter Optimization</i> | |
| | Yan, Yongjie | The 28th Research Inst. of China Electronics Tech. Group Corporation | | Wu, Zihao | Northwestern Polytechnical Univ. |
| | Shi, Xiaozhu | The 28th Research Inst. of China Electronics Tech. Group Corporation | | Fang, Yangwang | Northwestern Polytechnical Univ. |
| | Hu, Jie | The 28th Research Inst. of China Electronics Tech. Group Corporation | | Fu, Wenxing | Northwestern Polytechnical Univ. |
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| | Wu, Jie | Beijing Inst. of Tech. | | Li, Rui | Tsinghua Univ. |
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| 0716 | <i>The Research on GPS Signal Acquisition Algorithm Based on Coherent Integration</i> | | ▷ | PMoB-128 | |
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| 0951 | <i>Research on Intelligent Vehicle Following Technology Based on UWB</i> | | | Heng, Yong | Beijing Inst. of Electronic Sys. Engineering |
| | Pan, Jingrun | Beijing Inst. of Tech. | | Han, Liang | Beihang Univ. |
| | Dou, Yigeng | Beijing Institution of Tech. | | Li, Qingdong | Beihang Univ. |
| | Huang, Xudong | Beijing Inst. of Tech. | | Ren, Zhang | Beihang Univ. |
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| | Fei, Changjiang | National Univ. of Defence Tech. | | Zhou, Siquan | Beihang Univ. |
| | Zheng, Wei | National Univ. of DefenseTech. | | Ren, Jie | Beijing Aerospace Sys. Engineering Research Inst. |
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| | He, Yufan | Xi'an Satellite Control Center | | Yang, Bing | Northwestern Polytechnical Univ. |
| | Yang, Yongan | Xi'an Satellite Control Center | | Song, Yuanjie | Northwestern Polytechnical Univ. |
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| | Wang, Chenhua | Beijing Inst. of Tech. | | Tian, Bailing | Tianjin Univ. |
| | Pan, Jingrun | Beijing Inst. of Tech. | | Li, Zhiyu | Tianjin Univ. |
| | Chen, Jiabin | Beijing Inst. of Tech. | ▷ | PMoB-133 | |
| | Song, Chunlei | Beijing Inst. of Tech. | 2176 | <i>星型四阵元GNSS抗干扰天线相位中心误差研究</i> | |
| | Li, Leilei | Beijing Inst. of Tech. | | <i>Research on Phase Center Error of Star-shaped Four-element GNSS Anti-jamming Antenna</i> | |
| ▷ | PMoB-123 | | | Cao, Kejin | Naval Univ. of Engineering |
| 1303 | <i>Monocular Visual SLAM Based on VGG Feature Point Extraction</i> | | ▷ | PMoB-134 | |
| | Dai, Xuyang | Tianjin Univ. | 2183 | <i>利用非合作航天器双特征结构的相对姿态确定方法</i> | |
| | Meng, Qing-Hao | Tianjin Univ. | | <i>Relative Attitude Determination Method of Non-Cooperative Spacecraft Using Dual Feature Structure</i> | |
| | Zheng, Wen-Jian | Tianjin Univ. | | Wang, Dayi | China Acad. of Space Tech. |
| | Zhu, Shaokai | Tianjin Univ. | | E, Wei | China Acad. of Space Tech. |
| ▷ | PMoB-124 | | | Zou, Yuanjie | China Acad. of Space Tech. |
| 1402 | <i>Decentralized Moving Horizon Estimation for Networked Navigation System with Packet Dropouts</i> | | ▷ | PMoB-135 | |
| | Liu, Shuai | Naval Aviation Univ. | 2268 | <i>基于单目序列图像的近距离非合作目标相对导航方法</i> | |
| | Zhao, Guorong | Naval Aviation Univ. | | <i>Monocular Sequential Images-Based Relative Orbit Determination Method for Near-Range Non-cooperative Target</i> | |
| | He, Yunfeng | Naval Aviation Univ. | | Hou, Bowen | National Univ. of Defense Tech. |
| | Gao, Chao | Naval Aviation Univ. | | Wang, Dayi | China Acad. of Space Tech. |
| ▷ | PMoB-125 | | | Dong, Tianshu | Beijing Inst. of Spacecraft Sys. Engineering |
| 1442 | <i>Ascent Guidance for Launch Vehicle Based on Receding Horizon Control</i> | | | Wang, Jiongqi | National Univ. of Defense Tech. |
| | He, Qianwei | School of Artificial Intelligence & Automation, Huazhong Univ. of Sci. & Tech. | | Zhou, Haiyin | National Univ. of Defense Tech. |
| | Yang, Ye | Beijing Aerospace Automatic Control Inst | | He, Zhangming | National Univ. of Defense Tech. |

- ▷ PMoB-136
0300 *Research on Active Disturbance Rejection Control Based on Position Disturbance Electro-hydraulic Servo Force*
Zhao, Dingxuan Yanshan Univ.
Meng, Fanliang Yanshan Univ.
Zhang, Zhuxin Yanshan Univ.
Wang, Lixin Yanshan Univ.
Liu, Qian Yanshan Univ.
Liu, Chenhua Yanshan Univ.
- ▷ PMoB-137
0361 *Speed Observation of High-Speed Permanent Magnet Synchronous Motor Based on Fuzzy MRAS*
He, Yanzhao Beijing Inst. of Control Engineering
Wang, Jinxia Taiyuan Univ. of Sci. & Tech.
Wang, Zhenyan Beijing Univ. of Aeronautics & Astronautics
- ▷ PMoB-138
0829 *Design of A Fast Response Coriolis Flowmeter Converter Based on Zynq*
Sun, Lijun Tianjin Univ.
Li, Chunhui Tianjin Univ.
Ma, Chunli Walsn
- ▷ PMoB-139
0888 *Design of Ultrasonic Ranging System Based on Cross-correlation Method*
Lu, Han China Univ. of GeoSci.
Li, Zhihua China Univ. of GeoSci.
Gao, Pei China Univ. of GeoSci.
- ▷ PMoB-140
1423 *Airship Pitch Control with Composite Nonlinear Feedback*
Ding, Linlin Xiamen Univ.
Lan, Weiyao Xiamen Univ.
Li, Zhibin Shandong Univ. of Sci. & Tech.
- ▷ PMoB-141
1678 *Adaptive Fuzzy Sliding Mode Control for Decoupled Uncertain Under-actuated Systems*
Zhen, Zhou Hebei Univ.
Fu, Lei Hebei Univ.
Xiao, Jinzhuang Hebei Univ.
- ▷ PMoB-142
1970 *High Precision Waveform Reproduction of Shaking Table Based on Linear Active Disturbance Rejection Control*
Wang, Sheng Central South Univ.
Lei, Qi Central South Univ.
- ▷ PMoB-143
2076 *The Way of Adjusting Balance for Single Axis Air Bear Table Based on Mathematical Modeling*
Zhong, Jiapeng HIT(Anshan) Inst. of Industrial Tech.
Meng, Xiangrui HIT
Wang, Changhong Harbin Inst. of Tech.
Zhang, Chenxu No.208 Research Inst. of China Ordnance Industries

Xia, Hongwei School of Astronautics
Zhu, Ninghua No.208 Research Inst. of China Ordnance Industries
- ▷ PMoB-144
2143 *Research and Implementation of Digital Two-dimensional Inclination Measurement System*
Liu, Yongjiang Tianjin Univ. of Tech. & Education
Yang, Genghuang Tianjin Univ. of Tech. & Education
Liu, Yi Tianjin Univ. of Tech. & Education
- ▷ PMoB-145
0080 *Path Planning of Mobile Robot Based on Improved Fuzzy Control*
Guo, Na Shandong Univ. of Tech.
Li, Caihong Shandong Univ. of Tech.
Wang, Di Shandong Univ. of Tech.
Song, Yong Shandong Univ.
Gao, Tengting Shandong Univ. of Tech.
Liu, Guoming Shandong Univ. of Tech.
- ▷ PMoB-146
0091 *Local Path Planning of Mobile Robot Based on Artificial Potential Field*
Wang, Di Shandong Univ. of Tech.
- Li, Caihong Shandong Univ. of Tech.
Guo, Na Shandong Univ. of Tech.
Song, Yong Shandong Univ. of Tech.
Gao, Tengting Shandong Univ. of Tech.
Liu, Guoming Shandong Univ. of Tech.
- ▷ PMoB-147
0251 *Finite-Time Lyapunov-based Second-Order Sliding Mode Control for A Parallel Robot for Automobile Electro-Coating Conveying*
Ye, Mengyang Jiangsu Univ.
Gao, Guoqin Jiangsu Univ.
Zhong, Junwen Jiangsu Univ.
- ▷ PMoB-148
0257 *Learning to Navigate for Mobile Robot with Continual Reinforcement Learning*
Wang, Ning Univ. of Sci. & Tech. of China
Zhang, Dingyuan Univ. of Sci. & Tech. of China
Wang, Yong Univ. of Sci. & Tech. of China
- ▷ PMoB-149
0349 *Research on Modeling and Simulation of Cable-driven Bionic Octopus Arm Based on SimMechanics*
Wu, Yan Hangzhou Dianzi Univ.
Zhang, Xuecheng Hangzhoudianzi Univ.
Wu, Qiuxuan HANGZHOU DIANZI Univ.
Zhang, Botao Hangzhou Dianzi Univ.
- ▷ PMoB-150
0450 *Research on Robot Teaching for Complex Task*
Huang, Lingtao Jilin Univ.
Yang, Jinsong Jilin Univ.
Ni, Shui China Univ. of Petroleum
Wang, Bin Jilin Univ.
Zhang, Hongyan Jilin Univ.
- ▷ PMoB-151
0616 *Optimal Path Planning Algorithm of AUV State Space Sampling Based on Improved Cost Function*
Liu, Yizhuo Harbin Engineering Univ.
Liu, Liqiang Harbin Engineering Univ.
Yu, Xiaohang Heilongjiang Experimental High School
Wang, Chenyu Harbin No.9 High School
- ▷ PMoB-152
0651 *Autonomous Positioning of Omnidirectional Mobile Robot Based on Visual Inertial Navigation*
Li, Peng Harbin Engineering Univ.
Leng, Binghan Harbin Engineering Univ.
Fu, Huixuan Harbin Engineering Univ.
- ▷ PMoB-153
0754 *Improve RRT Algorithm for Path Planning in Complex Environments*
Gao, Sheng Shenyang Inst. of Automation, Chinese Acad. of Sci.
Yi, Chunlin Shenyang Ligong Univ.
Zhang, Wei Shenyang Inst. of Automation(SIA),Chinese Acad. of Sci.(CAS)
Zhang, Zhaowei Shenyang Inst. of Automation, Chinese Acad. of Sci.
He, Xu Shenyang Inst. of Automation, Chinese Acad. of Sci., Shenyang, China
- ▷ PMoB-154
0787 *Closed-form Integration of IMU Error State Covariance for Optimization-based Visual-Inertial State Estimator*
Wang, Xingbo Beijing Inst. of Tech.
Peng, Zhihong Beijing Inst. of Tech.
Xi, Lele Beijing Inst. of Tech.
- ▷ PMoB-155
1154 *Research on Multi-robots Self-organizing Cooperative Pursuit Algorithm Based on Voronoi Graph*
Wang, Yan Beijing Inst. of Tech.
He, Guohao Beijing Inst. of Tech.
Ma, Yuedong North Automatic Control Tech. Inst.
Kong, Guojie Beijing Special Vehicle Acad.
Gong, Jianwei Beijing Inst. of Tech.
- ▷ PMoB-156
1338 *Research on 3D Virtual Fitting System Based on Unity3d*

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- Xue, Jingya Inner Mongolia Univ. ▷ PMoB-165
 Li, Guoxin Hohhot Power Supply Bureau ²¹⁸⁹ *Research on Gait Planning Algorithm of Quadrupe Robot Based on Central Pattern Generator*
 Zheng, Zhiqiang Inner Mongolia Univ. Ma, Zihan Univ. of Chinese Acad. of Sci.
- ▷ PMoB-157
¹⁴⁷⁹ *Design of Double-Body Car-Snake Hybrid Transformable Robot* Liang, Yanbing Chinese Acad. of Sci.
 Li, Guannan Tianjin Univ. Tian, Hua Univ. of Chinese Acad. of Sci.
 Zeng, Ming Tianjin Univ. ▷ PMoB-166
 Ma, Yu Tianjin Univ. ²²⁰⁴ *Motion Planning of Six-DOF Arm Robot Based on Improved DDPG Algorithm*
 Li, Qi Tianjin Univ. Li, Zhuang Beijing Inst. of Tech.
 Xu, Wenkang Tianjin Univ. Ma, Hongbin Beijing Inst. of Tech.
 Ding, Yazhe Beijing Inst. of Tech.
 Wang, Chen Beijing Inst. of Tech.
 Jin, Ying Beijing Inst. of Tech.
- ▷ PMoB-158
¹⁵⁰⁹ *Local Map Construction Based on 3D-LiDAR and Camera* ▷ PMoB-167
 Qin, Hui Beijing Inst. of Tech. ²²⁰⁵ *Line Segment Semi-direct Tracking Based on Stereo Odometry*
 Li, Jing Bit Zhengzhou Univ.
 Wang, Junzheng Beijing Inst. of Tech. Liu, Liangyu Zhengzhou Univ.
 Wu, Qingbin Beijing Inst. of Tech. Liu, Yanhong Zhengzhou Univ.
 Lei, Yang Zhengzhou Univ.
 Zhang, Fangfang Zhengzhou Univ.
- ▷ PMoB-159
¹⁵⁶⁹ *Optimal Path Planning for A Robot Shelf Picking System* ▷ PMoB-168
 Tian, Sijia Huazhong Univ. of Sci. & Tech. ²²⁴⁵ *Lidar Odometry and Mapping Based on Two-stage Feature Extraction*
 Chen, Yueyue Huazhong Univ. of Sci. & Tech. Zhang, Shuaipeng Tianjin Univ.
 Gu, Qiang Ps-micro Xiao, Liang National Univ. of Defense Tech.
 Hu, Rong Huazhong Univ. of Sci. & Tech. Nie, Yiming Acad. of Military Sci. PLA China
 Lee, Ruige Huazhong Univ. of Sci. & Tech. Dai, Bin National Univ. of Defense Tech.
 He, Ding-Xin Huazhong Univ. of Sci. & Tech. Hu, Chaofang Tianjin Univ.
- ▷ PMoB-160
¹⁶²⁸ *A Reference Path Guided RRT* Method for the Local Path Planning of UGVs* ▷ PMoB-169
 Tang, Hongju Tianjin Univ. ²³⁴⁷ *Research on Vibration Isolation Control of Six Wheel-legged Robot Based on Impedance Control*
 Zhu, Qi National Inst. of Defense Tech. Yue, Binkai Beijing Inst. of Tech.
 Shang, Erke National Innovation Inst. of Defense Tech. (NIIDT) Wang, Shou Kun Beijing Inst. of Tech.
 Dai, Bin National Univ. of Defense Tech. Chen, Zhihua Beijing Inst. of Tech.
 Hu, Chaofang Tianjin Univ. Xu, Kang Beijing Inst. of Tech.
 Wang, Junzheng Beijing Inst. of Tech.
- ▷ PMoB-161
¹⁸¹⁹ *航天器集群地面仿真试验系统设计与实现* ▷ PMoB-170
Design and Implementation of Ground Simulation Test System for Spacecraft Cluster ²³⁸⁹ *评估盲区潜在动态障碍物危险的轨迹规划算法*
 Zhang, Jierui Harbin Inst. of Tech. Trajectory Planning Algorithm Using Risk Assessment of Potential Dynamic Obstacles in Blind Areas
 Xia, Hongwei Harbin Inst. of Tech. Zhang, Yuying Tongji Univ.
 Ma, Guangcheng Harbin Inst. of Tech. Guo, Yafeng Tongji Univ.
 Yang, Chihang Chinese Acad. of Sci. Wang, Jun Tongji Univ.
 Zhang, Hao Tech. & Engineering Center for Space Utilization, Chinese Acad. of Sci.
- ▷ PMoB-162
²¹²⁸ *Flocking Control of Mobile Robots via Simulated Annealing Algorithm* ▷ PMoB-171
 Cheng, Jin Univ. of Jinan ²⁴¹⁸ *Design of 3D Reconstruction System on Quadrotor by Fusing LiDAR and Camera*
 Wang, Bin Univ. of Jinan Li, Rui Univ. of Electronics Sci. & Tech. of China
 Shi, Ying Jing Univ. of Electronic Sci. & Tech. of China
- ▷ PMoB-163
²¹⁵⁹ *Autonomous Exploration of RRT Robot Based on Seeded Region Growing* ▷ PMoB-172
²⁴³³ *UAV Path Planning Based on Shuffled Frog-Leaping Algorithm and Dubins Path*
 Tian, Zeyu Dalian Maritime Univ. Li, Xinfang Northwestern Polytechnical Univ.
 Guo, Chen Dalian Maritime Univ. Fang, Yangwang Northwestern Polytechnical Univ.
 Liu, Yi Dalian Maritime Univ. Fu, Wenxing Northwestern Polytechnical Univ.
 Cui, Tianxiao Dalian Maritime Univ.
- ▷ PMoB-164
²¹⁶⁵ *Online Self-calibration of Camera-IMU External Parameters and IMU Initialization for Stereo VI-SLAM* ▷ PMoB-173
²⁴⁶⁸ *Structure Design and Control of Mass of Fog Monitoring Robot Installed on the Highway Guardrail Based on ESP32*
 Peng, Jian Xiamen Univ. Wang, Hao Hefei Univ.
 Zhong, Xunyu Xiamen Univ. Wang, Jun Hefei Univ.
 Peng, Xiafu Xiamen Univ. Liu, Wei Hefei Univ.
 Li, Yueliang Xiamen Univ. Yao, Zhentao Hefei Univ.

Tuesday, July 28, 2020

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|---|-------------|---|-------------|
| PL4 大会报告4 Plenary Lecture 4 Chair: Wu, Min China Univ. of Geosciences (Wuhan) | 8:30-9:30 | TuA01 Regular Session: Systems Theory and Control Theory (3) Chair: Li, You College of Information & Communication Co-Chair: Li, Luyu Dalian Univ. of Tech. | 13:30-15:30 |
| PL-4 ▶ PL-4 PL4 <i>Integrated Human-Machine Smart Industrial Manufacturing System — Artificial Intelligence EMPOWERS Manufacturing</i> Qian, Feng East China Univ. of Science & Technology | 8:30-9:30 | TuA01-1 ▶ TuA01-1 1494 <i>A Comparison Study of Three Active Disturbance Rejection Methods</i> Du, Youwu Cao, Weihua She, Jinhua Fang, Mingxing China Univ. of GeoSci. China Univ. of GeoSci. Tokyo Univ. of Tech. Anhui Normal Univ. | 13:30-13:50 |
| PL5 大会报告5 Plenary Lecture 5 Chair: Hong, Yiguang Chinese Academy of Sciences | 9:30-10:30 | TuA01-2 ▶ TuA01-2 2164 <i>Risk Modeling and Assessment of Spectrum Utilization During Large-Scale Events</i> Li, You Zhu, Xuan Jiang, Shuiqiao Liu, Han College of Information & Communication Electromagnetic Spectrum Management NUDT College of Information & Communication | 13:50-14:10 |
| PL-5 ▶ PL-5 <i>Safe Autonomy with Deep Learning in Feedback Loop</i> Pappas, George J. Univ. of Pennsylvania, USA | 9:30-10:30 | TuA01-3 ▶ TuA01-3 2241 <i>Analysis of the Vertical Isolation with Inerter and Clutching Inerter Damper Considering the Rocking Effect</i> Li, Luyu Yang, Qitao Dalian Univ. of Tech. Dalian Univ. of Tech. | 14:10-14:30 |
| PD1 专题研讨会1 Panel Discussion 1 Chair: Chen, Ben M. Chinese University of Hong Kong, China | 10:50-12:20 | TuA01-4 ▶ TuA01-4 2341 <i>Well-posedness of the $M/G/1$ Queueing System with Vacations by the Cofinal Theory</i> Win, Thet Thet Xu, Houbao Beijing Inst. of Tech. Beijing Inst. of Tech. | 14:30-14:50 |
| PD-1 ▶ PD-1 从自动化到智能化: 机遇与挑战 <i>From Automation to Intelligence: Opportunities and Challenges</i> Fu, Minyue Hu, Guoqiang Qin, Huashu Zhang, Ji-Feng Zheng, Tian Univ. of Newcastle, Australia Nanyang Technological Univ., Singapore Academy of Mathematics and Systems Science, CAS, China Academy of Mathematics and Systems Science, CAS, China Columbia Univ., USA | 10:50-12:20 | TuA01-5 ▶ TuA01-5 2428 <i>一种基于力矩分析的失效卫星接触消旋方法</i> <i>A Contact Detumbling Method for Disabled Satellites Based on Torque Analyzing</i> Duan, Wenjie Zhang, Haibo Xu, Shuanfeng China Acad. of Space Tech. Beijing Inst. of Control Engineering Beijing Inst. of Control Engineering | 14:50-15:10 |
| DF1 发展论坛1 Development Forum 1 Chair: Zhang, Weidong Shanghai Jiaotong Univ., China | 13:30-15:00 | TuA01-6 ▶ TuA01-6 2469 <i>Observability Analysis for Target Tracking Systems with Bearing Measurements</i> Liang, Chenxu Xue, Wenchao Fang, Hai-Tao Chinese Acad. of Sci. Chinese Acad. of Sci. Chinese Acad. of Sci. | 15:10-15:30 |
| DF-1 海洋机器人 <i>Ocean Robots</i> Yu, Jiancheng Yu, Junzhi Luo, Jun Zhang, Weidong Shenyang Institute of Automation, CAS, China Peking University, China Chongqing University, China Shanghai Jiaotong Univ., China | 13:30-15:30 | TuA02 Regular Session: Nonlinear Systems and Control (4) Chair: Liu, Da-Yan INSA Centre Val De Loire Co-Chair: Jiang, Tiantian Beijing Inst. of Control Engineering | 13:30-15:30 |
| DF2 发展论坛2 Development Forum 2 Chair: Zhang, Weidong Shanghai Jiaotong Univ., China | 15:20-16:50 | TuA02-1 ▶ TuA02-1 1016 <i>Observer Design for A Generalized Class of Nonlinear Dynamical Systems with Input</i> Wang, Lifei Boutat, Driss Liu, Da-Yan INSA Centre Val De Loire INSA Centre Val De Loire INSA Centre Val De Loire | 13:30-13:50 |
| DF-2 协作机器人 <i>Cooperative Robots</i> Huang, Qiang Huang, Panfeng Fu, Yili Fang, Hao Beijing Institute of Technology, China Northwestern Polytechnical University, China Harbin University of Technology, China Beijing Institute of Technology, China | 15:50-17:50 | TuA02-2 ▶ TuA02-2 1376 <i>Sampled-data Stabilization for A Class of Nonlinear Uncertain Systems Based on Characteristic Models</i> Jiang, Tiantian Beijing Inst. of Control Engineering | 13:50-14:10 |
| DF3 发展论坛3 Development Forum 3 Chair: Pan, Quan Northwestern Polytechnical Univ., China Chair: Li, Shaoyuan Shanghai Jiaotong Univ., China | 14:00-16:00 | TuA02-3 ▶ TuA02-3 1452 <i>Novel Synchronization Criteria of Chaotic Lur'e Systems with Time-varying Delayed Feedback PD Control</i> Tao, Run-Zhe Zhang, Ying Pang, Lei Chao Shangguan, Xing-Chen Li, Dan-Yun China Univ. of GeoSci.(Wuhan) China Univ. of GeoSci. China Univ. of GeoSci. School of Automation, China Univ. of GeoSci. China Univ. of GeoSci. | 14:10-14:30 |
| DF-3 自动化教育改革与发展 <i>Education Reform and Development on Automation</i> Lu, Renquan Hu, Qinglei Gao, Song Zhao, Yu-Xin Cao, Weihua Liu, Zhunga Guangdong Univ. of Tech., China Beihang University, China Xi'an Technological University, China Harbin Engineering University, China China University of Geosciences, Wuhan, China Northwestern Polytechnical University, China | 13:30-15:30 | TuA02-4 ▶ TuA02-4 1518 <i>Adaptive Control for Stochastic Nonlinear Systems with Quantized States</i> Zhao, Mingyuan Zheng, Shiqi China Univ. of GeoSci., Wuhan China Univ. of GeoSci., Wu Han | 14:30-14:50 |

Final Program

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| Liu, Feng | China Univ. of GeoSci. | Jiang, Aipeng | Hangzhou Dianzi Univ. |
| Chen, Xiang | China Univ. of GeoSci. (Wuhan) | Jiang, Enhui | School of Automation, Hangzhou Dianzi Univ. |
| Sun, Yuan | The Univ. of Adelaide | Xiao, Yangjian | Hangzhou Dianzi Univ. |
| ▶ TuA02-5 | 14:50–15:10 | Li, Fengxu | Hangzhou Dianzi Univ. |
| ¹⁵⁴¹ <i>Parallel Formation Tracking for Nonholonomic Vehicles in Some Constrained Conditions</i> | | Jiang, Jiaji | Hangzhou Dianzi Univ. |
| Wang, Mingxiang | Peking Univ. | ▶ TuA04-4 | 14:30–14:50 |
| Zhai, Jinpeng | Peking Univ. | ¹⁴⁴³ <i>Joint Task Planning of UAV Groups Using Improved Multi-objective Lion Swarm Optimization</i> | |
| Geng, Zhiyong | Peking Univ. | Dong, Shengwei | Shandong Univ. |
| Peng, Xiuhui | Peking Univ. | Jiang, Mingyan | Shandong Univ. |
| ▶ TuA02-6 | 15:10–15:30 | ▶ TuA04-5 | 14:50–15:10 |
| ¹⁵⁴² <i>Effect of Attitude Control on A Periodic Orbit Maintenance of Solar Sail in Earth-Moon Circular Restricted 3-Body Problem</i> | | ⁰⁰³⁴ <i>Maximum Principle for Partially Observed Optimal Control Problems of Stochastic Systems with Discrete and Distributed Delays</i> | |
| Wu, Liping | Nanjing Univ. of Sci. & Tech. | Zhang, Qixia | Univ. of Jinan |
| Guo, Yu | Nanjing Univ. of Sci. & Tech. | TuA05 | 13:30–15:30 |
| TuA03 | 13:30–15:30 | Regular Session: Optimization and Scheduling (3) | |
| Regular Session: Stochastic Systems (1) | | Chair: Li, Ning | Shanghai Jiao Tong Univ. |
| Chair: Shi, Jingtao | Shandong Univ. | Co-Chair: Liu, Ming | Nanjing Univ. of Sci. & Tech. |
| Co-Chair: Hou, Ting | Shandong Normal Univ. | ▶ TuA05-1 | 13:30–13:50 |
| ▶ TuA03-1 | 13:30–13:50 | ¹³⁵⁸ <i>Requirement Demonstration of Marine Enforcement Ships Based on Task-Capability</i> | |
| ⁰⁷⁹⁰ <i>Delay-dependent Exponential Stability Analysis for Stochastic Systems with Mixed Delays</i> | | Li, Xiaojun | Tianjin Research Inst. for Water Transport Engineering M.O.T |
| Xiao, Chunjie | Shandong Univ. of Sci. & Tech. | ▶ TuA05-2 | 13:50–14:10 |
| Hou, Ting | Shandong Normal Univ. | ¹⁴¹⁶ <i>Mission Re-planning for Agile Earth Observation Satellite Using Adaptive Mutation Genetic Algorithm</i> | |
| ▶ TuA03-2 | 13:50–14:10 | Gao, Xinzhou | Harbin Inst. of Tech. |
| ⁰⁸⁹⁹ <i>Stochastic Bifurcation Analysis of A Generalized Van Der Pol Oscillator with Fractional Derivative under Gaussian White Noise</i> | | Qu, Yaobin | Shanghai Inst. of Satellite Engineering |
| Li, Yajie | Henan Univ. of Urban Construction | Li, Wenbo | Beijing Inst. of Control Engineering |
| Lan, Qi-Xun | Henan Univ. of Urban Construction | Ma, Guangfu | Harbin Inst. of Tech. |
| ▶ TuA03-3 | 14:10–14:30 | Han, Peng | Harbin Inst. of Tech. |
| ¹⁰⁹³ <i>A Linear Quadratic Stackelberg Game of Backward Stochastic Differential Equations with Partial Information</i> | | ▶ TuA05-3 | 14:10–14:30 |
| Zheng, Yueyang | Shandong Univ. | ¹⁵⁷⁰ <i>Dynamic Economic Dispatch for CHP-MG System Based on Mixed Logical Dynamic Model and MPC Method</i> | |
| Shi, Jingtao | Shandong Univ. | Chen, Ke | Southeast Univ. |
| ▶ TuA03-4 | 14:30–14:50 | Li, Yiguo | Southeast Univ. |
| ¹²⁹⁵ <i>Verification Theorem of Stochastic Recursive Optimal Control Problems with Mixed Delay for Viscosity Solutions</i> | | Zhang, Junli | Southeast Univ. |
| Meng, Weijun | Shandong Univ. | Chen, Songlin | Nanjing NARI-Relays Electric Co., Ltd |
| Shi, Jingtao | Shandong Univ. | Niu, Honghai | Electrical Research Inst. |
| ▶ TuA03-5 | 14:50–15:10 | Li, Bing | Nanjing NARI-relays Electric Co.Ltd |
| ¹⁶²⁴ <i>Optimal Filtering for Two-Dimensional Nonlinear System with Stochastic Parameter Matrix in Measurement</i> | | ▶ TuA05-4 | 14:30–14:50 |
| Wang, Chengbin | Qufu Normal University | ¹⁵⁸⁴ <i>A Reinforcement Learning Algorithm Based on Neural Network for Economic Dispatch</i> | |
| Kong, Shulan | Qufu Normal Univ. | Yu, Liying | Shanghai Jiao Tong Univ. |
| ▶ TuA03-6 | 15:10–15:30 | Li, Ning | Shanghai Jiao Tong Univ. |
| ²⁴⁷⁵ <i>A Unified Algorithm for Deterministic and Stochastic Frameworks of System Identification with Binary Observations</i> | | ▶ TuA05-5 | 14:50–15:10 |
| Wang, Ying | Chinese Acad. of Sci. | ¹⁸⁹³ <i>Adaptive Path Planning Method Based on A*-PSO Algorithm</i> | |
| Zhao, Yanlong | Chinese Acad. of Sci. | Liu, Jiaxin | Shandong Univ. |
| Zhang, Ji-Feng | Chinese Acad. of Sci. | Liu, Zhili | Shandong Experimental Middle School |
| TuA04 | 13:30–15:30 | Liang, Huijun | Shandong Univ. |
| Regular Session: Optimal Control (1) | | ▶ TuA05-6 | 15:10–15:30 |
| Chair: Jiang, Aipeng | Hangzhou Dianzi Univ. | ¹⁹⁶⁹ <i>Optimization of Epidemic-logistics Network Considering the Original Emergency Facilities</i> | |
| Co-Chair: Zhang, Qixia | Univ. of Jinan | Liu, Ming | Nanjing Univ. of Sci. & Tech. |
| ▶ TuA04-1 | 13:30–13:50 | Lian, Jingxuan | Nanjing Univ. of Sci. & Tech. |
| ⁰²⁰⁰ <i>Optimal Control of LED Light Intensity in A Plant Factory</i> | | TuA06 | 13:30–15:30 |
| Xu, Dan | Chinese Acad. of Agriculture Sci. | Regular Session: Adaptive Control and Learning Control (1) | |
| ▶ TuA04-2 | 13:50–14:10 | Chair: Liu, Xiangbin | Beijing Jiaotong Univ. |
| ⁰⁴⁸¹ <i>Singular Optimal Control of A Generalized Backward Doubly Stochastic System with General Jumps</i> | | Co-Chair: Wang, Min | South China Univ. of Tech. |
| Peng, Yi | Changsha Normal Univ. | ▶ TuA06-1 | 13:30–13:50 |
| Wu, Jinbiao | Central South Univ. | ⁰¹⁹¹ <i>Tracking Control for Robot Manipulator Based on Deterministic Learning and Event-Triggered Mechanism</i> | |
| Zhu, Rongren | Central South Univ. | Wang, Min | South China Univ. of Tech. |
| ▶ TuA04-3 | 14:10–14:30 | Hu, Rui | South China Univ. of Tech. |
| ⁰⁹¹⁹ <i>一种基于参数自整定的智能阀门定位器控制算法研究</i> | | Xin, Xuegang | South China Univ. of Tech. |
| <i>Research on Control Algorithm of Intelligent Valve Positioner Based on Parameter Self-tuning</i> | | Shi, Haotian | South China Univ. of Tech. |
| Cheng, Qian | Hangzhou Dianzi Univ. | ▶ TuA06-2 | 13:50–14:10 |
| Liu, Zhifeng | Zoucheng Boda Electric Power Automation Engineering Co., Ltd | ⁰⁶²⁴ <i>Robust Static Output Feedback Based ILC Design with Finite Frequency Specifications for Batch Processes with Time-varying Uncertainties</i> | |
| | | Hao, Shoulin | Dalian Univ. of Tech. |

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|--|--|------|---|--|---|
| Liu, Tao | Dalian Univ. of Tech. | 0151 | <i>Robust Tracking Guidance for Zero Propellant Maneuver, Part 1: Background and Approach</i> | Zhang, Sheng | China Aerodynamics Research & Development Center |
| Paszke, Wojciech | Univ. of Zielona Gora | | | | |
| ▶ TuA06-3 | 14:10–14:30 | | | | |
| 0670 <i>Iterative Learning Scheme Design for A Class of Discrete-time Nonlinear Systems</i> | | | | | |
| Zhang, Yamiao | Xi'an Jiaotong Univ. | | | Zhao, Qian | National Univ. of Defense Tech. |
| Liu, Jian | Xidian Univ. | | | Huang, Haibing | National Univ. of Defense Tech. |
| Yuan, Yuan | Xi An Satellite Control Center | | | Tang, Guojin | National Univ. of Defense Tech. |
| ▶ TuA06-4 | 14:30–14:50 | | | ▶ TuA08-2 | 13:50–14:10 |
| 0784 <i>A Dueling-Double-DQN Controller for Magnetic Levitation Ball System</i> | | 0152 | <i>Robust Tracking Guidance for Zero Propellant Maneuver, Part 2: Simulation Verification</i> | Zhang, Sheng | China Aerodynamics Research & Development Center |
| Yang, Yefeng | Harbin Inst. of Tech. | | | | |
| Ban, Xiao Jun | Harbin Inst. of Tech. | | | Zhao, Qian | National Univ. of Defense Tech. |
| Huang, Xianlin | Harbin Inst. of Tech. | | | Huang, Haibing | National Univ. of Defense Tech. |
| Shan, Chenghao | Harbin Engineering Univ. | | | Tang, Guojin | National Univ. of Defense Tech. |
| ▶ TuA06-5 | 14:50–15:10 | | | ▶ TuA08-3 | 14:10–14:30 |
| 0793 <i>Model-Free Control Using Nonlinear Extended State Observer and Non-singular Fast Terminal Sliding Mode for Quadrotor Position and Attitude</i> | | 0382 | <i>Flocking Control under Virtual Leader of USVs with Obstacle Avoidance</i> | Wang, Yuanhui | Harbin Engineering Univ. |
| He, Dingxin | Nanjing Univ. of Sci. & Tech. | | | Xie, Weijie | College of Automation, Harbin Engineering Univ., Harbin |
| Wang, Haoping | Nanjing Univ. of Sci. & Tech. | | | Zhang, Xiaoyun | Harbin Marine Boiler & Turbine Research Inst., Harbin 150078, China |
| Tian, Yang | Nanjing Univ. of Sci. & Tech. | | | ▶ TuA08-4 | 14:30–14:50 |
| ▶ TuA06-6 | 15:10–15:30 | | | 0701 <i>Study on Elevator Absolute Positioning System Based on Magnetic Grid Ruler</i> | |
| 0841 <i>Robust Immersion and Invariance Adaptive Control of Linear Motor System</i> | | | | Sui, Feng | Shanghai STEP Elevator Components Company Ltd |
| Wang, Kangjun | Beijing Jiaotong Univ. | | | Wang, Shun | Shandong Univ. |
| Liu, Xiangbin | Beijing Jiaotong Univ. | | | Wang, Xiuhong | Shandong College of Electronic Tech. |
| Liu, Jiaqi | Beijing Jiaotong Univ. | | | Guo, Qingqiang | Shandong Univ. |
| TuA07 | 13:30–15:30 | | | ▶ TuA08-5 | 14:50–15:10 |
| Regular Session: Process Control (1) | | | | 1018 <i>Feedforward-Feedback Based Satellite Attitude Trajectory Tracking Control</i> | |
| Chair: Zheng, Ying | Huazhong Univ. of Sci. & Tech. | | | Cao, Yongkui | Space Engineering Univ. |
| Co-Chair: Zhao, Zhong | Beijing Univ. of Chemical Tech. | | | Liao, Yurong | Space Engineering Univ. |
| ▶ TuA07-1 | 13:30–13:50 | | | Ni, Shuyan | Space Engineering Univ. |
| 0031 <i>Design of Oil Injection Information Management System</i> | | | | ▶ TuA08-6 | 15:10–15:30 |
| Wang, Pengcheng | Qingdao Univ. | | | 1086 <i>Dual Time-Scale Control of Flexible Manipulator Based on Double-Power Sliding Mode and LQR</i> | |
| ▶ TuA07-2 | 13:50–14:10 | | | Sun, Xiaotong | Southwest Jiaotong Univ. |
| 0283 <i>MPC Controller Performance Evaluation and Self-healing Based on ISE-TSV Index and LMI</i> | | | | Ma, Lei | Southwest Jiaotong Univ. |
| Zhang, Hao | Beijing Univ. of Chemical Tech. | | | Li, Mengxue | Southwest Jiaotong Univ. |
| Zhao, Zhong | Beijing Univ. of Chemical Tech. | | | Sun, Yongkui | Southwest Jiaotong Univ. |
| ▶ TuA07-3 | 14:10–14:30 | | | Liu, Haoran | Southwest Jiaotong Univ. |
| 0290 <i>Real-time Estimation Application of Thermal Efficiency of Delayed Coking Furnace</i> | | | | TuA09 | 13:30–15:30 |
| Huang, Jian | Beijing Univ. of Chemical Tech. | | | Regular Session: Signal Processing and Information Fusion (3) | |
| Zhao, Zhong | Beijing Univ. of Chemical Tech. | | | Chair: Yi, Guo-Sheng | School of Electrical & Automation Eng., Tianjin Univ. |
| ▶ TuA07-4 | 14:30–14:50 | | | Co-Chair: Fu, Shan | SJTU |
| 0725 <i>Parity Space-based Model Mismatch Detection for Linear Discrete Time-invariant Systems with Unknown Disturbances</i> | | | | ▶ TuA09-1 | 13:30–13:50 |
| Tang, Yi | Huazhong Univ. of Sci. & Tech. | | | 0747 <i>EEG Sub-band Abnormality of Early-stage Parkinson's Disease with Mild Cognitive Impairment</i> | |
| Ling, Dan | Zhengzhou Univ. of Light Industry | | | Wan, Jinting | Tianjin Univ. |
| Zhang, Hong | Huazhong Univ. of Sci. & Tech. | | | Yi, Guo-Sheng | School of Electrical & Automation Eng., Tianjin Univ. |
| Wang, Yanwei | Wuhan Inst. of Tech. | | | Wang, Jiang | Tianjin Univ. |
| Zheng, Ying | Huazhong Univ. of Sci. & Tech. | | | ▶ TuA09-2 | 13:50–14:10 |
| ▶ TuA07-5 | 14:50–15:10 | | | 0836 <i>Ultrasound Array Scanning for Oil-gas-water Three-phase Flow Measurement Based on Plane Wave</i> | |
| 0950 <i>Interval Prediction Model of Blast Furnace Gas Utilization Rate Based on Multi-time-scale</i> | | | | Tian, Sheng | Tianjin Univ. |
| Yin, Feng | China Univ. of GeoSci. Wuhan | | | Tan, Chao | Tianjin Univ. |
| An, Jianqi | China Univ. of GeoSci. | | | Dong, Feng | Tianjin Univ. |
| Shen, Xiaoling | China Univ. of GeoSci., Wuhan | | | ▶ TuA09-3 | 14:10–14:30 |
| Terano, Takao | Tokyo Inst. of Tech. | | | 0903 <i>A Computational Method for Time Cognitive Bias Simulation: Undue Attention Attributed to Information Sequences</i> | |
| ▶ TuA07-6 | 15:10–15:30 | | | Zhou, Yutong | Shanghai Jiao Tong Univ. |
| 0952 <i>Multivariate Time Delay Estimation Based on Dynamic Characteristic Analytics</i> | | | | Yin, Tangwen | Shanghai Jiao Tong Univ. |
| Chen, Xu | Zhejiang Univ. | | | Ren, Bingxuan | Shanghai Jiao Tong Univ. |
| Zhao, Chunhui | Zhejiang Univ. | | | Fu, Shan | SJTU |
| TuA08 | 13:30–15:30 | | | ▶ TuA09-4 | 14:30–14:50 |
| Regular Session: Motion Control (1) | | | | 0937 <i>Method of Unknown Target Risk Analysis and Threat Assessment for</i> | |
| Chair: Ma, Lei | Southwest Jiaotong Univ. | | | | |
| Co-Chair: Zhang, Sheng | China Aerodynamics Research & Development Center | | | | |
| ▶ TuA08-1 | 13:30–13:50 | | | | |

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| UUVs | | | | | |
| Yu, Dan | Harbin Engineering Univ. | Liu, Xiaoqin | | Liaoning Shihua Univ. | |
| Wang, Hongjian | Harbin Engineering Univ. | Li, Qiang | | LIAONING SHIHUA Univ. | |
| Yuan, Jianya | Harbin Engineering Univ. | Li, Chengyu | | LIAONING SHIHUA Univ. | |
| He, Juyi | Harbin Engineering Univ. | Liu, Jinsong | | Shanxi Jingneng Lv Lin Electric Power Co.,Ltd | |
| ▶ TuA09-5 | 14:50–15:10 | ▶ TuA11-3 | 14:10–14:30 | | |
| ⁰⁹⁸⁷ A General Framework of Knowledge-Based Coaching System with Application in Table Tennis Training | | ⁰³⁷⁸ Wind Turbine Fault Detection and Diagnosis Using LSTM Neural Network | | | |
| Yan, Weichao | Southern Univ. of Sci. & Tech. | Yang, Taoran | | North China Electric Power Univ. | |
| Ma, Hao | Southern Univ. of Sci. & Tech. | Teng, Jing | | North China Electric Power Univ. | |
| Yang, Zaiyue | Southern Univ. of Sci. & Tech. | Li, Changling | | North China Electric Power Univ. | |
| ▶ TuA09-6 | 15:10–15:30 | Feng, Yizhan | | North China Electric Power Univ. | |
| ¹⁰⁰⁸ An Accurate and Efficient Frequency Estimation Algorithm by Using FFT and DTFT | | ▶ TuA11-4 | 14:30–14:50 | | |
| Liu, Jinyu | Dalian Polytechnic Univ. | ⁰⁵⁹³ Fault Detection and Isolation Based on Unknown Input Set-membership Observer | | | |
| Fan, Lei | Dalian Polytechnic Univ. | Fan, Xiaomin | | Shanghai Univ. of Engineering Sci. | |
| Jin, Jiyu | Dalian Polytechnic Univ. | Zhang, Wei | | Shanghai Univ. of Engineering Sci. | |
| Wang, Xinzhe | Dalian Polytechnic Univ. | Li, Xiaohang | | Shanghai Univ. of Engineering Sci. | |
| Xing, Jun | Dalian Polytechnic Univ. | ▶ TuA11-5 | 14:50–15:10 | | |
| He, Wenbo | Dalian Polytechnic Univ. | ⁰⁷³⁰ Derivative Failure of Compressor Station Analysis Based on Hawkes Process | | | |
| TuA10 | 13:30–15:30 | Zhang, Lu-Ning | China Univ. of Petroleum, Beijing Campus (CUP) | | |
| Regular Session: Navigation and Guidance (1) | | Zuo, Xin | China Univ. of Petroleum(Beijing) | | |
| Chair: Li, Yong | China Acad. of Space Thecnology | Liu, Jian-Wei | China Univ. of Petroleum, Beijing Campus (CUP) | | |
| Co-Chair: Wang, Yu | Beijing Inst. of Control Engineering | ▶ TuA11-6 | 15:10–15:30 | | |
| ▶ TuA10-1 | 13:30–13:50 | ¹⁵⁵² Attitude Fault Tolerant Control for Satellite under Actuator Fault and Inertial Sensor Fault | | | |
| ⁰²⁸⁴ Simultaneous Orbit Determination for Spacecraft and Its Target Asteroid from Onboard Relative Measurements | | Yang, Wenbo | | Shanghai Polytechnic Univ. | |
| Li, Yong | China Acad. of Space Thecnology | Wang, Jianjun | | Shanghai Polytechnic Univ. | |
| ▶ TuA10-2 | 13:50–14:10 | Li, Shaoyuan | | Shanghai Jiao Tong Univ. | |
| ⁰³⁸³ Study on Particle Filter Based Terrain Aided Navigation under the Ultra-low Resolution Map of the Arctic | | Wang, Liandong | | Shanghai Polytechnic Univ. | |
| Liu, Yanji | Shanghai Maritime Univ. | TuA12 | 13:30–15:30 | | |
| Zhang, Guichen | Shanghai Maritime Univ. | Regular Session: Intelligent Robots (3) | | | |
| Chen, Mengwei | Shanghai Maritime Univ. | Chair: Ren, Xuemei | | Beijing Inst. of Tech. | |
| Lu, Run | Shang Hai Maritime Univ. | Co-Chair: Meng, Qing-Hao | | Tianjin Univ. | |
| ▶ TuA10-3 | 14:10–14:30 | ▶ TuA12-1 | 13:30–13:50 | | |
| ⁰⁴⁴¹ 多航天器四维协同轨迹优化方法 | | ¹⁰¹³ Balance Control of A Wheeled Hopping Robot | | | |
| A 4-D Coordinated Trajectory Optimization Method for Multi-spacecraft | | Zhang, Lufeng | | Beijing Inst. of Tech. | |
| Wang, Yu | Beijing Inst. of Control Engineering | Ren, Xuemei | | Beijing Inst. of Tech. | |
| Li, Xindong | China Acad. of Space Tech. | Guo, Qing | | Beijing Inst. of Tech. | |
| Zou, Kui | Beijing Inst. of Control Engineering | ▶ TuA12-2 | 13:50–14:10 | | |
| ▶ TuA10-4 | 14:30–14:50 | ¹⁰²⁵ UAV-based Odor Source Localization in Multi-Building Environments Using Simulated Annealing Algorithm | | | |
| ⁰⁵⁷² Selection Method of the Matching Area of Underwater Gravity-Aided Inertial Navigation Based on Vector Characteristics | | Yang, Zizhen | | Tianjin Univ. | |
| Li, Yueting | Beijing Inst. of Tech. | Jing, Tao | | Tianjin Univ. | |
| Wang, Chenglong | Beijing Inst. of Tech. | Meng, Qing-Hao | | Tianjin Univ. | |
| Zhang, Jia | BeiJing Inst. of Techonlogy | ▶ TuA12-3 | 14:10–14:30 | | |
| Wang, Bo | Beijing Inst. of Tech. | ¹⁰³⁹ Application of C# Based Host Computer in Path Tracking of Unmanned Clean Vehicle | | | |
| ▶ TuA10-5 | 14:50–15:10 | Wang, Shujing | | Shanghai Univ. | |
| ⁰⁶⁶⁹ An Extended State Observer Based Guidance Method for Maneuvering Target Interception | | Wang, Dongdong | | ShangHai Univ. | |
| Zhong, Zenan | Harbin Engineering Univ. | Miao, Zhonghua | | Shanghai Univ. | |
| Zhao, Enjiao | Harbin Engineering Univ. | Hu, Xiaolu | | China Rural Tech. Development Center | |
| Zheng, Xin | Shanghai Acad. of Spaceflight Tech. | ▶ TuA12-4 | 14:30–14:50 | | |
| Zhao, Xin Hua | Harbin Engineering Univ. | ¹⁰⁶¹ An Aero-olfactory-Effect Elimination Algorithm for Rotor UAV Based Gas Distribution Mapping | | | |
| ▶ TuA10-6 | 15:10–15:30 | Jing, Tao | | Tianjin Univ. | |
| ⁰⁸⁰⁰ A Two-stage Extended Kalman Filter for Autonomous Navigation of Two-satellite System | | Wang, Jiaying | | Tianjin Univ. | |
| Zhou, Bochao | China Acad. of Space Tech. | Meng, Qing-Hao | | Tianjin Univ. | |
| Li, Yong | China Acad. of Space Thecnology | ▶ TuA12-5 | 14:50–15:10 | | |
| TuA11 | 13:30–15:30 | ¹¹¹⁰ A Heuristic Path Planning Algorithm for Inspection Robots | | | |
| Regular Session: Fault Diagnosis and Reliable Control (1) | | Tang, Qichao | | Southwest Jiaotong Univ. | |
| Chair: Yang, Wenbo | Shanghai Polytechnic Univ. | Ma, Lei | | Southwest Jiaotong Univ. | |
| Co-Chair: Yang, Ning | Shandong Inst. of Space Electronic Tech. | Sun, Yongkui | | Southwest Jiaotong Univ. | |
| ▶ TuA11-1 | 13:30–13:50 | Yang, Guang | | Southwest Jiaotong Univ. | |
| ⁰⁰⁰¹ Fault Diagnosis of Electro-mechanical Actuator Based on Deep Learning Network | | Li, Zhongfa | | Southwest Jiaotong Univ. | |
| Yang, Ning | Shandong Inst. of Space Electronic Tech. | Zhao, Duo | | Southwest Jiaotong Univ. | |
| ▶ TuA11-2 | 13:50–14:10 | ▶ TuA12-6 | 15:10–15:30 | | |
| ⁰⁰²⁰ Research of Cable Grounding Fault Location Based on Wireless Sensor Networks | | ¹³⁶⁸ A Fast Indoor Positioning Method for Mobile Robot | | | |
| | | Wang, Yuqiang | | South China Univ. of Tech. | |
| | | Tan, Minzhe | | South China Univ. of Tech. | |

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| TuA13 | 13:30–15:30 | | |
| Regular Session: Control of Network Systems and Networked Control Systems (3) | | | |
| Chair: Yu, Yao | | Univ. of Sci. & Tech. Beijing | |
| Co-Chair: Chen, Dongyan | | Harbin Univ. of Sci. & Tech. | |
| ▶ TuA13-1 | 13:30–13:50 | | |
| ¹⁸²⁹ <i>Event-triggered Fixed-time Phase Agreement of Kuramoto-oscillators with Switching Topologies</i> | | | |
| Sun, Jia | | Univ. of Sci. & Tech. Beijing | |
| Yu, Yao | | Univ. of Sci. & Tech. Beijing | |
| Wang, Yuanda | | Southeast Univ. | |
| Liu, Jian | | Univ. of Sci. & Tech. Beijing | |
| Sun, Changyin | | Southeast Univ. | |
| ▶ TuA13-2 | 13:50–14:10 | | |
| ²⁰²⁷ <i>Development of OPC UA Based Centralized Server Fieldbus Data High Efficiency Transmit Architecture</i> | | | |
| Huang, Gang | | Shandong Chaoyue Data Control Electronics Co.,Ltd | |
| Yu, Zhilou | | Shandong Chaoyue Data Control Electronics Co.,Ltd | |
| Chen, Naikuo | | Shandong Chaoyue Data Control Electronics Co.,Ltd | |
| Feng, Guirong | | Shandong Chaoyue Data Control Electronics Co.,Ltd | |
| Zhang, Lei | | Shandong Chaoyue Data Control Electronics Co.,Ltd | |
| Hu, Boyi | | Shandong Chaoyue Data Control Electronics Co.,Ltd | |
| Qin, Shiming | | Shandong Chaoyue Data Control Electronics Co.,Ltd | |
| ▶ TuA13-3 | 14:10–14:30 | | |
| ²²³⁹ <i>State Estimation for Discrete Neural Networks with False Data Injection Attacks under Weighted Try-Once-Discard Protocol</i> | | | |
| Hou, Dianhong | | Harbin Univ. of Sci. & Tech. | |
| Chen, Dongyan | | Harbin Univ. of Sci. & Tech. | |
| Yang, Ning | | Harbin Univ. of Sci. & Tech. | |
| ▶ TuA13-4 | 14:30–14:50 | | |
| ²³⁰⁵ <i>Synchronization Analysis of Bilateral Teleoperation System with Quantization and Saturation</i> | | | |
| Gong, Yunli | | Hebei Univ. of Sci. & Tech. | |
| Wu, Bing | | Hebei Polytechnic Inst. | |
| Ji, Yude | | Hebei Univ. of Sci. & Tech. | |
| ▶ TuA13-5 | 14:50–15:10 | | |
| ²³⁵⁰ <i>A Dynamic Event-Triggered Method to Distributed Filtering with Switching Nonlinearities and Redundant Channels</i> | | | |
| Li, Zehao | | Harbin Univ. of Sci. & Tech. | |
| Hu, Jun | | Harbin Univ. of Sci. & Tech. | |
| Chen, Dongyan | | Harbin Univ. of Sci. & Tech. | |
| ▶ TuA13-6 | 15:10–15:30 | | |
| ⁰⁵⁶¹ <i>React-Native Based Mobile App for Online Experimentation</i> | | | |
| Zhou, Xingwei | | Wuhan Univ. | |
| Hu, Wenshan | | Wuhan Univ. | |
| Liu, Guoping | | Univ. of South Wales | |
| TuA14 | 13:30–15:30 | | |
| Regular Session: Multi-Agent Systems and Distributed Control (3) | | | |
| Chair: Li, Dewei | | Shanghai Jiao Tong Univ. | |
| Co-Chair: Xia, Weiguo | | Dalian Univ. of Tech. | |
| ▶ TuA14-1 | 13:30–13:50 | | |
| ¹⁵⁶⁷ <i>Consensus of Discrete-time Multi-agent Systems with Unbounded Time-varying Delays</i> | | | |
| Zong, Siheng | | Southeast Univ. | |
| Tian, Yuping | | Hangzhou Dianzi Univ. | |
| ▶ TuA14-2 | 13:50–14:10 | | |
| ¹⁵⁷⁷ <i>Primal-dual Algorithm for Distributed Optimization with Local Domains on Signed Networks</i> | | | |
| Ren, Xiaoxing | | Shanghai Jiao Tong Univ. | |
| Li, Dewei | | Shanghai Jiao Tong Univ. | |
| Xi, Yugeng | | Shanghai Jiaotong Univ. | |
| Pan, Lulu | | Shanghai Jiao Tong Univ. | |
| Shao, Haibin | | Shanghai Jiao Tong Univ. | |
| ▶ TuA14-3 | 14:10–14:30 | | |
| ¹⁵⁸¹ <i>The H-inf Distributed Formation and Tracking Control for High-order Multi-agent Systems</i> | | | |
| Han, Nani | | Longdong Univ. | |
| Zheng, Yilin | | Qingyang Vocational & Technical College | |
| ▶ TuA14-4 | 14:30–14:50 | | |
| ¹⁵⁹⁴ <i>Mean-square Consensus Condition for Linear Multi-agent Systems over Random Delay Network</i> | | | |
| Li, Junhui | | South China Univ. of Tech. | |
| Su, Weizhou | | South China Univ. of Tech. | |
| Lu, Jieying | | South China Univ. of Tech. | |
| ▶ TuA14-5 | 14:50–15:10 | | |
| ¹⁷³⁰ <i>Distributed Formation of Autonomous Underwater Vehicles with Unreliable Switching Topologies and Transmission Delays</i> | | | |
| Ma, Chao | | Univ. of Sci. & Tech. Beijing | |
| Wu, Wei | | Inst. of Automation, Chinese Acad. of Sci. | |
| Ji, Yidao | | Univ. of Sci. & Tech. Beijing | |
| Fu, Hang | | Univ. of Sci. & Tech. Beijing | |
| TuA15 | 13:30–15:30 | | |
| Regular Session: Smart Grid (1) | | | |
| Chair: Xiao, Wendong | | Univ. of Sci. & Tech. Beijing, Beijing, China | |
| Co-Chair: Yang, Rui | | Xi'an Jiaotong-Liverpool Univ. | |
| ▶ TuA15-1 | 13:30–13:50 | | |
| ¹⁷⁴¹ <i>Mode Identification of Broad-band Oscillation Signal Based on Improved VMD Method</i> | | | |
| Lin, Sisi | | Central South Univ. | |
| Liu, Fang | | Central South Univ. | |
| Aliona, Dreglea | | Russian Acad. of Sci. | |
| ▶ TuA15-2 | 13:50–14:10 | | |
| ¹⁷⁹⁹ <i>基于虚拟电容有限时间直流微电网分布式二级控制 Distributed Secondary Control of DC Micro-grid Based on the Virtual Capacitor in Finite-time</i> | | | |
| Zhang, Lei | | Ningxia Univ. | |
| Pan, Huan | | Ningxia Univ. | |
| Guo, Ling | | Northwest Minzu Univ. | |
| ▶ TuA15-3 | 14:10–14:30 | | |
| ²²²⁴ <i>Grid Forming Control with Inertial and Virtual Admittance Characteristics for Grid-tied Converters</i> | | | |
| Zhao, Yuwei | | Xi'an Univ. of Posts & Telecommunications | |
| Zhang, Weiyi | | Xian Univ. of Posts & Telecommunications | |
| Wang, Wenqing | | Xi'an Univ. of Posts & Telecommunications | |
| Pan, Zhigang | | XUPT | |
| ▶ TuA15-4 | 14:30–14:50 | | |
| ²²³¹ <i>Adaptive Dynamic Programming Approach for Micro-grid Optimal Energy Transmission Scheduling</i> | | | |
| Li, Jinglin | | Univ. of Sci. & Tech. Beijing | |
| Chen, Shuai | | Univ. of Sci. & Tech. Beijing | |
| Jiang, Chengpeng | | Univ. of Sci. & Tech. Beijing | |
| Liu, Fen | | Univ. of Sci. & Tech. Beijing | |
| Xiao, Wendong | | Univ. of Sci. & Tech. Beijing, Beijing, China | |
| ▶ TuA15-5 | 14:50–15:10 | | |
| ²³⁶⁴ <i>JITL Based Fault Detection of DAB DC-DC Converter with EPS Control</i> | | | |
| Zhang, Yu | | Shandong Univ. of Sci. & Tech. | |
| Yang, Rui | | Xi'an Jiaotong-Liverpool Univ. | |
| Wen, Huiqing | | Xi'an Jiaotong-liverpool Univ. | |
| ▶ TuA15-6 | 15:10–15:30 | | |
| ²⁴⁵⁹ <i>Research of SSO and Suppression Method of Distributed Micro Grid in Offshore Oil Platform</i> | | | |
| Yu, Qingguang | | Tsinghua Univ. | |
| Liu, Yuming | | Tsinghua Univ. | |
| Li, Daxing | | State Grid Jibei Company | |
| Jiang, Zhicheng | | Tsinghua Univ. | |
| Long, Gaoxiang | | Tsinghua Univ. | |
| TuA16 | 13:30–15:30 | | |
| Regular Session: Vehicle Control and Transportation Systems (3) | | | |
| Chair: Zhang, Jiangyan | | Dalian Minzu Univ. | |
| Co-Chair: Zhao, Yuan | | Tianjin Normal Univ. | |
| ▶ TuA16-1 | 13:30–13:50 | | |
| ⁰⁹⁴¹ <i>UUV Path Planning for Collision Avoidance Based on Ant Colony Algorithm</i> | | | |
| He, Juyi | | Harbin Engineering Univ. | |
| Wang, Hongjian | | Harbin Engineering Univ. | |

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| | Liu, Chaowei Yu, Dan | Harbin Engineering Univ. Harbin Engineering Univ. | ▶ TuA17-6 1783 | <i>Active Disturbance Rejection Control Tuned by Whale Optimization Algorithm for Electric Loading System</i> | 15:10–15:30 |
| ▶ TuA16-2 | | 13:50–14:10 | | Chang, Jiaqi Shen, Dongkai Chen, Dong | Beihang Univ. Beihang Univ. Aviation Military Representative Office of Army Equipment Department in Chengdu |
| 1374 | <i>Robust Adaptive Tracking Control for Range-Extended Electric Vehicles</i> | Shandong Jiaotong Univ. Shandong Jiaotong Univ. Shandong Jiaotong Univ. Shandong Jiaotong Univ. | | | |
| | Guo, Junyu Yang, Jun Zhang, Qinglin Wang, Jian Li, Fangyuan | | | | |
| ▶ TuA16-3 | | 14:10–14:30 | | | |
| 1560 | <i>Distributed Resilient Platoon Control of Vehicular Cyber Physical Systems Subject to DoS Attacks</i> | Tianjin Normal Univ. Dalian Maritime Univ. The Chinese Univ. of Hong Kong Research Group of Augmented Machine Interaction (AMI) | ▶ TuA18-1 1283 | <i>Population Counting Method Based on Semantic Perceptual Network</i> | 13:30–15:30 |
| | Zhao, Yuan Liu, Zhongchang Wong, Wingshing Chen, Chung Shue | | | Yang, Kai Liu, Ting Chu, Zhigang Sun, Lupeng | Northeastern Univ. Nankai Univ. 13:30–13:50 Zhengzhou Normal Univ. Zhengzhou Normal Univ. Zhengzhou Normal Univ. Zhengzhou Normal Univ. |
| ▶ TuA16-4 | | 14:30–14:50 | ▶ TuA18-2 1385 | <i>Marker Location Method Based on Improved LINE2D</i> | 13:50–14:10 |
| 1572 | <i>Energy Optimization Design of HEV with Adaptive Cruise Control (Extended Abstract)</i> | Dalian Minzu Univ. Sophia Univ. | | Liu, Jitong Gong, Jun Qian, Xiao-Long Wang, Yiping | Northeastern Univ. Northeastern Univ. Northeastern Univ. Northeastern Univ. |
| | Zhang, Jiangyan Xu, Fuguo | | | | |
| ▶ TuA16-5 | | 14:50–15:10 | ▶ TuA18-3 1444 | <i>An Online SEMG Motion Classification Framework for Tele-operating the Robotic Hand</i> | 14:10–14:30 |
| 1680 | <i>Dynamic Vehicle Routing Problem Considering Customer Satisfaction</i> | Northeastern Univ. Northeastern Univ. Northeastern Univ. Northeastern Univ. | | Zheng, Haosi Yokoi, Hiroshi Jiang, Yinlai Duan, Feng | Nankai Univ. The Univ. of Electro-Communication The Univ. of Electro-Communication College of Artificial Intelligence, Nankai Univ. |
| | Pan, Jing Huang, Min Zhang, Qihuan Yu, Yang | | | | |
| ▶ TuA16-6 | | 15:10–15:30 | ▶ TuA18-4 1482 | <i>A Safe Landing Site Selection Method of UAVs Based on LiDAR Point Clouds</i> | 14:30–14:50 |
| 1788 | <i>Finite-time Platoon Control of Connected and Automated Vehicles with Mismatched Disturbances</i> | Hunan Univ. Tsinghua Univ. Tsinghua Univ. Hunan Univ. Hunan Univ. Tsinghua Univ. | | Yan, Lu Qi, Juntong Wang, Mingming Wu, Chong Xin, Ji | Tianjin Univ. Tianjin Univ. Tianjin Univ. EFY Intelligent Control China Helicopter Research & Development Inst. |
| | Wang, Xuan Bian, Yougang Qin, Xiaohui Hu, Manjiang Xu, Biao Xie, Guotao | | | | |
| TuA17 13:30–15:30 | | | TuA18-5 14:50–15:10 | | |
| Regular Session: Aircraft Control (3) | | | 1525 | | |
| Chair: Yao, Hong Space Engineering Univ. | | | <i>A Framework for Cervical Cell EDF Image Segmentation Using Similarity Measure</i> | | |
| Co-Chair: Sun, Weixuan China Acad. of Launch Vehicle Tech. | | | Li, Yu Kun Northeastern Univ. | | |
| ▶ TuA17-1 | | 13:30–13:50 | Wang, Qing Northeastern Univ. | | |
| 1350 | <i>基于动力学等价机械臂的空间机器人控制与仿真实现</i> | | Fan, Xiaonan Northeastern Univ. | | |
| | <i>Space Robot Control and Simulation Based on Dynamically Equivalent Manipulator</i> | | Xu, Xiaoxue Northeastern Univ. | | |
| | Yao, Hong Space Engineering Univ. | | Gong, Jun Northeastern Univ. | | |
| | Ren, Yuan Space Engineering Univ. | | ▶ TuA18-6 15:10–15:30 | | |
| | Wang, Weijie Space Engineering Univ. | | 1591 | | |
| ▶ TuA17-2 | | 13:50–14:10 | <i>Zipper Classification and Defect Detection Based on Computer Vision</i> | | |
| 1399 | <i>Research on Thrust Vector/Aerodynamics Compound Control Method for Solid Rocket Based on Proportion Mixing</i> | | Zhang, Xincheng Northeastern Univ. | | |
| | Sun, Weixuan China Acad. of Launch Vehicle Tech. | | Wang, Qing Northeastern Univ. | | |
| ▶ TuA17-3 | | 14:10–14:30 | Liu, Jitong Northeastern Univ. | | |
| 1473 | <i>Fixed Time Robust Trajectory Tracking Control for Quadrotor UAV with Disturbances</i> | | Liu, Zongao Northeastern Univ. | | |
| | Shao, Shikai Hebei Univ. of Sci. & Tech. | | Gong, Jun Northeastern Univ. | | |
| | Wang, Shu Hebei Univ. of Sci. & Tech. | | TuA19 13:30–15:30 | | |
| | Zhao, Yuanjie Hebei Univ. of Sci. & Tech. | | Regular Session: Neural Networks and Deep Learning (3) | | |
| ▶ TuA17-4 | | 14:30–14:50 | Chair: Zhang, Ximing Northwestern Polytechnical Univ. | | |
| 1566 | <i>Modeling and Simulation of Parallel TBCC Aircraft/Engine Integrated System</i> | | Co-Chair: Yu, Ziyang Northeastern Univ. | | |
| | Yu, Hua Feng Northwestern Polytechnical Univ. | | ▶ TuA19-1 13:30–13:50 | | |
| | Guo, Yingqing Northwestern Polytechnical Univ. | | 0947 | | |
| ▶ TuA17-5 | | 14:50–15:10 | <i>DeepFake Face Image Detection Based on Improved VGG Convolutional Neural Network</i> | | |
| 1609 | <i>ESO-based Trajectory Tracking Control for Quadrotor UAV with Prescribed Performance</i> | | Chang, Xu Shandong Univ. of Political Sci. & Law | | |
| | Cao, Chengyu Central South Univ. | | Wu, Jian Shandong Univ. of Political Sci. & Law | | |
| | Wei, Caisheng Central South Univ. | | Yang, Tongfeng Shandong Univ. of Political Sci. & Law | | |
| | Liao, Yuxin Central South Univ. | | Feng, Guorui Shandong Univ. of Political Sci. & Law | | |
| | Li, Jun Central South Univ. | | ▶ TuA19-2 13:50–14:10 | | |
| | Luo, Shibin Central South Univ. | | 0975 | | |
| | | | <i>Research on Automatic Music Recommendation Algorithm Based on Facial Micro-expression Recognition</i> | | |
| | | | Yu, Ziyang Northeastern Univ. | | |
| | | | Zhao, Mengda Northeastern Univ. | | |
| | | | Wu, Yilin Northeastern Univ. | | |
| | | | Liu, Peizhuo Northeastern Univ. | | |

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| Chen, Hexu | Northeastern Univ. | | |
| ▶ TuA19-3 | 14:10–14:30 | | |
| ¹⁰¹⁴ <i>Spatial Transformer Part-based Siamese Visual Tracking</i> | | | |
| Zhang, Ximing | Northwestern Polytechnical Univ. | | |
| Lei, Hao | CAS | | |
| Ma, Yilong | Xi'an Inst. of Optics & Precision Mechanics, Chinese Acad. of Sci. | | |
| Luo, Shujuan | Northwestern Polytechnical Univ. | | |
| Fan, Xuewu | Xi'an Inst. of Optics & Precision Mechanics of CAS | | |
| ▶ TuA19-4 | 14:30–14:50 | | |
| ¹¹⁸⁶ <i>Image Reconstruction for Ultrasonic Tomography Using Multi-channel Convolutional Neural Network</i> | | | |
| Lyu, Jiashuo | Tianjin Univ. | | |
| Tan, Chao | Tianjin Univ. | | |
| Dong, Feng | Tianjin Univ. | | |
| ▶ TuA19-5 | 14:50–15:10 | | |
| ¹³³³ <i>A Fire Monitoring and Alarm System Based on YOLOv3 with OHEM</i> | | | |
| Shi, Fei | Hohai Univ. | | |
| Qian, Huimin | Hohai Univ. | | |
| Chen, Wei | Hohai Univ. | | |
| Huang, Min | Hohei Univ. | | |
| Wan, Zechen | Hohai Univ. | | |
| TuA20 | 13:30–15:30 | | |
| Invited Session: Quantum Control and Learning (1) | | | |
| Organizer: Xue, Shibei | Shanghai Jiao Tong Univ. | | |
| Organizer: Ma, Shan | Central South Univ. | | |
| Organizer: Zhang, Jun | UM-SJTU Joint Inst. | | |
| Chair: Xue, Shibei | Shanghai Jiao Tong Univ. | | |
| Co-Chair: Ma, Shan | Central South Univ. | | |
| ▶ TuA20-1 | 13:30–13:50 | | |
| ⁰⁰⁷³ <i>Quantum Dialogue Bases on Non-maximally Entangled Bell States</i> | | | |
| Li, Huayang | Soochow Univ. | | |
| Jiang, Min | Soochow Univ. | | |
| ▶ TuA20-2 | 13:50–14:10 | | |
| ⁰¹³⁵ 随机开放量子系统的开关控制 <i>Switch Control of Stochastic Open Quantum Systems</i> | | | |
| Cong, Shuang | Univ. of Sci. & Tech. of China | | |
| Dong, Zhixiang | Univ. of Sci. & Tech. of China | | |
| ▶ TuA20-3 | 14:10–14:30 | | |
| ⁰³²³ <i>Covariance Functions for Quantum Linear System Driven by Few Photons</i> | | | |
| Dong, Zhiyuan | Harbin Inst. of Tech. (Shenzhen) | | |
| Zhang, Guofeng | The Hong Kong Polytechnic Univ. | | |
| Wu, Ai-Guo | Harbin Inst. of Tech. Shenzhen Graduate School | | |
| ▶ TuA20-4 | 14:30–14:50 | | |
| ⁰⁴¹¹ 基于光学微腔的磁场探测 <i>Magnetic Field Detection Based on Optical Microcavity</i> | | | |
| Guan, Jianqing | Tsinghua Univ. | | |
| Yang, Zhenning | Tsinghua Univ. | | |
| Zhang, Wanzhe | Tsinghua Univ. | | |
| Zhang, Jing | Tsinghua Univ. | | |
| ▶ TuA20-5 | 14:50–15:10 | | |
| ⁰⁴²³ <i>Quantum-inspired Entanglement Language Model for Question Answering</i> | | | |
| Chen, Yiwei | Zhejiang Univ. | | |
| Pan, Yu | Chinese Acad. of Sci. | | |
| Li, Ming | Zhejiang Univ. | | |
| ▶ TuA20-6 | 15:10–15:30 | | |
| ⁰⁴⁷¹ <i>Self-to-self Transitions in Open Quantum Systems: the Origin and Solutions</i> | | | |
| Gao, Fang | Guangxi Univ. | | |
| Wang, Yaoxiong | Inst. of Intelligent Machines, Chinese Acad. of Sci. | | |
| Gao, Qing | Beihang Univ. | | |
| Cao, Dewen | Anqing Normal Univ. | | |
| Shuang, Feng | Guangxi Univ. | | |
| TuA21 | 13:30–15:30 | | |
| Invited Session: Hybrid Logical Systems (1) | | | |
| Organizer: Li, Haitao | Shandong Normal Univ. | | |
| Organizer: Lu, Jianquan | Southeast Univ. | | |
| Organizer: Liu, Yang | Zhejiang Normal Univ. | | |
| Organizer: Wu, Yuhu | Dalian Univ. of Tech. | | |
| Chair: Li, Haitao | Shandong Normal Univ. | | |
| Co-Chair: Lu, Jianquan | Southeast Univ. | | |
| ▶ TuA21-1 | 13:30–13:50 | | |
| ⁰⁵³⁵ <i>Observability Analysis of Composite Automata Based on Algebraic State Space</i> | | | |
| Zhou, Yingrui | Nankai Univ. | | |
| Chen, Zengqiang | Nankai Univ. | | |
| Zhang, Zhipeng | Tianjin Univ. of Tech. | | |
| Liu, Zhongxin | Nankai Univ. | | |
| ▶ TuA21-2 | 13:50–14:10 | | |
| ⁰⁶³⁰ <i>On Periodic Detectability of Probabilistic Boolean Networks</i> | | | |
| Yang, Wendong | Tianjin Univ. of Sci. & Tech. | | |
| Han, Xiaoguang | Tianjin Univ. of Sci. & Tech. | | |
| Li, Zhiwu | Xidian Univ. | | |
| Chen, Zengqiang | Nankai Univ. | | |
| ▶ TuA21-3 | 14:10–14:30 | | |
| ⁰⁶³¹ <i>Matrix Approach to Verify Initial-State Opacity of Discrete-Event Systems</i> | | | |
| Zhang, Jiahui | Tianjin Univ. of Sci. & Tech. | | |
| Han, Xiaoguang | Tianjin Univ. of Sci. & Tech. | | |
| Li, Zhiwu | Xidian Univ. | | |
| Chen, Zengqiang | Nankai Univ. | | |
| ▶ TuA21-4 | 14:30–14:50 | | |
| ⁰⁷⁰² <i>Input/output-to-state Stability of Nonlinear Systems with Average-delay Impulses</i> | | | |
| Jiang, Bangxin | Southeast Univ. | | |
| Lu, Jianquan | Southeast Univ. | | |
| ▶ TuA21-5 | 14:50–15:10 | | |
| ⁰⁸⁵⁶ <i>Pinning Control of Boolean Networks via Injection Mode</i> | | | |
| Liu, Zequn | Acad. of Mathematics & Sys. Sci. Chinese Acad. of Sci. | | |
| Cheng, Daizhan | Chinese Acad. of Sci. | | |
| Liu, Jiang | Bradley Univ. | | |
| TuA22 | 13:30–15:30 | | |
| Invited Session: Nonlinear Control and Optimization | | | |
| Organizer: Tang, Yutao | Beijing Univ. of Posts & Telecommunications | | |
| Chair: Tang, Yutao | Beijing Univ. of Posts & Telecommunications | | |
| Co-Chair: Li, Ranran | Northeastern Univ. | | |
| ▶ TuA22-1 | 13:30–13:50 | | |
| ¹⁰⁶⁸ <i>IPOP with Majorization Ordered Objectives: A (0,1)-Matrix Completion Approach</i> | | | |
| Mo, Yanfang | The Hong Kong Univ. of Sci. & Tech. | | |
| Chen, Wei | KTH | | |
| You, Keyou | Tsinghua Univ. | | |
| Qiu, Li | Hong Kong Univ. of Sci. & Tech. | | |
| ▶ TuA22-2 | 13:50–14:10 | | |
| ¹¹⁸¹ <i>Distributed Optimal Control Law Design for A Class of Higher Order Linear Multi-agent Systems and Its Application to Euler-Lagrangian Systems</i> | | | |
| Li, Ranran | Northeastern Univ. | | |
| ▶ TuA22-3 | 14:10–14:30 | | |
| ¹²⁷⁵ <i>Unsupervised Domain Adaptation with Conditional Distribution Alignment</i> | | | |
| Cao, Kai | Chinese Acad. of Sci. | | |
| Tu, Zhipeng | AMSS | | |
| Ming, Yang | Acad. of Mathematics & Sys. Sci., Chinese Acad. of Sci. | | |
| Hong, Yiguang | Chinese Acad. of Sci. | | |
| ▶ TuA22-4 | 14:30–14:50 | | |
| ¹⁴¹² <i>Team-Based Blanket Coverage Control for Heterogeneous Multi-agent Systems</i> | | | |
| Yang, Kaiqi | Harbin Inst. of Tech. | | |
| Wang, Xiaoli | Harbin Inst. of Tech. at Weihai | | |
| ▶ TuA22-5 | 14:50–15:10 | | |
| ¹⁶⁹⁴ <i>Distributed Optimization for Multi-agent Systems with Unknown High-</i> | | | |

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| <i>frequency-gain Signs</i> | | | | | |
| | Tang, Yutao | Beijing Univ. of Posts & Telecommunications | | Xia, Hao | Dalian Univ. of Tech. |
| | | | | Du, Xian | Dalian Univ. of Tech. |
| | | | | Wu, Yuhu | Dalian Univ. of Tech. |
| TuA23 | | | 13:30–15:30 | | |
| Invited Session: Swarm Intelligence Technology for Distributed Space-based Systems | | | | | |
| | Organizer: Zhou, Qingrui | China Acad. of Space Tech. | | ► TuA24-3 | 14:10–14:30 |
| | Chair: Zhou, Qingrui | China Acad. of Space Tech. | | ¹⁴⁶⁰ <i>Completely Model-free Approximate Optimal Tracking Control for Continuous-time Nonlinear Systems</i> | |
| | Co-Chair: Wu, Xiande | Harbin Engineering Univ. | | Xu, Zhenhui | Sophia Univ. |
| | | | | Shen, Tielong | Sophia Univ. |
| ► TuA23-1 | | | 13:30–13:50 | ► TuA24-4 | 14:30–14:50 |
| ¹⁰³⁵ <i>Neighbor Search Based Allocation Method for Satellite Swarm with Large Scale Tasks</i> | | | | ¹⁴⁶⁷ <i>A Maximum Likelihood State Estimator for Probabilistic Boolean Control Networks</i> | |
| | Han, Zhao | Harbin Engineering Univ. | | Toyoda, Mitsuru | Tokyo Metropolitan Univ. |
| | Wu, Xiande | Harbin Engineering Univ. | | Wu, Yuhu | Dalian Univ. of Tech. |
| | Feng, Haolong | Harbin Engineering Univ. | | ► TuA24-5 | 14:50–15:10 |
| | Cui, Hongtao | Harbin Engineering Univ. | | ¹⁵⁴⁸ <i>Optimization of Fleet Management for Automated Shared Taxis with Policy-based Reinforcement Learning</i> | |
| | Yang, Yuheng | Harbin Engineering Univ. | | Inuzuka, Shota | Sophia Univ. |
| | Zhang, Zehua | Harbin Engineering Univ. | | Shen, Tielong | Sophia Univ. |
| | Liu, Chaozhen | CASC | | | |
| | Hao, Yong | Harbin Engineering Univ. | | TuA25 | 13:30–15:30 |
| ► TuA23-2 | | | 13:50–14:10 | Invited Session: Multi-agent Optimization Theory and Applications | |
| ¹⁰⁴⁰ <i>An Online Virtual Maintenance Path Search Method Based on A* Algorithm</i> | | | | Organizer: Yang, Shaofu | Southeast Univ. |
| | Li, Jun | MARINE DESIGN & RESEARCH Inst. OF CHINA | | Organizer: Li, Huaqing | Southwest Univ. |
| | Feng, Haolong | Harbin Engineering Univ. | | Chair: Yang, Shaofu | Southeast Univ. |
| | Bai, Wenbin | Harbin Engineering Univ. | | Co-Chair: Li, Huaqing | Southwest Univ. |
| | Wu, Wei | Harbin Engineering Univ. | | ► TuA25-1 | 13:30–13:50 |
| | Xu, Tianhao | Harbin Engineering Univ. | | ¹⁴²⁹ <i>A Discontinuous Projection-Based Algorithm for Solving Distributed Optimization with Linear Equation Constraints</i> | |
| | Wu, Xiande | Harbin Engineering Univ. | | Shi, Xinli | Southeast Univ. |
| | Wang, Zhaolong | Shanghai Aerospace Control Tech. | | Wen, Guanghui | Southeast Univ. |
| | Hao, Yong | Harbin Engineering Univ. | | Yu, Xinghuo | RMIT Univ. |
| ► TuA23-3 | | | 14:10–14:30 | ► TuA25-2 | 13:50–14:10 |
| ¹²²⁸ <i>Real-time Model Identification for Beam Stabilization in Laser Pointing Systems</i> | | | | ¹⁴³⁷ <i>Distributed Time-varying Algorithm for Extended Monotropic Optimization</i> | |
| | Wang, Xiaochu | China Academy of Space Tech. | | Zeng, Xianlin | Beijing Inst. of Tech. |
| | Sun, Changhao | China Acad. of Space Tech. | | Lei, Jinlong | Tongji Univ. |
| | Wang, Lei | China Acad. of Space Tech. | | Chen, Jie | Beijing Inst. of Tech. |
| | Wang, Sijia | China Acad. of Space Tech. | | ► TuA25-3 | 14:10–14:30 |
| | Zhou, Qingrui | China Acad. of Space Tech. | | ¹⁶⁹⁹ <i>A Heavy-Ball Distributed Optimization Algorithm over Digraphs with Row-Stochastic Matrices</i> | |
| ► TuA23-4 | | | 14:30–14:50 | Shen, Yang | Southeast Univ. |
| ¹³⁶⁰ <i>Stochastic Learning for the SET K-COVER Problem in Heterogeneous Wireless Sensor Networks</i> | | | | Yang, Shaofu | Southeast Univ. |
| | Sun, Changhao | China Acad. of Space Tech. | | ► TuA25-4 | 14:30–14:50 |
| | Wang, Xiaochu | China Academy of Space Tech. | | ¹⁷⁴⁷ <i>Distributed Nesterov Gradient and Heavy-Ball Double Accelerated Asynchronous Optimization</i> | |
| | Qiu, Huaxin | China Acad. of Space Tech. | | Li, Huaqing | Southwest Univ. |
| | Zhou, Qingrui | China Acad. of Space Tech. | | ► TuA25-5 | 14:50–15:10 |
| ► TuA23-5 | | | 14:50–15:10 | ¹⁷⁶⁴ <i>Distributed Stochastic Subgradient-Push Algorithm for Online Optimization with Privacy Masking</i> | |
| ¹⁸³⁸ <i>A Method of Autonomous Navigation for Mars Cruise</i> | | | | Lu, Qingguo | Southwest Univ. |
| | Ye, Zipeng | China Acad. of Space Tech. | | Li, Huaqing | Southwest Univ. |
| | Zhou, Qingrui | China Acad. of Space Tech. | | | |
| | Wang, Hui | China Acad. of Space Tech. | | TuA26 | 13:30–15:30 |
| ► TuA23-6 | | | 15:10–15:30 | Invited Session: Modeling and Control of Flexible Structures and Their Applications | |
| ²³⁵⁴ <i>Multi-target Track Extraction Method Based on Gaussian Mixture Probability Hypothesis Density Filter</i> | | | | Organizer: Liu, Yu | South China Univ. of Tech. |
| | Zhu, Chuang | China Acad. of Space Tech. | | Organizer: He, Wei | Univ. of Sci. & Tech. Beijing |
| | Zhou, Qingrui | China Acad. of Space Tech. | | Chair: Liu, Yu | South China Univ. of Tech. |
| | | | | Co-Chair: He, Wei | Univ. of Sci. & Tech. Beijing |
| TuA24 | | | 13:30–15:30 | ► TuA26-1 | 13:30–13:50 |
| Invited Session: Advanced Control Design Methods | | | | | |
| | Organizer: Wu, Yuhu | Dalian Univ. of Tech. | | ¹¹⁷⁹ <i>Output Constraint Boundary Control of A Flexible Manipulator</i> | |
| | Organizer: Shen, Tielong | Sophia Univ. | | Chen, Xiongbin | South China Univ. of Tech. |
| | Chair: Wu, Yuhu | Dalian Univ. of Tech. | | Wu, Yilin | Guangdong Univ. of Education |
| | Co-Chair: Shen, Tielong | Sophia Univ. | | Xu, Ruifeng | DililiLabs, Inc |
| ► TuA24-1 | | | 13:30–13:50 | Qu, Hongyi | Hong Kong Univ. of Sci. & Tech. |
| ¹³¹⁶ <i>Deriving A Simple Probabilistic Boolean Network from Incomplete Knowledge</i> | | | | Liu, Yu | South China Univ. of Tech. |
| | Kobayashi, Koichi | Hokkaido Univ. | | Yao, Ke | The Hong Kong Univ. of Sci. & Tech. |
| | Wu, Yuhu | Dalian Univ. of Tech. | | ► TuA26-2 | 13:50–14:10 |
| ► TuA24-2 | | | 13:50–14:10 | ¹²⁰² <i>Fuzzy Boundary Compensator for A Semi-linear Parabolic PDE System with Non-collocated Boundary Measurement</i> | |
| ¹³⁴¹ <i>Comparative Study on LADRC and NLADRC of VGTE-EGR System in Diesel Engine</i> | | | | Zhang, Jinfeng | Univ. of Sci. & Tech. Beijing |
| | Zhang, Pingyue | Dalian Univ. of Tech. | | Wang, Jun-Wei | Univ. of Sci. & Tech. Beijing |
| | Zhang, Jingyu | Dalian Univ. of Technology | | | |

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| ▶ TuA26-3 1351 一类参数未知双曲型PDE-ODE耦合系统自适应边界镇定 <i>Adaptive Boundary Stabilization for A Class of Hyperbolic PDE-ODE Coupled Systems with Unknown Parameters</i> Li, Xia Liu, Yungang Li, Fengzhong Li, Jian | 14:10–14:30 Shandong Univ. Shandong Univ. Shandong Univ. Yantai Univ. | ▶ TuA28-1 1278 基于超网络的突发事件舆情风险感知研究 Ma, Ning Liu, Yijun | 13:30–13:50 Chinese Acad. of Sci. Chinese Acad. of Sci. |
| ▶ TuA26-4 1469 <i>Time-delay Compensation and Stabilization for A Flexible Satellite</i> Ma, Yonghao He, Xiuyu Li, Guang He, Wei | 14:30–14:50 Univ. of Sci. & Tech. Beijing Univ. of Sci. & Tech. Beijing Queen Mary, Univ. of London Univ. of Sci. & Tech. Beijing | ▶ TuA28-2 1294 <i>Random Consensus-time for Noise-driven Hegselmann-Krause Dynamics</i> Su, Wei | 13:50–14:10 Inst. of Sys. Sci., Academy of Mathematics & Sys. Sci., CAS Chinese Acad. of Sci. |
| ▶ TuA26-5 1782 具有局部粘弹性阻尼的弹性系统的稳定性分析 <i>Stability Analysis for Elastic System with Locally Viscoelastic Damping</i> Yu, Kai Han, Zhong-Jie | 14:50–15:10 Tianjin Univ. Tianjin Univ. | ▶ TuA28-3 1349 <i>Heterogeneous Hegselmann-Krause Dynamics with Environment and Communication Noise</i> Chen, Ge | 14:10–14:30 Chinese Acad. of Sci. |
| ▶ TuA26-6 0024 <i>Boundary Stabilization of Coupled Wave System with Spatially-varying Coefficients and Internal Anti-damping</i> Feng, Xiaodan Zhang, Zhifei | 15:10–15:30 Huazhong Univ. of Sci. & Tech. School of Mathematics & Statistics | ▶ TuA28-4 1372 <i>Extended Abstract: Opinion Limits Study for the Multi-selection Bounded Confidence Model</i> Zhang, Jiangbo | 14:30–14:50 Southwest Petroleum Univ. |
| TuA27 13:30–15:30 Invited Session: Frontiers in Distributed Optimization and Control for Multi-agent Systems Organizer: Fang, Hao Organizer: Liu, Lu Chair: Fang, Hao Co-Chair: Liu, Lu | Beijing Inst. of Tech. City Univ. of Hong Kong Beijing Inst. of Tech. City Univ. of Hong Kong | ▶ TuA28-5 1379 <i>Predicting the Evolution of Hot Topics: A Solution Based on the Online Opinion Dynamics Model in Social Network</i> Jiang, Lei | 14:50–15:10 Hunan Univ. of Sci. & Tech. |
| ▶ TuA27-1 1276 <i>3-D Multi-player Pursuit-evasion Game with a Faster Evader</i> Fang, Xu Cheng, Cheng Xie, Lihua | 13:30–13:50 Nanyang Technological Univ. Tongji Univ. Nanyang Technological Univ. | ▶ TuA28-6 1606 <i>Expressed and Private Opinion Dynamics on Influence Networks with Asynchronous Updating</i> Xia, Weiguo Hong, Liang Ye, Mengbin | 15:10–15:30 Dalian Univ. of Tech. Dalian Univ. of Tech., China Australian National Univ. |
| ▶ TuA27-2 1553 <i>Second-Order Linear Multi-Agent Formation Control Based on Fuzzy Logic System Approximator and Actor-Critic Reinforcement Learning</i> Zhang, Zipeng Huang, Jie Cai, Fenghuang Chen, Jian Chen, Yutao | 13:50–14:10 Fuzhou Univ. Fuzhou Univ. Fuzhou Univ. Fuzhou Univ. Fuzhou Univ. | TuB01 15:50–17:50 Regular Session: Systems Theory and Control Theory (4) Chair: Zhang, Xuefeng Co-Chair: Wang, Jiarong | 15:50–17:50 Northeastern Univ. Unit 92228 of PLA |
| ▶ TuA27-3 2036 <i>Exponential Convergence of Distributed Optimal Coordination for Linear Multi-Agent Systems over General Digraphs</i> Zhang, Jin Liu, Lu Ji, Haibo | 14:10–14:30 City Univ. of Hong Kong City Univ. of Hong Kong Univ. of Sci. & Tech. of China | ▶ TuB01-1 0759 <i>Robust Commensurate Fractional Differentiator for A Class of Fractional Order Linear Systems</i> Li, Ang Liu, Da-Yan Boutat, Driss Wang, Yong | 15:50–16:10 Univ. of Sci. & Tech. of China INSA Centre Val De Loire INSA Centre Val De Loire Univ. of Sci. & Tech. of China |
| ▶ TuA27-4 2414 <i>Consensus of Linear Multi-Agent Systems in the Presence of Bounded Measurement Noises</i> Meng, Tingyang Xie, Yijing Lin, Zongli | 14:30–14:50 Univ. of Virginia Shanghai Jiao Tong Univ. Univ. of Virginia | ▶ TuB01-2 1298 <i>Adaptive Backstepping Sliding Mode Control for Fractional Order Systems</i> Chen, Xiang Zheng, Shiqi Liu, Feng Zhang, Xiongliang Sun, Yuan | 16:10–16:30 China Univ. of GeoSci. (Wuhan) China Univ. of GeoSci., Wu Han China Univ. of GeoSci. China Univ. of GeoSci. (Wuhan) The Univ. of Adelaide |
| ▶ TuA27-5 1256 <i>Differentially Private Consensus for Multi-Agent Systems</i> Wang, Jimin Zhang, Ji-Feng | 14:50–15:10 Chinese Acad. of Sci. Chinese Acad. of Sci. | ▶ TuB01-3 1787 <i>LMI Based Stability and Stabilization for Uncertain T-S Fuzzy Fractional Order Systems</i> Zhang, Xuefeng Liu, Yangyang | 16:30–16:50 Northeastern Univ. China Tobacco Henan Industrial Co., Ltd |
| ▶ TuA27-6 0962 <i>Multi-robot Task Allocation and Path Planning System Design</i> Fan, Yunfeng Deng, Fang Shi, Xiang | 15:10–15:30 Beijing Inst. of Tech. Beijing Inst. of Tech. Beijing Inst. of Tech. | ▶ TuB01-4 1487 <i>Parameter Identification for Fractional-order Chaotic System by Using Nelder-Mead Simplex Gravitational Search Algorithm</i> Wang, Jiarong | 16:50–17:10 Unit 92228 of PLA |
| TuA28 13:30–15:30 Invited Session: Social Networks and Dynamics Organizer: Chen, Ge Chair: Chen, Ge Co-Chair: Xia, Weiguo | Chinese Acad. of Sci. Chinese Acad. of Sci. Dalian Univ. of Tech. | ▶ TuB01-5 1837 <i>Stabilizability of Discontinuous Fractional-Order Switched Systems with Partial Unstable Modes</i> Xiao, Peng Wang, Yijing Zuo, Zhiqiang | 17:10–17:30 Tianjin Univ. Tianjin Univ. Tianjin Univ. |
| | | ▶ TuB01-6 0733 <i>Adaptive Fuzzy Fractional Order PID Control for 6-DOF Quadrotor</i> Liu, Tong Chen, Yang Chen, Zhihuan Wu, Huaiyu Cheng, Lei | 17:30–17:50 Wuhan Univ. of Sci. & Tech. Wuhan Univ. of Sci. & Tech. Wuhan Univ. of Sci. & Tech. Wuhan Univ. of Sci. & Tech. Wuhan Univ. of Sci. & Tech. |

Final Program

| | | | |
|---|-------------|--|--|
| TuB02 | 15:50–17:50 | | |
| Regular Session: Nonlinear Systems and Control (5) | | | |
| Chair: Xu, Dabo | | Nanjing Univ. of Sci. & Tech. | |
| Co-Chair: Wang, Jie | | Hebei Univ. of Tech. | |
| ▶ TuB02-1 | 15:50–16:10 | | |
| ¹⁵⁶⁸ Observed-based Event-triggered Control for Nonlinear Systems with Disturbances Using Adaptive Dynamic Programming | | | |
| Hu, Chuanhao | | Shanghai Jiao Tong Univ. | |
| Zou, Yuanyuan | | Shanghai Jiao Tong Univ. | |
| Li, Shaoyuan | | Shanghai Jiao Tong Univ. | |
| ▶ TuB02-2 | 16:10–16:30 | | |
| ¹⁶³⁸ Event-triggered Sliding Mode Controller Design for Lower Limb Exoskeleton | | | |
| Liu, Jiahao | | Hebei Univ. of Tech. | |
| Wang, Jie | | Hebei Univ. of Tech. | |
| Zhang, Gaowei | | Hebei Univ. of Tech. | |
| ▶ TuB02-3 | 16:30–16:50 | | |
| ¹⁷¹⁵ Output Regulation of Euler-Lagrange Systems Based on Error and Velocity Feedback | | | |
| Wu, Haiwen | | Nanjing Univ. of Sci. & Tech. | |
| Xu, Dabo | | Nanjing Univ. of Sci. & Tech. | |
| Jayawardhana, Bayu | | Univ. of Groningen | |
| ▶ TuB02-4 | 16:50–17:10 | | |
| ¹⁷³¹ Approximation-Based Adaptive Asymptotic Quantized Control of Uncertain Non-Affine Nonlinear Dynamics | | | |
| Wang, Ning | | Air Force Engineering Univ. | |
| Wang, Ying | | Air Force Engineering Univ. | |
| Wang, Xiaolin | | Air Force Engineering Univ. | |
| Fan, Zhang | | Sun Yat-sen Univ. | |
| Li, Jie | | Air Force Engineering Univ. | |
| Shi, Xiangyu | | Air Force Engineering Univ. | |
| Liu, Zongcheng | | Air Force Engineering Univ. | |
| ▶ TuB02-5 | 17:10–17:30 | | |
| ¹⁷⁷³ Robust Adaptive Backstepping Control for Missile Servo Control System with Backlash and Disturbances | | | |
| Zhang, Kunfeng | | The Luoyang Electro-optical Tech. Development Center | |
| Xu, Xiaolu | | Luoyang Electro-optical Tech. Development Center | |
| ▶ TuB02-6 | 17:30–17:50 | | |
| ¹⁸⁵⁵ Finite-time Command Filtered Based Adaptive Event-triggered Neural Control for Nonlinear Systems | | | |
| Li, Baomin | | Liaocheng Univ. | |
| Diao, Shuzhen | | Liaocheng Univ. | |
| Lian, Yuxiao | | Liaocheng Univ. | |
| Wang, Sanxia | | Liaocheng Univ. | |
| Xia, Jianwei | | Liaocheng Univ. | |
| Sun, Wei | | Liaocheng Univ. | |
| TuB03 | 15:50–17:50 | | |
| Regular Session: Stochastic Systems (1) | | | |
| Chair: Wang, Guangchen | | Shandong Univ. | |
| Co-Chair: Song, Bo | | Jiangsu Normal Univ. | |
| ▶ TuB03-1 | 15:50–16:10 | | |
| ¹⁶³⁴ Optimal Filter for Discrete-time Markov Jump Systems with Measurement-delays and Packet Dropouts | | | |
| Wang, Wei | | Univ. of Jinan | |
| Han, Chunyan | | Univ. of Jinan | |
| ▶ TuB03-2 | 16:10–16:30 | | |
| ²³³⁹ Robust Stability and Stabilization of Uncertain Stochastic Systems Involving Jump Random Noise | | | |
| Song, Bo | | Jiangsu Normal Univ. | |
| Zhou, Heng | | Jiangsu Normal Univ. | |
| Xu, Peng | | Jiangsu Normal Univ. | |
| Ma, Xin-Xin | | Jiangsu Normal Univ. | |
| ▶ TuB03-3 | 16:30–16:50 | | |
| ¹⁹¹⁸ Optimal Portfolio and Consumption with Assets under Partial Information | | | |
| Zhang, Detao | | Shandong Univ. | |
| Zhang, Panpan | | Shandong Univ. | |
| ▶ TuB03-4 | 16:50–17:10 | | |
| ¹⁹¹⁹ A Partial Information Linear-quadratic Optimal Control Problem of Backward Stochastic Differential Equation with Its Applications | | | |
| Huang, Pengyan | | Shandong Univ. | |
| Wang, Guangchen | | Shandong Univ. | |
| Zhang, Huanjun | | Shandong Univ. | |
| ▶ TuB03-5 | 17:10–17:30 | | |
| ¹⁹⁵⁴ Maximum Principle for A Kind of Risk-sensitive Optimal Control Problem with Delay | | | |
| Wang, Peng | | Shandong Univ. | |
| TuB04 | 15:50–17:50 | | |
| Regular Session: Optimal Control (2) | | | |
| Chair: Wang, Bingchang | | Shandong Univ. | |
| Co-Chair: Wang, Jingcheng | | Shanghai Jiao Tong Univ. | |
| ▶ TuB04-1 | 15:50–16:10 | | |
| ¹⁵³⁰ An Optimal Tracking Control Method with Q-learning for Discrete-time Linear Switched System | | | |
| Zhao, Shangwei | | Shanghai Jiao Tong Univ. | |
| Wang, Jingcheng | | Shanghai Jiao Tong Univ. | |
| Wang, Hongyuan | | Shanghai Jiao Tong Univ. | |
| Xu, Haotian | | Shanghai Jiao Tong Univ. | |
| ▶ TuB04-2 | 16:10–16:30 | | |
| ¹⁶³⁹ Optimal Energy Trajectory Planning and Control for Automatic Ship Berthing | | | |
| Liu, Xinzhao | | Dalian Maritime Univ. | |
| Ren, Junsheng | | Dalian Maritime Univ. | |
| Wang, Hui | | Dalian Maritime Univ. | |
| ▶ TuB04-3 | 16:30–16:50 | | |
| ¹⁹⁰⁸ A ALO-LSSVM Model for the Cell Voltage Optimization in Aluminum Electrolysis Process | | | |
| Xu, Chen-Hua | | Guangxi Univ. | |
| Zhang, Jin-Zhi | | Guangxi Univ. | |
| Cheng, Ruo-Jun | | Guangxi Univ. | |
| Chen, Rui | | Guangxi Univ. | |
| Luo, Zhu-Guang | | Guangxi Univ. | |
| Li, Hao-Ran | | Guangxi Univ. | |
| ▶ TuB04-4 | 16:50–17:10 | | |
| ¹⁹²⁴ Actor-critic Based Graphical Games for Discrete-time Linear Systems with Input Constraints | | | |
| Wang, Tianxiang | | Shandong Univ. | |
| Liang, Yong | | Shandong Univ. | |
| Wang, Bingchang | | Shandong Univ. | |
| ▶ TuB04-5 | 17:10–17:30 | | |
| ²³¹³ Differential Evolution Algorithm of Basis Vector Scaling and Mirror Crossover | | | |
| Zhang, Chunmei | | Taiyuan Univ. of Sci. & Tech. | |
| Yang, Haibin | | Taiyuan Univ. of Sci. & Tech. | |
| Guo, Hongge | | Taiyuan Univ. of Sci. & Tech. | |
| Shi, Yanjun | | Taiyuan Univ. of Sci. & Tech. | |
| TuB05 | 15:50–17:50 | | |
| Regular Session: Optimization and Scheduling (4) | | | |
| Chair: Zhang, Ruiyou | | Northeastern Univ. | |
| Co-Chair: Wang, Luhao | | Univ. of Jinan | |
| ▶ TuB05-1 | 15:50–16:10 | | |
| ²⁰⁶⁷ A Regional Local Search and Memory Based Evolutionary Algorithm for Dynamic Multi-objective Optimization | | | |
| Li, San Yi | | Zhengzhou Univ. of Light Industry | |
| Wang, Yanfeng | | Zhengzhou Univ. of Light Industry | |
| Yue, Weichao | | Zhengzhou Univ. of Light Industry | |
| ▶ TuB05-2 | 16:10–16:30 | | |
| ²¹³² Modeling and Optimization of Pumps Scheduling Considering the Time-of-use Electricity Tariff | | | |
| Wei, Nianjia | | Northeastern Univ. | |
| Zhang, Ruiyou | | Northeastern Univ. | |
| Hua, Tiantian | | Bengbu Medical College | |
| Ye, Yifu | | Northeastern Univ. | |
| ▶ TuB05-3 | 16:30–16:50 | | |
| ²¹⁶³ A Stochastic Cournot Game Based Optimal Energy Bidding for Multiple Microgrids | | | |
| Wang, Luhao | | Univ. of Jinan | |
| Zhang, Yumin | | Shandong Univ. of Sci. & Tech. | |
| Li, Qiqiang | | Shandong Univ. | |
| Cheng, Xingong | | Univ. of Jinan | |
| Wang, Zhuo | | JiNan Univ. | |

- ▶ TuB05-4 16:50–17:10
²⁴³¹ *Timetable Mapping Model and Dynamic Programming Approach for High-speed Railway Rescheduling*
 Xu, Peng Northeastern Univ.
 Feng, Guoqi Northeastern Univ.
 Cui, Dongliang Northeastern Univ.
 Dai, Xue-Wu Northeastern Univ.
- ▶ TuB05-5 17:10–17:30
²⁴⁷² *Randomized-Difference Based Zeroth-Order Algorithm for Distributed Resource Allocation*
 Geng, Xiaoxue Chinese Acad. of Sci.
 Zhao, Wen-Xiao Chinese Acad. of Sci.
- TuB06** 15:50–17:50
 Regular Session: Adaptive Control and Learning Control (2)
 Chair: Wang, Ding Beijing Univ. of Tech.
 Co-Chair: Liu, Xiangbin Beijing Jiaotong Univ.
- ▶ TuB06-1 15:50–16:10
⁰⁸⁶⁹ *Robust I & I Adaptive DSC with Disturbance Observer for Maglev Systems with Output Constraint*
 Liu, Jiaqi Beijing Jiaotong Univ.
 Liu, Xiangbin Beijing Jiaotong Univ.
 Su, Hongye Zhejiang Univ., China
- ▶ TuB06-2 16:10–16:30
⁰⁹⁷⁰ *Reinforcement Learning PID Control with New Adaptive Updating Rule*
 Guan, Zhe Hiroshima Univ.
 Yamamoto, Toru Hiroshima Univ.
- ▶ TuB06-3 16:30–16:50
⁰⁹⁸⁶ *A New Control System Based on An Improved PID Neural Network Controller for Landslide System Control*
 Zhang, Ying Huazhong Univ. of Sci. & Tech.
 Sun, Shu Huazhong Univ. of Sci. & Tech.
 Cheng, Lian Wuhan Univ. of Tech.
 Wang, Xiaoping Huazhong Univ. of Sci. & Tech.
- ▶ TuB06-4 16:50–17:10
⁰⁹⁸⁸ *Vibration Suppression of A Flexible Beam Based on A Color Tracking Camera and ADC Method*
 Zhang, Ze Guizhou Univ.
 Zhang, Tao Guizhou Univ.
 Zhu, Yongting Guizhou Univ.
 Wei, Zhaowei Guizhou Univ.
 Zhang, Yuanming Guizhou Univ.
- ▶ TuB06-5 17:10–17:30
¹⁰⁰⁹ *Improved Adaptive Critic for Neural Optimal Control of Constrained Nonlinear Discrete-Time Systems*
 Zhao, Mingming Beijing Univ. of Tech.
 Wang, Ding Beijing Univ. of Tech.
 Ha, Mingming Univ. of Sci. & Tech. Beijing
- ▶ TuB06-6 17:30–17:50
¹²⁴² *Value-Iteration-Based Neuro-Optimal Tracking Control for Affine Systems with Completely Unknown Dynamics*
 Ha, Mingming Univ. of Sci. & Tech. Beijing
 Wang, Ding Beijing Univ. of Tech.
 Liu, Derong CASIA
- TuB07** 15:50–17:50
 Regular Session: Process Control (2)
 Chair: Liu, Tao Dalian Univ. of Tech.
 Co-Chair: Zhao, Dongya China Univ. of Petroleum
- ▶ TuB07-1 15:50–16:10
¹⁰⁷⁰ *Model Free Adaptive Control Scheme Based on Elman Neural Network Prediction*
 Liao, Yongwen School of Control & Computer Engineering
 Ma, Yiming North China Electric Power Univ.
 Chen, Baowei Guodian New Energy Tech. Research Inst. Co.,Ltd
 Li, Gengda Guodian New Energy Tech. Research Inst. Co.,Ltd
 Zeng, De-Liang North China Electric Power Univ.
- ▶ TuB07-2 16:10–16:30
¹⁴⁶² *Predictor-based Disturbance Rejection Control Design for Low-order Stable and Integrating Processes with Time Delay*
 Zang, Rudong Dalian Univ. of Tech.
 Hao, Shoulin Dalian Univ. of Tech.
 Liu, Tao Dalian Univ. of Tech.
- ▶ TuB07-3 16:30–16:50
¹⁵⁴⁴ *Analysis of Bit-Rock Interaction Models Using Finite Element Simulation Data*
 Huang, Hengyu China Univ. of GeoSci.
 Wu, Min China Univ. of GeoSci.
 Ma, Sike China Univ. of GeoSci.
 Chen, Luefeng China Univ. of GeoSci.
 Lu, Chengda China Univ. of GeoSci.
- ▶ TuB07-4 16:50–17:10
²⁰⁷⁷ *Nonlinear PID Pressure Control Based on Extremum Seeking*
 Zhang, Song Northwestern Polytechnical Univ.
 Dan, Zhihong 1. Key Laboratory of High-altitude Simulation Tech., Mianyang 621703; 2. AECC Sichuan Turbine Research Inst., Mianyang 621703
 Qian, Qiumeng 1. Key Laboratory of High-altitude Simulation Tech., Mianyang 621703; 2. AECC Sichuan Turbine Research Inst., Mianyang 621703
 Guo, Yu-Ying Southwest Univ. of Sci. & Tech., Nanjing Univ. of Aeronautics & Astronautics
 Zhang, Jianping Southwest Univ. of Sci. & Tech.
- ▶ TuB07-5 17:10–17:30
²¹⁶⁸ *Discrete-Time Dynamic Output Feedback Integral Sliding Model Predictive Control*
 Zhao, Dongya China Univ. of Petroleum
 Xiao, Huili China Univ. of Petroleum
- TuB08** 15:50–17:50
 Regular Session: Motion Control (2)
 Chair: Li, Weihua Harbin Inst. of Tech.
 Co-Chair: Guo, Rongwei Qilu Univ. of Tech.
- ▶ TuB08-1 15:50–16:10
¹²⁹⁶ *Region Tracking Control for Autonomous Underwater Vehicle with Control Input Saturation*
 Liu, Xing Jiaying Univ.
 Zhang, Mingjun Harbin Engineering Univ.
- ▶ TuB08-2 16:10–16:30
¹⁹⁴⁹ *Bilateral Control with Disturbance Observer and Adaptive Neural Network Compensation*
 Wen, Jing Changchun Inst. of Optics, Fine Mechanics & Physics, Chinese Acad. of Sci.
 Tian, Dapeng Chinese Acad. of Sci.
- ▶ TuB08-3 16:30–16:50
¹⁹⁶⁶ *Stabilization of A Class of Complex Chaotic Systems with Both Uncertainty and Disturbance*
 Sha, Hongsheng Qilu Univ. of Tech. (Shandong Acad. of Sci.)
 Wang, Zuoxun Qilu Univ. of Technology
 Guo, Rongwei Qilu Univ. of Tech.
- ▶ TuB08-4 16:50–17:10
¹⁹⁸⁵ *Research on Control Characteristics of Three-phase Permanent Magnet Synchronous Motor for Electric Aircraft Propulsion*
 Zhang, Qingxin Shenyang Aerospace Univ.
 Wang, Miao Shenyang Aerospace Univ.
 Li, Huapeng Shenyang Aerospace Univ.
 Cui, Tong Shenyang Aerospace Univ.
- ▶ TuB08-5 17:10–17:30
²¹²¹ *Bilateral Teleoperation of Wheeled Mobile Robots Subject to Lateral Sliding on Soft Terrains*
 Li, Weihua Harbin Inst. of Tech.
 Liu, Sanjun Shanghai Aerospace Equipments Manufacturer Co, Ltd
 Ren, Dianbo , Harbin Inst. of Tech. at Weiha
 Wang, Jianfeng Harbin Inst. of Tech.
 Gao, Haibo Harbin Inst. of Tech.
- ▶ TuB08-6 17:30–17:50
²¹⁷¹ *Vehicle Obstacle Avoidance Path Planning Based on Gauss Pseudospectral Method*
 Chu, Jianxin Jilin Univ.
 Qu, Ting Jilin Univ.
 Yu, Shuyou Jilin Univ.
 Xu, Fang Jilin Univ.

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|---|-------------|--|--|
| TuB09 | 15:50–18:10 | | |
| Regular Session: Signal Processing and Information Fusion (4) | | | |
| Chair: Song, Enbin | | Sichuan Univ. | |
| Co-Chair: Xu, Weimin | | Shanghai Maritime Univ. | |
| ▶ TuB09-1 | 15:50–16:10 | | |
| ¹⁰⁴¹ <i>A Fast Registration Method Based on Line Features</i> | | | |
| Zhang, Meng | | Xi An Jiaotong Univ. | |
| Yang, Yi | | Xi An Jiaotong Univ. | |
| Jiang, Qinghua | | Xi An Jiaotong Univ. | |
| Zhang, Sixian | | Xi An Jiaotong Univ. | |
| ▶ TuB09-2 | 16:10–16:30 | | |
| ¹⁰⁵⁴ <i>Gray Object Recognition and Angle Measurement Method Based on Mean Shift to Overhead Crane Systems</i> | | | |
| Huang, Jinling | | Shanghai Maritime Univ. | |
| Xu, Weimin | | Shanghai Maritime Univ. | |
| Zhao, Weiwei | | Shanghai Maritime Univ. | |
| Yuan, Hesong | | Shanghai Maritime Univ. | |
| Hu, Yibin | | Shanghai Maritime Univ. | |
| ▶ TuB09-3 | 16:30–16:50 | | |
| ¹²²⁵ <i>Research on Power Quality Signals Reconstruction Method Based on K-SVD Dictionary Learning</i> | | | |
| Liu, Chuanyang | | Chizhou Univ. | |
| Liu, Jingjing | | Chizhou Univ. | |
| ▶ TuB09-4 | 16:50–17:10 | | |
| ¹⁴⁹¹ <i>Nonlinear Tracking Differentiator Based on Feedforward and Arctangent Function</i> | | | |
| Kong, Yawen | | Univ. of Chinese Acad. of Sci. | |
| Tian, Dapeng | | Chinese Acad. of Sci. | |
| Xiu, Jihong | | Chinese Acad. of Sci. | |
| Che, Xin | | Chinese Acad. of Sci. | |
| ▶ TuB09-5 | 17:10–17:30 | | |
| ¹⁶⁹⁷ <i>A Multiple-Model State Estimator Based on the Unscented Kalman Filter</i> | | | |
| Li, Guohua | | Sichuan Univ. | |
| Niu, Dunbiao | | Sichuan Univ. | |
| Song, Enbin | | Sichuan Univ. | |
| ▶ TuB09-6 | 17:30–17:50 | | |
| ¹⁷⁰⁴ <i>Minimax Joint Detection and Estimation with the Bayesian Cost</i> | | | |
| Cai, Yuyang | | Sichuan Univ. | |
| Zhao, Xiaotong | | Sichuan Univ. | |
| Song, Enbin | | Sichuan Univ. | |
| ▶ TuB09-7 | 17:50–18:10 | | |
| ¹⁷³³ <i>Sequential Inverse Covariance Intersection Fusion Estimation for Non-uniform Sampling Systems with Fading Measurements</i> | | | |
| Lin, Honglei | | Heilongjiang Univ. | |
| Sun, Shuli | | Heilongjiang Univ. | |
| TuB10 | 15:50–18:10 | | |
| Regular Session: Navigation and Guidance (2) | | | |
| Chair: Shen, Kai | | Beijing Inst. of Tech. | |
| Co-Chair: Hu, Qinglei | | Beihang Univ. | |
| ▶ TuB10-1 | 15:50–16:10 | | |
| ⁰⁷⁴⁸ <i>On Guidance Parameter Calculation of Flight Vehicle Using Relevance Vector Machine and Particle Swarm Optimization</i> | | | |
| Zhao, Yao | | Beijing Aerospace Automatic Control Inst. | |
| Tan, Yun | | Beijing Aerospace Automatic Control Inst. | |
| Tian, Hai-Tao | | Beijing Aerospace Automatic Control Inst. | |
| Zou, Ying | | Beijing Aerospace Automatic Control Inst. | |
| ▶ TuB10-2 | 16:10–16:30 | | |
| ⁰⁸⁸⁶ <i>Kalman-filter-based Attitude and Parameters Estimation for Noncooperative Spacecraft</i> | | | |
| Chen, Hang | | Beihang Univ. | |
| Hu, Qinglei | | Beihang Univ. | |
| Wang, Wei | | Shanghai Inst. of Satellite Engineering | |
| ▶ TuB10-3 | 16:30–16:50 | | |
| ⁰⁹⁰² <i>Pose Estimation for Non-cooperative Spacecraft Based on Deep Learning</i> | | | |
| Huan, Wenxiu | | Beihang Univ. | |
| Liu, Mingmin | | Shanghai Aerospace Control Tech. Inst. | |
| Hu, Qinglei | | Beihang Univ. | |
| ▶ TuB10-4 | 16:50–17:10 | | |
| ¹⁴⁴⁰ <i>Shortest Path Planning of UAV for Target Tracking and Obstacle Avoid-</i> | | | |
| <i>ance in 3D Environment</i> | | | |
| Wang, Yanxiang | | Beihang Univ. | |
| Wang, Honglun | | Beihang Univ. | |
| Lun, Yuebin | | Beihang Univ. | |
| ▶ TuB10-5 | 17:10–17:30 | | |
| ¹⁴⁹⁹ <i>Trajectory Optimization of SUAV Communication Relay Based on GWO Algorithm in the Environments with Sea Breeze</i> | | | |
| Lun, Yuebin | | Beihang Univ. | |
| Wang, Honglun | | Beihang Univ. | |
| Wu, Jianfa | | Beihang Univ. | |
| Wang, Yanxiang | | Beihang Univ. | |
| ▶ TuB10-6 | 17:30–17:50 | | |
| ¹⁵⁴⁰ <i>Sequential Guidance of Multiple Unmanned Surface Vehicles</i> | | | |
| Zhao, Weishen | | No.705 Inst. of CSSC | |
| Xu, Hui | | Northwestern Polytechnical Univ. | |
| Mao, Ruiqi | | Northwestern Polytechnical Univ. | |
| Chen, Lepeng | | Northwestern Polytechnical Univ. | |
| Cui, Rongxin | | Northwestern Polytechnical Univ. | |
| ▶ TuB10-7 | 17:50–18:10 | | |
| ¹⁵⁴⁵ <i>A Novel Robust Kalman Filter for Unmanned Ground Vehicles Positioning under GNSS Abnormal Measurements</i> | | | |
| Yin, Zhang | | Beijing Inst. of Tech. | |
| Fu, Mengyin | | Beijing Inst. of Tech. | |
| Shen, Kai | | Beijing Inst. of Tech. | |
| TuB11 | 15:50–18:10 | | |
| Regular Session: Fault Diagnosis and Reliable Control (2) | | | |
| Chair: Fan, Huijin | | Huazhong Univ. of Sci. & Tech. | |
| Co-Chair: Ma, Yanhua | | Dalian Univ. of Tech. | |
| ▶ TuB11-1 | 15:50–16:10 | | |
| ⁰⁷⁷³ <i>A Fault Diagnosis Based on LSSVM and Bayesian Probability for Wind Turbines</i> | | | |
| Zhang, Yuxian | | Shenyang Univ. of Tech. | |
| Yan, Shuqing | | Shenyang Univ. of Tech. | |
| Qian, Xiaoyi | | Shenyang Univ. of Tech. | |
| ▶ TuB11-2 | 16:10–16:30 | | |
| ⁰⁷⁸¹ <i>Robust Adaptive Finite-Time Fault-Tolerant Tracking Control for Uncertain Systems</i> | | | |
| Fang, Xinpeng | | Huazhong Univ. of Sci. & Tech. | |
| Fan, Huijin | | Huazhong Univ. of Sci. & Tech. | |
| Liu, Lei | | Huazhong Univ. of Sci. & Tech. | |
| ▶ TuB11-3 | 16:30–16:50 | | |
| ⁰⁸⁵⁷ <i>Detection of the Incipient Degradation for Aluminum Electrolytic Capacitors in Track Circuits</i> | | | |
| Guo, Yusheng | | Hefei Univ. of Tech. | |
| Jiang, Canghua | | Hefei Univ. of Tech. | |
| Xiang, Nianwen | | Hefei Univ. of Tech. | |
| Su, Bo | | CRSC Research & Design Inst. Group Co.,Ltd | |
| Yin, Huiyuan | | CRSC Research & Design Inst. Group Co.,Ltd | |
| Xu, Zongqi | | CRSC Research & Design Inst. Group Co.,Ltd | |
| ▶ TuB11-4 | 16:50–17:10 | | |
| ¹²³⁶ <i>An Improved Kalman Filter Based on Neural Network for Turbofan Engine Gas-path Health Estimation</i> | | | |
| Liu, Bozhang | | Dalian Univ. of Tech. | |
| Ma, Yanhua | | Dalian Univ. of Tech. | |
| Wu, Yuhu | | Dalian Univ. of Tech. | |
| Sun, Xi-Ming | | Dalian Univ. of Tech. | |
| ▶ TuB11-5 | 17:10–17:30 | | |
| ¹²⁸¹ <i>Wind Turbine Frequent Principal Fault Detection Based on A Self-attentive LSTM Encoder-decoder Model</i> | | | |
| Jiang, Na | | Shanghai Jiao Tong Univ. | |
| Li, Ning | | Shanghai Jiao Tong Univ. | |
| ▶ TuB11-6 | 17:30–17:50 | | |
| ¹⁵⁷³ <i>Convolutional Domain Adaptation Network for Fault Diagnosis of Thermal System under Different Loading Conditions</i> | | | |
| Wang, Xiaoxia | | North China Electric Power Univ. | |
| Jin, Meng | | North China Electric Power Univ. | |
| ▶ TuB11-7 | 17:50–18:10 | | |
| ¹⁵⁶² <i>Fault Diagnosis of Modular Multilevel Converter Based on Optimized Support Vector Machine</i> | | | |
| Ke, Longzhang | | Wuhan Univ. of Sci. & Tech. | |
| Liu, Zhenxing | | Wuhan Univ. of Sci. & Tech. | |

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|--|---|--|---|----------------|
| Zhang, Yong | Wuhan Univ. of Sci. & Tech. | 2135 | <i>An Encoding and Decoding Scheme for Long-distance Ultrasonic Localization</i> | |
| TuB12 | 15:50–17:50 | Ji, Cheng | | Zhejiang Univ. |
| Regular Session: Intelligent Robots (4) | | Chen, Minlin | | Zhejiang Univ. |
| Chair: Zhai, Di-Hua | Beijing Inst. of Tech. | Sun, Peng | | Zhejiang Univ. |
| Co-Chair: Zheng, Gang | Inria Lille | Shu, Haoran | | Zhejiang Univ. |
| ► TuB12-1 | 15:50–16:10 | Wang, Zhi | | Zhejiang Univ. |
| 1453 <i>Object Recognition and Robot Grasping Technology Based on RGB-D Data</i> | | ► TuB13-6 | 17:30–17:50 | |
| Yu, Sheng | Beijing Inst. of Tech. | 2175 | <i>基于广度增强型烟花算法的水声信道均衡方法研究</i> | |
| Zhai, Di-Hua | Beijing Inst. of Tech. | <i>Research on Underwater Acoustic Channel Equalization Method Based on Breadth Enhanced Fireworks Algorithm</i> | | |
| Wu, Haocun | Beijing Inst. of Tech. | Jiang, Ning | The School of Information Sci. & Tech., Qingdao Univ. of Sci. & Tech. | |
| Yang, Hongda | Beijing Inst. of Tech. | Yang, Xinghai | Qingdao Univ. of Sci. & Tech. | |
| Xia, Yuanqing | Beijing Inst. of Tech. | Huang, Zihao | The School of Information Sci. & Tech., Qingdao Univ. of Sci. & Tech. | |
| ► TuB12-2 | 16:10–16:30 | Tong, Gang | Qingdao Univ. of Sci. & Tech. | |
| 1471 <i>A DMPs-based Switching Motion Planning Method for Robots with Obstacles</i> | | Wang, Jingjing | Qingdao Univ. of Sci. & Tech. | |
| Wu, Haocun | Beijing Inst. of Tech. | ► TuB13-7 | 17:50–18:10 | |
| Zhai, Di-Hua | Beijing Inst. of Tech. | 2230 | <i>Mobile Energy Replenishment Scheduling Based on Quantum-behavior Particle Swarm Optimization</i> | |
| Xia, Zhiqiang | BIT | Jiang, Chengpeng | Univ. of Sci. & Tech. Beijing | |
| Xia, Yuanqing | Beijing Inst. of Tech. | Liu, Fen | Univ. of Sci. & Tech. Beijing | |
| ► TuB12-3 | 16:30–16:50 | Li, Jinglin | Univ. of Sci. & Tech. Beijing | |
| 1702 <i>Simulation and Control Co-design Methodology for Soft Robotics</i> | | Lv, Peng | Univ. of Sci. & Tech. Beijing | |
| Zheng, Gang | Inria Lille | Xiao, Wendong | Univ. of Sci. & Tech. Beijing, Beijing, China | |
| Wu, Ke | INRIA | TuB14 | 15:50–17:50 | |
| ► TuB12-4 | 16:50–17:10 | Regular Session: Multi-Agent Systems and Distributed Control (4) | | |
| 1858 <i>Variable Sampling Domain and Map Compression Based on Greedy RRT Algorithm for Robot Path Planning</i> | | Chair: Zhang, Zhiqiang | Univ. of Jinan | |
| Wang, Zhiqiang | Nanjing Univ. of Sci. & Tech. | Co-Chair: He, Dong | Chongqing Univ. | |
| Shan, Liang | Nanjing Univ. of Sci. & Tech. | ► TuB14-1 | 15:50–16:10 | |
| Chang, Lu | Nanjing Univ. of Sci. & Tech. | 1743 | <i>Two Event-Triggered Control Mechanisms for Multi-Agent Systems and Their Comparisons</i> | |
| Qiu, Bo | Nanjing Univ. of Sci. & Tech. | Zhang, Zhiqiang | Univ. of Jinan | |
| Qi, Zhidong | Nanjing Univ. of Sci. & Tech. | Lu, Zehuan | Univ. of Jinan | |
| ► TuB12-5 | 17:10–17:30 | Sun, Yuangong | Univ. of Jinan | |
| 1861 <i>A Frontier-Based Coverage Path Planning Algorithm for Robot Exploration in Unknown Environment</i> | | ► TuB14-2 | 16:10–16:30 | |
| Gao, Songqun | Univ. of Sci. & Tech. of China | 1767 | <i>Robust Guaranteed Cost Formation Control for Multi-agent Systems with Uncertain Topologies</i> | |
| Ding, Yulong | Beijing Inst. of Tech. | Zhang, Yaxiao | Beijing Union Univ. | |
| Chen, Ben M. | Chinese Univ. of Hong Kong | Tong, Shiwen | Beijing Union Univ. | |
| ► TuB12-6 | 17:30–17:50 | Chen, Yangzhou | Beijing Univ. of Tech. | |
| 1988 <i>Observer-Based Flexible Switching Control of the Aircraft Skin Inspection Robot with State/output Disturbances</i> | | Huang, Ning | Beijing Spacecrafts | |
| Wu, Xuewei | Nanjing Univ. of Aeronautics & Astronautics | ► TuB14-3 | 16:30–16:50 | |
| Wang, Congqing | Nanjing Univ. of Aeronautics & Astronautics | 1771 | <i>Distributed Unscented Filter with Minimum Sigma Set for Improved Performance</i> | |
| TuB13 | 15:50–18:10 | Chang, Chaoyong | North Univ. of China | |
| Regular Session: Sensor Networks and Internet of Things (IoT) | | Qin, Zerui | Central South Univ. | |
| Chair: Yang, Bo | Shanghai Jiao Tong Univ. | Liu, Peng | North Univ. of China | |
| Co-Chair: Xiao, Wendong | Univ. of Sci. & Tech. Beijing, Beijing, China | Ren, Yi-Feng | North Univ. of China | |
| ► TuB13-1 | 15:50–16:10 | Shi, Yuanhao | North Univ. of China | |
| 0315 <i>An Industrial Internet of Things Multi-Protocol Convergence Gateway Research and Experiment</i> | | ► TuB14-4 | 16:50–17:10 | |
| Ma, Li | North China Univ. of Tech. | 1805 | <i>A Novel VAV Air Conditioning Control System Based on Swarm Intelligence</i> | |
| Xiu, Zhaoyuan | North China Univ. of Tech. | He, Dong | Chongqing Univ. | |
| ► TuB13-2 | 16:10–16:30 | Xiong, Qingyu | Chongqing Univ. | |
| 0666 <i>Robust Power Control in TDMA-based Vehicular Communication Network</i> | | Jiang, Ziyang | Tsinghua Univ. | |
| Liu, Zhixin | School of Electrical Engineering, Yanshan Univ. | ► TuB14-5 | 17:10–17:30 | |
| Su, Jiawei | Yanshan Univ. | 1818 | <i>Distributed Heavy-Ball Nash Equilibrium Seeking Algorithm in Aggregative Games</i> | |
| Xie, Yuanai | Yanshan Univ. | Song, Chenhui | Southeast Univ. | |
| ► TuB13-3 | 16:30–16:50 | Wu, Chenpeng | Southeast Univ. | |
| 1481 <i>Coordinated Sensing Coverage with Distributed Deep Reinforcement Learning</i> | | Lv, Zhongtao | Southeast Univ. | |
| Dai, Tianwei | The Univ. of Manchester | Zhang, Fangshuo | SouthEast Univ. | |
| Ding, Zhengtao | Univ. of Manchester | Lee, Jingyu | SEU | |
| ► TuB13-4 | 16:50–17:10 | Yang, Shaofu | Southeast Univ. | |
| 2102 <i>Joint Computation Offloading and Resource Allocation for NOMA-Enabled Industrial Internet of Things</i> | | ► TuB14-6 | 17:30–17:50 | |
| Zhou, Peng | Shanghai Jiao Tong Univ. | 1856 | <i>Verifying Computation Tree Logic of Knowledge via the Similar Reachability Graphs of Knowledge-oriented Petri Nets</i> | |
| Yang, Bo | Shanghai Jiao Tong Univ. | He, Leifeng | Tongji Univ. | |
| Chen, Cailian | Shanghai Jiao Tong Univ. | Liu, Guanjun | Tongji Univ. | |
| ► TuB13-5 | 17:10–17:30 | | | |

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| TuB18 | 15:50–17:50 | Zhang, Chenchen | College of Economics & Management, Civil Aviation Univ. of China |
| Invited Session: Pattern Recognition (4) | | Guo, Dongdan | Travelsky Tech. Limited |
| Chair: Han, Deqiang | Xi'an Jiaotong Univ. | | |
| Co-Chair: Yang, Fan | Harbin Engineering Univ. | | |
| ▶ TuB18-1 | 15:50–16:10 | ▶ TuB19-4 | 16:50–17:10 |
| ¹⁶³⁵ Contour-based High-speed Image Registration for Train Fault Diagnosis in Complex Environment | | ¹⁴⁰¹ A Real-time ECG Signal Classification Algorithm | |
| Zhang, Yiming | Southwest Jiaotong Univ. | Yao, Xitong | Nankai Univ. |
| Hu, Yuanjiang | Guangzhou Yunda Intelligent Tech. Co., Ltd | Dai, Yu | Nankai Univ. |
| Liu, Ziyi | Southwest Jiaotong Univ. | Zhang, Jianxun | Nankai Univ. |
| Bu, Xianli | Guangzhou Metro Group Co. Ltd | ▶ TuB19-5 | 17:10–17:30 |
| Huang, Deqing | Southwest Jiaotong Univ. | ¹⁴⁹³ Chaotic Neural Network with Trigonometric Function Self-feedback | |
| Zou, Meng | CNPC Chuangqing Drilling Engineering Company Limited | Xu, Yaoqun | Harbin Univ. of Commerce |
| | | Xu, Nan | Heilongjiang Bayi Agricultural Univ. |
| | | Qiu, Zeguo | Harbin Univ. of Commerce |
| ▶ TuB18-2 | 16:10–16:30 | ▶ TuB19-6 | 17:30–17:50 |
| ¹⁶⁴² Automatic 3D Lung Nodule Detection Based on Shape Filter and Region Growing | | ¹⁴⁹⁸ Reduction of Multiplications in Convolutional Neural Networks | |
| Liu, Shu-An | Northeastern Univ. | Ali, Munawar | Univ. of Sci. & Tech. of China |
| Xu, Xiaoxue | Northeastern Univ. | Yin, Baoqun | Univ. of Sci. & Tech. of China |
| Yang, Xiaonan | Northeastern Univ. | Kumar, Aakash | Information Sci. & Tech. |
| Liu, Qiongyang | Northeastern Univ. | Shaikh, Ali Muhammad | Information Sci. & Tech. |
| Gong, Jun | Northeastern Univ. | Bilal, Hazrat | Univ. of Sci. & Tech. of China |
| ▶ TuB18-3 | 16:30–16:50 | TuB20 | 15:50–18:10 |
| ¹⁷⁹⁵ A CEEMD Method for Diesel Engine Misfire Fault Diagnosis Based on Vibration Signals | | Invited Session: Quantum Control and Learning (2) | |
| Li, Shoutao | Jilin Univ. | Organizer: Xue, Shibe | Shanghai Jiao Tong Univ. |
| Zhang, Yu | Jilin Univ. | Organizer: Ma, Shan | Central South Univ. |
| Wang, Lianbing | JiLin Univ. | Organizer: Zhang, Jun | UM-SJTU Joint Inst. |
| Xue, Jingyuan | Jilin Univ. | Chair: Zhang, Ming | National Univ. of Defense Tech. |
| Jin, Jingfu | Jilin Univ. | Co-Chair: Wu, Rebing | Tsinghua Univ. |
| Yu, Dingli | Liverpool John Moores Univ. | ▶ TuB20-1 | 15:50–16:10 |
| ▶ TuB18-4 | 16:50–17:10 | ⁰⁵⁷⁰ On Quantum Computation and Artificial Intelligence | |
| ²³⁶¹ A New Polarization Image Demosaicking Method in the Frequency Domain for DoFP Polarization Imaging | | Zhang, Ming | National Univ. of Defense Tech. |
| Hao, Jinglei | Northwestern Polytechnical Univ. | ▶ TuB20-2 | 16:10–16:30 |
| Zhao, Yongqiang | Northwestern Polytechnical Univ. | ⁰⁶⁵⁶ Some Emerging Quantum Control Problems | |
| Liu, Wuteng | The 2nd Research Inst. of China Electronics Tech. Group Corporation | Wu, Rebing | Tsinghua Univ. |
| ▶ TuB18-5 | 17:10–17:30 | ▶ TuB20-3 | 16:30–16:50 |
| ²³⁷⁵ 一种基于证据理论的动态特征选择 | | ⁰⁸⁰³ Robustness of Imperfect Initialization in Quantum Parameter Estimation | |
| Dynamic Feature Selection Based on Evidence Theory | | Bao, Liying | Univ. of Chinese Acad. of Sci. |
| Wang, Sai | Inst. of Integrated Automation | Qi, Bo | Acad. of Mathematics & Sys. Sci., Chinese Acad. of Sci. |
| Han, Deqiang | Xi'an Jiaotong Univ. | ▶ TuB20-4 | 16:50–17:10 |
| Zhang, Shixing | Xi'an Jiaotong Univ. | ¹⁹⁵⁰ Threats and Opportunities: Blockchain Meets Quantum Computation | |
| ▶ TuB18-6 | 17:30–17:50 | Cui, Wei | South China Univ. of Tech. |
| ²⁰⁶⁴ 双目视觉动态场景分割SLAM算法 | | Dou, Tong | South China Univ. of Tech. |
| Binocular Vision Dynamic Scene Segmentation SLAM Algorithm | | Yang, Shilu | South China Univ. of Tech. |
| Mo, Hongwei | Harbin Engineering Univ. | ▶ TuB20-5 | 17:10–17:30 |
| Yang, Fan | Harbin Engineering Univ. | ¹⁸⁸¹ Distribution of Quantum Fisher Information in Spin Channel | |
| TuB19 | 15:50–17:50 | Song, Hongting | China Acad. of Space Tech. |
| Invited Session: Neural Networks and Deep Learning (4) | | ▶ TuB20-6 | 17:30–17:50 |
| Chair: Liu, Zhen-Tao | China Univ. of GeoSci. | ⁰⁴³³ 深度强化学习在石墨烯量子系统中的应用 | |
| Co-Chair: Zhao, Zhenwu | College of Economics&Management, Civil Aviation Univ. of China | Application of Deep Reinforcement Learning in Graphene Quantum System | |
| ▶ TuB19-1 | 15:50–16:10 | Wei, Peng | Chinese Academy of Sci. |
| ¹³⁵² 基于分段双流通道卷积神经网络的行为识别 | | Xi, Zairong | Chinese Acad. of Sci. |
| Two-Stream CNN Based on Segmentation for Action Recognition | | ▶ TuB20-7 | 17:50–18:10 |
| Chen, Lin | School of Control Sci. & Engineering | ¹⁹²⁷ Identification of High-Frequency Hysteresis Based on Dual Bouc-Wen Model | |
| Liu, Yungang | Shandong Univ. | Zheng, Haiyang | Guangxi Univ. |
| Man, Yongchao | Shandong Univ. | Cao, Zeyan | SIPPR Engineering Group Co., Ltd |
| ▶ TuB19-2 | 16:10–16:30 | Li, Lindong | SAIC-GM-Wuling Automobile Co., Ltd |
| ¹³⁹⁰ A Novel Eye State Detection Method via WBCNN | | Xie, Yangqiu | Guangxi Univ. |
| Liu, Zhen-Tao | China Univ. of GeoSci. | TuB21 | 15:50–17:50 |
| Li, Sihan | China Univ. of GeoSci. (Wuhan) | Invited Session: Hybrid Logical Systems (2) | |
| Jiang, Cheng-Shan | China Univ. of GeoSci. | Organizer: Li, Haitao | Shandong Normal Univ. |
| Li, Dan-Yun | China Univ. of GeoSci. | Organizer: Lu, Jianquan | Southeast Univ. |
| Hao, Man | China Univ. of GeoSci. | Organizer: Liu, Yang | Zhejiang Normal Univ. |
| ▶ TuB19-3 | 16:30–16:50 | Organizer: Wu, Yuhu | Dalian Univ. of Tech. |
| ¹³⁹² Analysis of Risk-Based Airport Passenger Classification with PSO-BP Neural Network | | Chair: Feng, Jun-E | Shandong Univ. |
| Zhao, Zhenwu | College of Economics&Management, Civil Aviation Univ. of China | Co-Chair: Liu, Yang | Zhejiang Normal Univ. |
| | | ▶ TuB21-1 | 15:50–16:10 |
| | | ⁰⁹⁷⁴ Input-output Decoupling of Singular Boolean Control Networks | |
| | | Wang, Jianjun | Univ. of Camerino |
| | | De Leone, Renato | Univ. of Camerino |

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| Fu, Shihua | Liaocheng Univ. | Yu, Hui | Beijing Research Inst. of Telemetry |
| Xia, Jianwei | Liaocheng Univ. | Wu, Hanling | Beijing Inst. of Astronautical Sys. Engineering |
| Qiao, Lishan | Liaocheng Univ. | Ni, Fenglei | Harbin Inst. of Tech. |
| ▶ TuB21-2 | 16:10–16:30 | ▶ TuB22-7 | 17:50–18:10 |
| ¹¹²¹ <i>Detectability of Mix-valued Logical Networks</i> | | ²²⁹⁸ <i>Online Receding Horizon Trajectory Planning Method for UUV Near Bottom Terrain Tracking</i> | |
| Shao, Xiaojia | Shandong Univ. | Chen, Tao | Harbin Engineering Univ. |
| Feng, Jun-E | Shandong Univ. | Pi, Qiqi | Harbin Engineering Univ. |
| Zhang, Qiliang | Shandong Univ. | Xu, Da | Harbin Engineering Univ. |
| ▶ TuB21-3 | 16:30–16:50 | Zhou, Jiajia | Harbin Engineering Univ. |
| ¹¹²⁷ <i>Logic-based Solvability of Max-plus Linear Equations</i> | | Yuan, Yonglin | College of Automation |
| Chen, Qi | Shandong Normal Univ. | Lu, Zehui | College of Automation |
| Li, Haitao | Shandong Normal Univ. | | |
| Li, Ping | Shandong Normal Univ. | | |
| Yang, Xinrong | Shandong Normal Univ. | | |
| ▶ TuB21-4 | 16:50–17:10 | TuB23 | 15:50–17:50 |
| ¹⁵²¹ <i>On Degeneracy Problem of NFSRs via Semi-tensor Product</i> | | Invited Session: Intelligent Control of Unmanned System | |
| Zhao, Xinyu | Shandong Univ. | Organizer: Chen, Mou | NUAA |
| Wang, Biao | Shandong Univ. | Organizer: Shao, Shuyi | Nanjing Univ. of Aeronautics & Astronautics |
| Zhu, Shuqian | Shandong Univ. | Chair: Chen, Mou | NUAA |
| Feng, Jun-E | Shandong Univ. | Co-Chair: Shao, Shuyi | Nanjing Univ. of Aeronautics & Astronautics |
| ▶ TuB21-5 | 17:10–17:30 | ▶ TuB23-1 | 15:50–16:10 |
| ¹⁷⁶² <i>A Control-oriented Model Identification for Air Path System of Diesel Engines</i> | | ¹¹⁰⁹ <i>A Moving Target Tracking Control and Obstacle Avoidance of Quadrotor UAV Based on Sliding Mode Control Using Artificial Potential Field and RBF Neural Networks</i> | |
| Wang, Zhijian | Weichai Power Co | Chen, Xuan | Jiangsu Univ. of Sci. & Tech. |
| Yang, Xinda | Weichai Power Co.,Ltd | Xue, Wentao | Jiangsu Univ. of Sci. & Tech. |
| Zhang, Jingfei | Weichai Power Co.,Ltd | Qiu, Haiyang | Jiangsu Univ. of Sci. & Tech. |
| Zhang, Jingyu | Dalian Univ. of Technology | Ye, Hui | Jiangsu Univ. of Sci. & Tech. |
| Wu, Yuhu | Dalian Univ. of Tech. | ▶ TuB23-2 | 16:10–16:30 |
| TuB22 | 15:50–18:10 | ¹⁶³² <i>Finite-Time Backstepping Sliding Mode Control Applied to the Yaw Control of UAV Helicopters with Actuator Faults</i> | |
| Invited Session: Modeling, Sensing and Control for Vehicle and Robot Systems | | Chen, Xia | Univ. of Jinan |
| Organizer: Song, Jia | Beihang Univ. | Zhang, Qiang | Univ. of Jinan |
| Organizer: Liu, Yang | Beihang Univ. (BUAA) | Duan, Yuzhen | Luyi No.2 Experimental High School |
| Chair: Song, Jia | Beihang Univ. | ▶ TuB23-3 | 16:30–16:50 |
| Co-Chair: Liu, Yang | Beihang Univ. (BUAA) | ¹⁷⁷⁴ <i>Approximation-based Finite-time Adaptive Control for MIMO Stochastic Nonlinear Systems and Its Application to NSVs</i> | |
| ▶ TuB22-1 | 15:50–16:10 | Yan, Xiaohui | Hefei Univ. |
| ⁰⁹²¹ <i>Active Disturbance Rejection Course Control for USV Based on RBF Neural Network</i> | | Shao, Shuyi | Nanjing Univ. of Aeronautics & Astronautics |
| Liu, Lei | Dalian Maritime Univ. | Shao, Guiwei | Hefei Univ. |
| Fan, Yunsheng | Dalian Maritime Univ. | Yang, Qingyun | Zaozhuang Univ. |
| ▶ TuB22-2 | 16:10–16:30 | ▶ TuB23-4 | 16:50–17:10 |
| ⁰⁹²⁸ <i>Multi-UUV Formation Coordination Control Based on Virtual Navigator</i> | | ¹⁸⁹⁴ <i>Research on Lifetime Optimization of Unmanned Ship Lithium Battery Pack Power Supply System Based on Artificial Fish Swarm Algorithm</i> | |
| Zhou, Jiajia | Harbin Engineering Univ. | Qi, Yongshuang | Jiangsu Univ. of Sci. & Tech. |
| Zhang, Qiang | Harbin Engineering Univ. | Zhi, Pengfei | Jiangsu Univ. of Sci. & Tech. |
| Wang, Hongjian | Harbin Engineering Univ. | Ye, Hui | Jiangsu Univ. of Sci. & Tech. |
| Guo, Shaobin | Southwest China Research Inst. of Electronic Equipment | Zhu, Wanlu | Jiangsu Univ. of Sci. & Tech. |
| Wang, Yingying | Harbin Engineering Univ. | ▶ TuB23-5 | 17:10–17:30 |
| ▶ TuB22-3 | 16:30–16:50 | ²¹⁵⁶ <i>Reinforcement Learning Based Dynamic Inverse Attitude Control of Near-space Vehicle</i> | |
| ⁰⁹⁶¹ <i>LVS Guidance Based Path Following Control for Unmanned Sailboat with the Event-triggered Input</i> | | Shen, Yaohua | Nanjing Univ. of Aeronautics & Astronautics |
| Zhang, Guoqing | Dalian Maritime Univ. | Chen, Mou | NUAA |
| Li, Jiqiang | Dalian Maritime Univ. | TuB24 | 15:50–17:50 |
| Zhang, Chenliang | Dalian Maritime Univ. | Invited Session: New Challenges in Engine Control | |
| Zhang, Weidong | Shanghai Jiao Tong Univ. | Organizer: Kang, Mingxin | Northeastern Univ. |
| ▶ TuB22-4 | 16:50–17:10 | Organizer: Gao, Jinwu | Jilin Univ. |
| ⁰⁹⁷⁹ <i>The High-speed Rotorcraft UAV Trajectory Planning Based on the Beetle Antennae Search Optimization Algorithm</i> | | Organizer: Shen, Tielong | Sophia Univ. |
| Song, Jia | Beihang Univ. | Chair: Kang, Mingxin | Northeastern Univ. |
| Sun, Mingming | Beihang Univ. | Co-Chair: Gao, Jinwu | Jilin Univ. |
| ▶ TuB22-5 | 17:10–17:30 | ▶ TuB24-1 | 15:50–16:10 |
| ¹⁰²⁹ <i>A State Feedback Control Approach to Optimal Low-thrust Earth-Moon Trajectories</i> | | ¹¹⁰¹ <i>Air Flow Rate and Pressure Control Approach for A PEMFC Air Supply Subsystem</i> | |
| Peng, Kun | China Acad. of Space Tech. | Gao, Jinwu | Jilin Univ. |
| Xu, Ming | Beihang Univ. | Li, Meng | Univ. of Jilin |
| Huang, Zhen | China Acad. of Space Tech. | ▶ TuB24-2 | 16:10–16:30 |
| Yang, Lei | China Acad. of Spacecraft Engineering | ¹¹⁴³ <i>基于数据驱动模型的柴油发动机燃烧与排放一体化控制 Integration of Combustion and Emission Control of Diesel Engine Based on Data Drive Model</i> | |
| ▶ TuB22-6 | 17:30–17:50 | Sun, Mengge | Jilin Univ. |
| ¹⁰³⁴ <i>Research of Teleoperation Grasping Control Method Based on Three-fingered Dexterous Hand</i> | | Gong, Xun | Jilin Univ. |
| Jie, Dangyang | Beijing Inst. of Astronautical Sys. Engineering | Hu, Yunfeng | Jilin Univ. |
| | | Yin, Hai | Jilin Univ. |

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| ▶ TuB24-3 | 16:30–16:50 | | |
| ¹⁴¹⁸ <i>Hybrid Model Framework for Spark Ignition Engines</i> | | | |
| Kang, Mingxin | Northeastern Univ | | |
| ▶ TuB24-4 | 16:50–17:10 | | |
| ¹⁴⁷² <i>Adaptive Dual-Threshold Knock Probability Control Strategy and Experimental Validation for SI Engines</i> | | | |
| Zhao, Kai | Sophia Univ. | | |
| Shen, Tielong | Sophia Univ. | | |
| ▶ TuB24-5 | 17:10–17:30 | | |
| ²³⁹² <i>Observer-based Model Predictive Control Design for Air Supply System of Automotive PEM Fuel Cells</i> | | | |
| Jiang, Weihai | Automotive Engineering Research Inst. | | |
| TuB25 | 15:50–18:30 | | |
| Invited Session: Model, control and optimization of complex systems | | | |
| Organizer: Du, Wenli | East China Univ. of Sci. & Tech | | |
| Organizer: Zhong, Weimin | East China Univ. of Sci. & Tech. | | |
| Organizer: Tang, Yang | East China Univ. of Sci. & Tech. | | |
| Organizer: He, Wangli | East China Univ. of Sci. & Tech. | | |
| Organizer: Zhang, Wenle | Northeastern Univ. | | |
| Chair: Tang, Yang | East China Univ. of Sci. & Tech. | | |
| Co-Chair: He, Wangli | East China Univ. of Sci. & Tech. | | |
| ▶ TuB25-1 | 15:50–16:10 | | |
| ¹³²⁶ <i>Quality-relevant Fault Detection Strategy in the Industrial Process Based on Teacher-Student Uncertainty</i> | | | |
| Yang, Dan | East China Univ. of Sci. & Tech. | | |
| Lu, Yusheng | East China Univ. of Sci. & Tech. | | |
| Jiang, Chao | East China Univ. of Sci. & Tech. | | |
| Zhong, Weimin | East China Univ. of Sci. & Tech. | | |
| Peng, Xin | East China Univ. of Sci. & Tech. | | |
| ▶ TuB25-2 | 16:10–16:30 | | |
| ¹³³⁰ <i>Impulsive Synchronization of Singularly Perturbed Complex Networks with Semi-Markov Jump Topologies</i> | | | |
| Liang, Kun | East China Univ. of Sci. & Tech. | | |
| He, Wangli | East China Univ. of Sci. & Tech. | | |
| ▶ TuB25-3 | 16:30–16:50 | | |
| ¹³⁵³ <i>Leader-follower Quantized Consensus of Multi-agent Systems with Antagonistic Interactions</i> | | | |
| Wang, Qiang | East China Univ. of Sci. & Tech. | | |
| Zhong, Weimin | East China Univ. of Sci. & Tech. | | |
| He, Wangli | East China Univ. of Sci. & Tech. | | |
| Tan, Dayu | East China Univ. of Sci. & Tech. | | |
| ▶ TuB25-4 | 16:50–17:10 | | |
| ¹⁶⁴⁷ <i>A Linearly Convergent Algorithm for Distributed Optimization with Identical Constrained Sets</i> | | | |
| Dong, Ziwei | East China Univ. of Sci. & Tech. | | |
| ▶ TuB25-5 | 17:10–17:30 | | |
| ¹⁶⁹³ <i>An Overview of Navigation Using Reinforcement Learning</i> | | | |
| Wang, Jianrui | East China Univ. of Sci. & Tech. | | |
| Tang, Yang | East China Univ. of Sci. & Tech. | | |
| Wu, Tianyu | East China Univ. of Sci. & Tech. | | |
| ▶ TuB25-6 | 17:30–17:50 | | |
| ¹⁷⁸⁵ <i>湍流状态下危险气体的扩散建模及泄露溯源</i> | | | |
| <i>Diffusion Modeling and Leakage Tracing of Hazardous Gas in Turbulent Condition</i> | | | |
| Dong, Jikai | East China Univ. of Sci. & Tech. | | |
| Du, Wenli | East China Univ. of Sci. & Tech. | | |
| Wang, Bing | East China Univ. of Sci. & Tech. | | |
| ▶ TuB25-7 | 17:50–18:10 | | |
| ¹⁴²² <i>Simultaneous Optimization and Heat Integration of Aromatic Complex Based on Surrogate Model</i> | | | |
| Liu, Yu-Rong | East China Univ. of Sci. & Tech. | | |
| Yang, Minglei | East China Univ. of Sci. & Tech. | | |
| Du, Wenli | East China Univ. of Sci. & Tech. | | |
| Qian, Feng | East China Univ. of Sci. & Tech. | | |
| ▶ TuB25-8 | 18:10–18:30 | | |
| ¹⁶¹⁰ <i>Modeling of An Industrial Regenerator with External Catalyst Cooler in Fluid Catalytic Cracking Unit</i> | | | |
| Li, Tianyue | East China Univ. of Sci. & Tech. | | |
| Long, Jian | East China Univ. of Sci. & Tech. | | |
| Du, Wenli | East China Univ. of Sci. & Tech. | | |
| Qian, Feng | East China Univ. of Sci. & Tech. | | |
| TuB26 | 15:50–17:50 | | |
| Invited Session: Security and Control in Intelligent Cyber-Physical Systems | | | |
| Organizer: Qin, Jiahu | Univ. of Sci. & Tech. of China | | |
| Chair: Qin, Jiahu | Univ. of Sci. & Tech. of China | | |
| Co-Chair: Wu, Junfeng | KTH,Royal Inst. of Tech. | | |
| ▶ TuB26-1 | 15:50–16:10 | | |
| ¹¹⁶² <i>Robust Adaptive Control for A Class of Disturbed Cyber-Physical Systems with Denial of Service</i> | | | |
| Lv, Shaoyu | HeFei Univ. of Tech. | | |
| Jin, Xiao-Zheng | Qilu Univ. of Tech. | | |
| ▶ TuB26-2 | 16:10–16:30 | | |
| ¹²⁷⁴ <i>Optimal Design of An Automatic Sorting System with Robot Arm</i> | | | |
| Huang, Mengyu | HONG KONG Univ. OF Sci. & Tech. | | |
| Wu, Junfeng | KTH,Royal Inst. of Tech. | | |
| Tang, Yang | ABB CHINA | | |
| Shi, Ling | Hong Kong Univ. of Sci. & Tech. | | |
| ▶ TuB26-3 | 16:30–16:50 | | |
| ¹³²² <i>Global Distributed Attitude Tracking Control of Multiple Rigid Bodies via Quaternion Based Hybrid Feedback</i> | | | |
| Huang, Yi | Tsinghua Univ. | | |
| Meng, Ziyang | Tsinghua Univ. | | |
| ▶ TuB26-4 | 16:50–17:10 | | |
| ¹⁷¹⁹ <i>Newton-Based Multi-Area Economic Dispatch Distributed Algorithm</i> | | | |
| Wan, Yanni | Univ. of Sci. & Tech. of China | | |
| Qin, Jiahu | Univ. of Sci. & Tech. of China | | |
| ▶ TuB26-5 | 17:10–17:30 | | |
| ¹⁹⁴¹ <i>False Data Injection Attack Detection for Industry Control Systems Using Time and Frequency-domain Analysis of Sensory Data</i> | | | |
| Zhang, Wenan | Zhejiang Univ. of Tech. | | |
| Huang, Dajian | Zhejiang Univ. of Tech. | | |
| TuB27 | 15:50–17:50 | | |
| Invited Session: Distributed Control, Estimation and Computation of Multi-agent Systems | | | |
| Organizer: Xu, Dabo | Nanjing Univ. of Sci. & Tech. | | |
| Organizer: Song, Cheng | Nanjing Univ. of Sci. & Tech. | | |
| Organizer: Cheng, Yi | Nanjing Univ. of Sci. & Tech. | | |
| Chair: Xu, Dabo | Nanjing Univ. of Sci. & Tech. | | |
| Co-Chair: Song, Cheng | Nanjing Univ. of Sci. & Tech. | | |
| ▶ TuB27-1 | 15:50–16:10 | | |
| ¹³⁰² <i>Distributed ϵ-Generalized Nash Equilibria for Games with Coupled Constraints Accompanied by Uncertainties</i> | | | |
| Chen, Guanpu | Chinese Acad. of Sci. | | |
| Ming, Yang | Acad. of Mathematics & Sys. Sci., Chinese Acad. of Sci. | | |
| Hong, Yiguang | Chinese Acad. of Sci. | | |
| Yi, Peng | Tongji Univ. | | |
| ▶ TuB27-2 | 16:10–16:30 | | |
| ¹³⁰⁹ <i>Coverage Control for Mobile Sensor Networks Subject to Bounded Measurement Errors</i> | | | |
| Song, Cheng | Nanjing Univ. of Sci. & Tech. | | |
| Fan, Yuan | Anhui Univ. | | |
| ▶ TuB27-3 | 16:30–16:50 | | |
| ¹³¹⁸ <i>Distributed Matrix Completion Algorithm Based on Matrix Factorization</i> | | | |
| Tu, Zhipeng | AMSS | | |
| Hong, Yiguang | Chinese Acad. of Sci. | | |
| ▶ TuB27-4 | 16:50–17:10 | | |
| ¹⁸⁸⁷ <i>Multi-agent System Task Planning under Temporal Logic Specifications and Control Barrier Function</i> | | | |
| Huang, Xinyuan | Tongji Univ. | | |
| Li, Li | Tongji Univ. | | |
| Chen, Jie | Beijing Inst. of Tech. | | |
| ▶ TuB27-5 | 17:10–17:30 | | |
| ²¹⁶¹ <i>Multi-agent Formation Tracking with Pattern Size Scaling by Dynamic Displacement Feedback</i> | | | |
| Qin, Fei | Nanjing Univ. of Sci. & Tech. | | |
| Wang, Xinghu | Univ. of Sci. & Tech. of China | | |
| Xu, Dabo | Nanjing Univ. of Sci. & Tech. | | |
| ▶ TuB27-6 | 17:30–17:50 | | |
| ¹²⁴¹ <i>Distributed Unscented Kalman Filters for Nonlinear Multi-Agent Systems with Homologous Unknown Inputs</i> | | | |

Final Program

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|---|----------------------------------|--|---|
| Liu, Changqing Wang, Youqing | Beijing Univ. of Chemical Tech. | Ma, Lei Qin, Na | Southwest Jiaotong Univ. Southwest Jiaotong Univ. |
| TuB28 | 15:50–17:50 | ▷ PTuA-06 | |
| Invited Session: Distributed Optimization of Multi-agent Systems and Its Applications to Economic Dispatch for Smart Grid | | | |
| Organizer: Wang, Dong | Dalian Univ. of Tech. | 0430 ▷ Statistics Manifold Learning Approach and Its Application to Non-Gaussian Process Monitoring | |
| Organizer: Ye, Maojiao | Nanjing Univ. of Sci. & Tech. | Cui, Ping | Shanghai Jiao Tong Univ. |
| Chair: Wang, Dong | Dalian Univ. of Tech. | Wang, Xuhong | Shanghai Jiao Tong Univ. |
| Co-Chair: Ye, Maojiao | Nanjing Univ. of Sci. & Tech. | Yang, Yu-Pu | Shanghai Jiao Tong Univ. |
| ▶ TuB28-1 | 15:50–16:10 | ▷ PTuA-07 | |
| 1022 Distributed Optimal Consensus Control for A Class of Uncertain Non-linear Multi-agent Networks with Disturbance Rejection Using Adaptive Technique | | 0511 Comparative Study of Fault Estimation for 3-DOF Helicopter | |
| Wang, Zhu | Dalian Univ. of Tech. | Lu, Mengjie | Shanghai Maritime Univ. |
| Wang, Dong | Dalian Univ. of Tech. | Zhu, Xiaoyuan | Shanghai Maritime Univ. |
| Wang, Wei | Dalian Univ. of Tech. | Wang, Tianzhen | Shanghai Maritime Univ. |
| ▶ TuB28-2 | 16:10–16:30 | ▷ PTuA-08 | |
| 1169 Hybrid Control Design for Distributed Nonsmooth Extended Monotropic Optimization | | 0676 Fault Diagnosis of Micro Grid Inverter Based on Wavelet Transform and Probabilistic Neural Network | |
| Jiang, Xia | Beijing Inst. of Tech. | Gong, Xin | China Univ. of GeoSci.(wu Han) |
| Zeng, Xianlin | Beijing Inst. of Tech. | Wang, Nan | Wuhan Second Ship Design & Research Inst. |
| Sun, Jian | Beijing Inst. of Tech. | Zhang, Yiqiong | China Univ. of GeoSci. |
| Chen, Jie | Beijing Inst. of Tech. | Yin, Shuai | China Univ. of GeoSci.(Wu Han) |
| ▶ TuB28-3 | 16:30–16:50 | Wang, Ming Yang | China Univ. of GeoSci.,Wuhan |
| 1445 Distributed Real-time Optimal Power Allocation in Smart Grid: A Learning-based Approach | | Wu, Genping | Wuhan Second Ship Design & Research Inst. |
| Guo, Fanghong | Zhejiang Univ. of Tech. | ▷ PTuA-09 | |
| ▶ TuB28-4 | 16:50–17:10 | 0760 Spacecraft Fault Diagnosis Based on Improved A* Algorithm | |
| 1734 An Extremum Seeking Based Approach for Nonconvex Social Cost Minimization | | Zhang, Wei | Shenyang Inst. of Automation(SIA),Chinese Acad. of Sci.(CAS) |
| Ye, Maojiao | Nanjing Univ. of Sci. & Tech. | Gao, Sheng | Shenyang Inst. of Automation, Chinese Acad. of Sci. |
| ▶ TuB28-5 | 17:10–17:30 | He, Xu | Shenyang Inst. of Automation, Chinese Acad. of Sci., Shenyang, China |
| 2068 Distributed Adaptive Optimal Resource Allocation over Networks of Uncertain Nonlinear Multi-agent Systems | | Zou, Yongming | Shenyang Ligong Univ. |
| Qu, Xinyu | Univ. of Sci. & Tech. of China | Li, Wei | Shenyang Inst. of Automation, Chinese Acad. of Sci. |
| Wang, Xinghu | Univ. of Sci. & Tech. of China | ▷ PTuA-10 | |
| Ji, Haibo | Univ. of Sci. & Tech. of China | 1066 Fault Detection and Diagnosis for A Class of Linear Time-Varying (LTV) Discrete-Time Uncertain Systems Using Interval Observers | |
| Poster Session PTuA July 28, 13:30–15:30 | | | |
| ▷ PTuA-01 | | Yi, Zeren | South China Univ. of Tech. |
| 0010 Laguerre-based Robust Dual-mode Predictive Fault Tolerant Tracking Control for A Class of Constrained Linear Parameter-varying Systems | | Xie, Wei | South China Univ. of Tech. |
| Han, Ke-Zhen | Northeastern Univ. | Khan, Awais | South China Univ. of Tech. |
| Jiang, Ping | Univ. of Jinan | Xu, Bugong | South China Univ. of Tech. |
| Li, Shi | Univ. of Jinan | ▷ PTuA-11 | |
| ▷ PTuA-02 | | 1167 Rotary Bearing Fault Diagnosis Based on Improved VMD Algorithm and ELM | |
| 0224 Fault-tolerant Control for PMSM Based on ADRC and Fault Estimation Compensation | | Wei, Pengying | Heilongjiang Univ. |
| Wang, Fuxiang | Beijing Inst. of Tech. | Liu, Mingliang | Heilongjiang Univ. |
| Ma, Liling | Beijing Inst. of Tech. | Guo, Zijian | Heilongjiang Univ. |
| Wang, Junzheng | Beijing Inst. of Tech. | Qin, Huabin | Heilongjiang Univ. |
| Shen, Wei | Beijing Inst. of Tech. | ▷ PTuA-12 | |
| ▷ PTuA-03 | | 1243 Fault Diagnosis Based on Batch-normalized Stacked Sparse Autoencoder | |
| 0302 Fault Travelling Wave Ranging Method Based on GST-TT Transform | | Liu, Xiaozhi | Northeastern Univ. |
| Xu, Yaosong | Liaoning Technical Univ. | Gao, Yang | Northeastern Univ. |
| Xu, Caibao | Liaoning Technical Univ. | Yang, Yinghua | Northeastern Univ. |
| Tang, Wei | Liaoning Technical Univ. | ▷ PTuA-13 | |
| Chen, Haoxuan | Liaoning Technical Univ. | 1248 Computer Design and Test of Suspension Control Based on Two-machine Hot Standby for High Speed Maglev Train | |
| ▷ PTuA-04 | | Liang, Shi | College of Intelligence Sci. & Tech., National Univ. of Defense Tech. |
| 0357 基于解卷积降噪和稀疏分解的风机轴承故障特征提取 FAULT DIAGNOSIS OF ROLLING BEARING BASED ON MED AND ENHANCED SPARSE DECOMPOSITION OF VIBRATION SIGNALS | | Zeng, Jiawei | National Univ. of Defense Tech. |
| Zhou, Chuandi | North China Electric Power Univ. | Jin, Le | National Univ. of Defense Sci. & Tech. |
| Dong, Jian | North China Electric Power Univ. | Long, Zhiqiang | National Univ. of Defense Tech. |
| Wu, Shiming | ENVADA.Ltd | ▷ PTuA-14 | |
| Zhang, Xuan | North China Electric Power Univ. | 1251 Nonlinear Adaptive Fault Estimation for Actuator Faults of Non-Gaussian Uncertain Systems with Sensor Measurement Error | |
| Liu, Yibing | North China Electric Power Univ. | Hu, Kaiyu | Nanjing Univ. of Aeronautics & Astronautics |
| ▷ PTuA-05 | | Chen, Fuyang | Nanjing Univ. of Aeronautics & Astronautics |
| 0401 Disturbance De-coupling for Faults Detection and Identification Based on Right Eigenvectors Assignment for A Single-phase PWM Rectifier | | Cheng, Zian | Nanjing Univ. of Aeronautics & Astronautics |
| Egone, Ndabarushimana | Southwest Jiaotong Univ. | ▷ PTuA-15 | |
| | | 1265 A Finite Frequency Domain Approach to Fault Detection Observer Design for Spatially Interconnected Systems with Interconnected Chains | |
| | | Qin, Wen | Nanjing Univ. of Tech. |

- Wang, Guopeng Nanjing Inst. of Tech.
- ▷ PTuA-16
- 1267 *A Novel Fault Detection Method Based on Adversarial Auto-Encoder*
Wang, Jian Bohai Univ.
Han, Zhi Yan Bohai Univ.
- ▷ PTuA-17
- 1561 *Fault-tolerant Control for Electric Power Steering System Using Inverse System Algorithm*
Zhang, Yun Hefei Univ. of Tech.
Yu, Ming Hefei Univ. of Tech.
Wang, Bing Hefei Univ. of Tech.
Xiao, Chenyu Hefei Univ. of Tech.
- ▷ PTuA-18
- 1563 *Model-based Distributed Diagnosis for Electro-hydraulic Suspension System*
Lan, Dun HeFei Univ. of Tech.
Yu, Ming Hefei Univ. of Tech.
Xiao, Chenyu Hefei Univ. of Tech.
- ▷ PTuA-19
- 1565 *Fault Detection and Isolation for Electric Power Steering System Using Sensitivity Signature*
Wang, Bing Hefei Univ. of Tech.
Yu, Ming Hefei Univ. of Tech.
Zhang, Yun Hefei Univ. of Tech.
Xiao, Chenyu Hefei Univ. of Tech.
- ▷ PTuA-20
- 1823 *Hybrid Deep Neural Network Based on SDAE and GRUNN*
Zou, Yingyong Harbin Univ. of Sci. & Tech.
Yu, Jun Harbin Univ. of Sci. & Tech.
Tang, Jiangen Harbin Univ. of Sci. & Tech.
Zhang, Yongde Harbin Univ. of Sci. & Tech.
- ▷ PTuA-21
- 1928 *Fault Diagnosis of TE Process Based on Incremental Learning*
Wu, Dongsheng Shenyang Ligong Univ.
Gu, Yudi Shenyang Ligong Univ.
Luo, Deng Shenyang Ligong Univ.
Yang, Qing Shenyang Ligong Univ.
- ▷ PTuA-22
- 2074 *Fault Diagnosis Method of Photovoltaic Array Based on Random Forest Algorithm*
Gong, Sizhe Northeastern Univ.
Wu, Xunhao Northeastern Univ.
Zhang, Ziwen Northeastern Univ.
- ▷ PTuA-23
- 2107 *基于核局部保持投影和无监督迁移成分分析的海水泵故障诊断
Seawater Pump Fault Diagnosis Based on Kernel Locality Preserving Projection and Unsupervised Transfer Component Analysis*
Cui, Shiyu Jiangsu Univ. of Sci. & Tech.
Zhu, Zhiyu Jiangsu Univ. of Sci. & Tech.
- ▷ PTuA-24
- 1968 *Stereo Matching Algorithm Based on Wavelet Transform and Joint Selection*
Xu, Yiming China Univ. of Mining & Technology
Yan, Zhibo Harbin Univ. of Sci. & Tech.
Wang, Li Jiangsu Automation Research Inst.
Zhang, Ya Jiangsu Automation Research Inst.
- ▷ PTuA-25
- 2052 *A PDDL Based Disaster Storyline Generation Approach*
Tang, Mingrong Xiamen Univ.
Ni, Jinxin Xiamen Univ.
Zhou, Qifeng Xiamen Univ.
- ▷ PTuA-26
- 0022 *Attack Detection Based on Set-membership Estimation*
Liu, Hao Shenyang Aerospace Univ.
Wang, Xinrui Shenyang Aerospace Univ.
- ▷ PTuA-27
- 0333 *The Optimal False Data Injection Attacks Based on Zonotopes*
Xu, Guangyan Shenyang Inst. of Aeronautical Engineering
Qiu, Hui Shenyang Aerospace Univ.
Liu, Hao Shenyang Aerospace Univ.
- ▷ PTuA-28
- 0585 *Mobile Edge Computing and Resource Scheduling of Internet of Vehicles*
Zhang, Ke Beijing Univ. of Tech.
Lyu, Ying Sci. & Tech. Department
Zhang, Liguoh Beijing Univ. of Tech.
- ▷ PTuA-29
- 0896 *False Data Injection Attacks Against State Estimation in AC-DC Hybrid Power System*
Lin, Rui Nanjing Univ. of Tech.
Yan, Xinteng Nanjing Univ. of Tech.
Li, Feng Nanjing Univ. of Tech.
Zhang, Xuan Nanjing Univ. of Tech.
Yuan, Xiaoshu Nanjing Univ. of Tech.
Sang, Zi Nanjing Univ. of Tech.
Xie, Yunyun Nanjing Univ. of Tech.
- ▷ PTuA-30
- 1266 *Generation Prediction of Ultra-short-term Wind Farm Based on Quantum Genetic Algorithm and Fuzzy Neural Network*
Kou, Zheng Inner Mongolia Electric Power Sci. & Research Inst.
Liu, Taowei Inner Mongolia Electric Power Research Inst.
Zhao, Jianli Inner Mongolia Electric Power Sci. & Research Inst.
- Zhao, Lei Inner Mongolia Electric Power Research Inst.
- ▷ PTuA-31
- 1550 *Power Control of Multi-sensor Remote State Estimation under Malicious Attacks*
Xu, Guangyan Shenyang Inst. of Aeronautical Engineering
Sun, Qiuying Shenyang Aerospace Univ.
Liu, Hao Shenyang Aerospace Univ.
- ▷ PTuA-32
- 1555 *H_{∞} Control for the ICPS Encountering Reactive DoS Jamming Attacks*
Wang, Mufeng Zhejiang Univ.
Liu, Ke Zju
Wang, Jingpei Zhejiang Univ.
Wang, Mengzhi Beijing Inst. of Tech.
Zhao, Zhijun Huaxing Information Tech. Branch of Jiaxing Hengchuang Power Group Co., Ltd
- Xu, Chen Huaxing Information Tech. Branch of Jiaxing Hengchuang Power Group Co., Ltd
- ▷ PTuA-33
- 1585 *A Vision-based Demonstration and Verification Platform for Path Planning*
Gao, Xin Beihang Univ.
Liu, Yipeng BUAA
Shi, Jinxu Beihang Univ.
Wu, Jiang Beihang Univ.
- ▷ PTuA-34
- 1832 *基于最小二乘支持向量机的风功率预测问题
Wind Power Prediction Based on Least Squares Support Vector Machine*
Lang, Jin Northeastern Univ.
Zhang, Yanyan Northeastern Univ.
Zhao, Ren Liaoning Key Laboratory of Manufacturing Sys. & Logistics
- ▷ PTuA-35
- 2289 *Optimal Energy Allocation Based DoS Attack over Remote State Estimation with the Relay*
Miao, Zizheng Univ. of Electronic Sci. & Tech. Oof China
Gan, Ruimeng Univ. of Electronic Sci. & Tech. of China
Bai, Libing Univ. of Electronic Sci. & Tech. of China
Shao, Jinliang Univ. of Electronic Sci. & Tech. of China
- ▷ PTuA-36
- 0203 *SINR-based Multi-channel Power Control under DoS Attacks: A Stackelberg Game Approach*
Liu, Hao Shenyang Aerospace Univ.
Wang, Shaodong Shenyang Aerospace Univ.
- ▷ PTuA-37
- 0064 *Stabilization of Event-triggered Quantized Feedback Control Systems under Denial-of-Service Attacks*
Lin, Yuqing Univ. of Sci. & Tech. of China

Final Program

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|---|--|---|--|
| Li, Feng | Univ. of Sci. & Tech. of China | Huang, Jinke | Air Force Engineering Univ. |
| Ling, Qiang | Univ. of Sci. & Tech. of China | Yao, Mengjia | Xijing Univ. |
| ▷ PTuA-38 | | ▷ PTuA-48 | |
| ⁰¹²⁷ <i>Implementation and Analysis of IEEE 1588 PTP Daemon Based on Embedded System</i> | | ²⁰⁶⁰ <i>Task-Space Adaptive Control of Bilateral Teleoperators with Time-Varying Delay</i> | |
| Lao, Kaiyao | Zhejiang Univ. | Zhang, Congxi | Beijing Inst. of Control Engineering |
| Yan, Gangfeng | Zhejiang Univ. | Wang, Hanlei | Beijing Inst. of Control Engineering |
| ▷ PTuA-39 | | ▷ PTuA-49 | |
| ⁰⁵¹⁴ <i>Regulated State Synchronization for Discrete-time Homogeneous Networks of Non-introspective Agents in Presence of Unknown Non-uniform Input Delays: A Scale-free Protocol Design</i> | | ²²⁹⁷ <i>Event-Triggered Dynamic Output Feedback Control for LTI Systems</i> | |
| Liu, Zhenwei | Northeastern Univ. | Wang, Yong | Hebei Univ. of Tech. |
| Nojavanzadeh, Donya | School of Electrical Engineering & Computer Sci. | Ding, Sanbo | Hebei Univ. of Tech. |
| | | Wang, Jie | Hebei Univ. of Tech. |
| | | Geng, Yanli | Department of Artificial Intelligent |
| Saberi, Dmitri | Stanford Univ. | ▷ PTuA-50 | |
| Saberi, Ali | Washington State Univ. | ²⁴⁰² <i>Impulsive Synchronization of Fractional-order Delayed Gene Regulatory Network Based on Comparative System Method</i> | |
| Stoorvogel, Anton | Univ. of Twente | Liu, Feng | China Univ. of GeoSci. |
| ▷ PTuA-40 | | Ye, Shaoqiang | China Univ. of GeoSci. |
| ⁰⁶⁸⁴ <i>Stability Analysis for Networked Power Systems with LFC and Event-Triggered Communication</i> | | Zheng, Shiqi | China Univ. of GeoSci., Wu Han |
| Liu, Xinghua | Xi'an Univ. of Tech. | Wang, Hua O. | Boston Univ. |
| Bai, Dandan | Xi'an Univ. of Tech. | ▷ PTuA-51 | |
| Zhang, Xiaoyue | Xi'an Univ. of Tech. | ⁰⁹⁰⁰ <i>Distributed Adaptive Finite-time Time-varying Group Formation Tracking for High-order Multi-agent Systems with Directed Topologies</i> | |
| Guan, Jianwei | Xi'an Univ. of Tech. | Tian, Lei | Beihang Univ. |
| ▷ PTuA-41 | | Hua, Yongzhao | Beihang Univ. |
| ⁰⁷⁷⁰ <i>Cooperation Control for SMMS Teleoperation Systems with the Round-Robin Protocol</i> | | Dong, Xiwang | Beihang Univ. |
| Wang, Liping | Univ. of Sci. & Tech. Beijing | Li, Qingdong | Beihang Univ. |
| Li, Yuling | Univ. of Sci. & Tech. Beijing | Ren, Zhang | Beihang Univ. |
| Li, Jing | Univ. of Sci. & Tech. Beijing | ▷ PTuA-52 | |
| Yin, Yixin | Univ. of Sci. & Tech. Beijing, China | ⁰¹⁷² <i>Research on Cooperative Obstacle Avoidance Control of UAV Formation Based on Improved Potential Field Method</i> | |
| Dong, Jie | Univ. of Sci. & Tech. Beijing, China | Dai, Jiyang | Nanchang Hangkong Univ. |
| ▷ PTuA-42 | | Sun, Yijun | Nanchang Hangkong Univ. |
| ⁰⁸⁶⁴ <i>PWM Precise Synchronous Control Method Based on Ether CAT Distributed Ring Net Topology</i> | | Jin, Ying | Nanchang Hangkong Univ. |
| Zhang, Jiangna | Wuhan Univ. of Sci. & Tech. | Nie, Hang | Nanchang Hangkong Univ. |
| Wang, Bin | Wuhan Univ. of Sci. & Tech. | ▷ PTuA-53 | |
| Liu, Jiang | Wuhan Univ. of Sci. & Tech. | ⁰²²¹ <i>Distributed Control of Second-Order Multi-Agent Systems: Fractional Integral Action and Consensus</i> | |
| Zhang, Liangli | Information Sci. & Engineering | Cajo, Ricardo | Ghent Univ. |
| ▷ PTuA-43 | | Zhao, Shiquan | Harbin Engineering Univ. |
| ¹¹⁷⁰ <i>H_∞ Controller Design Based on Redundant Channel Scheme for Networked T-S Fuzzy Systems</i> | | Plaza Guingla, Douglas Antonio | Escuela Superior Politecnica Del Litoral (ESPOL) |
| Zhang, Lei | Heilongjiang Univ. | De Keyser, Robin | Ghent Univ. |
| Wang, Baojun | Heilongjiang Univ. | Ionescu, Clara Mihaela | UGent |
| Li, Xiuying | Electronic Engineering College of Heilongjiang Univ. | ▷ PTuA-54 | |
| ▷ PTuA-44 | | ⁰²⁴⁸ <i>Ultra-wideband and Visual Odometry Based Relative Localization for Multi-UAV System</i> | |
| ¹²²¹ <i>Design and Implementation of EtherCAT Master of Gyrowheel under RTX System</i> | | Zhang, Yikai | Tianjin Univ. |
| Wang, Xin | Shanghai Electro-Mechanical Engineering Inst. | Tian, Bailing | Tianjin Univ. |
| Chen, Yifen | Shanghai Electro-Mechanical Engineering Inst. | Chen, Hongming | Tianjin Univ. |
| Fang, Dongyang | Shanghai Electro-Mechanical Engineering Inst. | ▷ PTuA-55 | |
| Zhong, Jihong | Shanghai Electro-Mechanical Engineering Inst. | ⁰³³⁹ <i>Leader-Following Coordinated Control for Multiple Autonomous Underwater Vehicles Recovery System with Time Varying Delays</i> | |
| Wang, Yiran | Shanghai Electro-Mechanical Engineering Inst. | Zhang, Wei | Harbin Engineering Univ. |
| ▷ PTuA-45 | | Zeng, Jia | Harbin Engineering Univ. |
| ¹⁴¹⁰ <i>Improved Smith Predictive Control Design of Aeroengine Based on H_∞ algorithm</i> | | Yan, Zheping | Harbin Engineering Univ. |
| Li, Jiejie | Dalian Univ. of Tech. | Yu, Zhang | Harbin Engineering Univ. |
| Du, Xian | Dalian Univ. of Tech. | Tian, Weida | Harbin Engineering Univ. |
| Sun, Xi-Ming | Dalian Univ. of Tech. | ▷ PTuA-56 | |
| Liu, Kun-Zhi | Dalian Univ. of Tech. | ⁰⁴⁹³ <i>Asynchronous Algorithm for Distributed Multi-agent Convex Optimization</i> | |
| Gao, Yong-Feng | Dalian Univ. of Tech. | Zhao, Duqiao | School of Automation & Information Engineering |
| ▷ PTuA-46 | | Liu, Ding | Xi'an Univ. of Tech., China |
| ¹⁴⁵⁴ <i>H_∞ Controller Design for Networked Control Systems with Quantization</i> | | Zhang, Xia | Xi'an Univ. of Tech. |
| Zhang, Lingmin | Hebei Normal Univ. of Sci. & Tech., | ▷ PTuA-57 | |
| Li, Xinbin | Yanshan Univ. | ⁰⁵¹³ <i>Fixed-time Control for Uncertain Multi-robot Systems with Prescribed Performance</i> | |
| Yang, Xian | Inst. of Information Sci. & Engineering | Liu, Zheng | Univ. of Sci. & Tech. Beijing |
| ▷ PTuA-47 | | Li, Yuling | Univ. of Sci. & Tech. Beijing |
| ¹⁵¹⁷ <i>Q-MAC Protocol Technique for Cognitive Radio Network</i> | | Zhao, Baoyong | Univ. of Sci. & Tech. Beijing |
| Sun, Wei | XIJING Univ. | Dong, Jie | Univ. of Sci. & Tech. Beijing, China |

- Yin, Yixin Univ. of Sci. & Tech. Beijing, China
- ▷ PTuA-58
⁰⁵³⁰ *Event-triggered Distributed Consensus of Quantized Second-order Multiagent Systems with Partially Measurable States*
 Lin, Na Univ. of Sci. & Tech. of China
 Duan, Shihui China Acad. of Information & Communications Tech.
- Li, Feng Univ. of Sci. & Tech. of China
 Xu, Jun Univ. of Sci. & Tech. of China
 Ling, Qiang Univ. of Sci. & Tech. of China
- ▷ PTuA-59
⁰⁵⁵⁹ *Vision-Based Fixed-Time Platoon Formation Control of Multi-Agent Systems*
 Lu, Ke South China Univ. of Tech.
 Wang, Min South China Univ. of Tech.
 Dai, Shi-Lu South China Univ. of Tech.
- ▷ PTuA-60
⁰⁶⁹¹ *Leader-Follower Bipartite Consensus over Directed Co-op Network with Leader's Bounded Input*
 Nan, Xiaoya Peking Univ.
 Lv, Yuezu Southeast Univ.
 Duan, Zhisheng Peking Univ.
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¹⁰⁴⁴ *Output Synchronization of Heterogeneous Multi-agent Systems Subject to Unknown, Non-uniform and Arbitrarily Large Input Delay: A Scale-free Protocol Design*
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¹²⁴⁴ *Collaborative Path Planning Based on MAXQ Hierarchical Reinforcement Learning for Manned/Unmanned Aerial Vehicles*
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¹²⁵⁸ *Finite Horizon Cooperative Formation Control for Multi-agent Systems*
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¹³⁵⁷ *Distributed Formation Control for Multiple Quadrotor System Based on Consensus Algorithm*
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¹⁶⁰⁵ *Coverage Control of Multi-agent Systems for Ergodic Exploration*
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 Li, Xiao Huazhong Univ. of Sci. & Technology
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¹⁶⁰⁷ *Fault-tolerant Cooperative Tracking Control for Second-order Nonlinear Multi-agent Systems with Actuator Faults*
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¹⁶³¹ *Event-Triggered Finite-Time Consensus for Nonlinear Leaderless Multi-Agent System with Uncertain Disturbances*
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¹⁶⁷⁷ *Distributed Anti-flocking Method for Area Coverage of Multiple Unmanned Aerial Vehicles*
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²⁰²⁹ *面向人工智能的兵棋推演系统设计
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²⁰⁷⁵ *一种基于电力供求平衡的One-Less分布式在线经济调度算法
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 Li, Yanjun Zhejiang Univ. City College
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²²³⁵ *Energy-limited Formation Design for Second-order Multi-agent Systems*
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²²⁶⁴ *Fixed-time Distributed Optimization for Multi-Agent Systems Using An Event-Triggered Communication Scheme*
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²²⁸² *Group Consensus of Continuous-time Second-order Multi-agent Systems via Asynchronous Sampled-data Control*
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²³⁸⁵ *Bipartite Synchronization of Nonlinear Network under Signed Digraph and Switching Topologies*
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⁰¹⁷⁸ *Gradient-based Clustering Routing Algorithm for EH-WSN in Transmission Line Monitoring*
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⁰²¹³ *The Research of Indoor Three-Dimensional Positioning Algorithm Based on Ultra-Wideband Technology*

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Bai, Xingzhen Shandong Univ. of Sci. & Tech.
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0407 *Precise Indoor Pressure Positioning System Based on LabVIEW*
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2404 *Design and Implementation of Cloud-based Single-channel LoRa IIoT*
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Sun, Changqing Inst. of Automation, Qilu Univ. of Tech. (Shandong Acad. of Sci.)
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0245 *Control Strategy of Current Balance Based on VSG of DFIG under Unbalanced Grid Voltage Conditions*
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 1961 *Thermal Efficiency Prediction Model of Cement Clinker Production Based on Fuzzy C-Means Monitoring Clustering*
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 2150 *A Short Review on Block Issues in Hydrogen Recirculation Loop in Proton Exchange Membrane Fuel Cell System and Counter Measures*
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 Yuan, Shu Guangzhou Automobile Group Co., Ltd Automotive Research & Development Center
 Zhou, Feikun Guangzhou Automobile Group Co., Ltd Automotive Research & Development Center
 Xia, Minghui Guangzhou Automobile Group Co., Ltd Automotive Research & Development Center
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 2229 *波浪能转换装置控制策略发展现状*
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 0107 *A Dynamic Motion Planning Framework for Autonomous Driving in Urban Environments*
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 Yu, Lingli Central South Univ.
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 0429 *轮毂液压混合动力系统多模式能量管理策略架构*
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 Chen, Hongxu Jilin Univ.
 Yang, Tian China Automotive Tech. & Research Center
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 Zhang, Xinyong CRRRC Tangshan Co., Ltd
 Gao, Shan CRRRC Tangshan Co., Ltd
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 0794 *An Improved Model Predictive Control Method for Vehicle Lateral Control*
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 1072 *Optimal Lane Change Analysis for Vehicle Platooning Based on Lateral and Longitudinal Control*
 Zhou, Runfa Southern Univ. of Sci. & Tech.
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 1183 *A Sliding Mode Periodic Adaptive Learning Operation Control Method for Medium-speed Maglev Trains*
 Gao, Yaping Beijing Jiaotong Univ.
 Wang, Yonggang CRRRC Tangshan Co., Ltd.,
 Zhang, Jinpeng Luoyang Optoelectro Tech. Developerment Center
 Li, Mengyue Beijing Jiaotong Univ.
 Yue, Qiang School of Electronic & Information Engineering
 Zhang, Wenjing Beijing Jiaotong Univ.
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 1191 *Modeling and Control of Maglev Train Considering Eddy Current Effect*
 Yang, Qing National Univ. of Defense Tech.
 Yu, Pei-Chang National Univ. of Defense Tech.
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 1398 *A Practical Control Strategy for Magnetic Levitation System Against Two Probes Failures*
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 Ding, Kai Shanghai Univ.
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 Wu, Chaoxian Xi'an Jiaotong-liverpool Univ.
 Xue, Fei Xi'an Jiaotong-Liverpool Univ.
 Yang, Jie Jiangxi Univ. of Sci. & Tech.
 Lu, Shaofeng South China Univ. of Tech.
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 1643 *A Periodic Adaptive Learning Control Method for the Medium-speed Maglev Train with Input Saturation*
 Li, Mengyue Beijing Jiaotong Univ.
 Yang, Jun CRRRC Tangshan Co. ,LTD
 Zhang, Jinpeng Luoyang Optoelectro Tech. Developerment Center
 Cao, Bowen Beijing Jiaotong Univ.
 Yue, Qiang School of Electronic & Information Engineering
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 1777 *Fuzzy Wavelet Neural Network Controller Design for Vehicle Active Suspensions Based on Genetic Algorithm*
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| Dong, Xuxin | Nanjing Univ. of Sci. & Tech. | | Wang, Xiaohui | Shenyang Inst. of Automation, Chinese Acad. of Sci. |
| Zhang, Weibin | Nanjing Univ. of Sci. & Tech. | | Sang, Qiming | Chinese Acad. of Sci. |
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| Li, Weibing | Anhui JiangHuai Automobile Group CO. Ltd | | Ren, Junchao | Xi'an Univ. of Tech. |
| Ding, Zhao | Anhui JiangHuai Automobile Group CO. Ltd | | Liu, Congcong | Xi'an Univ. of Tech. |
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Li, Xinlei Tianjin Univ.
Chang, Siyuan Tianjin Univ.
Li, Huiyan Tianjin Univ. of Tech. & Education
Liu, Chen Tianjin Univ.
Wang, Jiang Tianjin Univ.
Wei, Xile Tianjin Univ.
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0328 *A Real-time Simulation Platform Design Based on Neural Mass Model for Deep Brain Stimulation*
Wei, Xile Tianjin Univ.
Zhou, Yifei Tianjin Univ.
Chang, Siyuan Tianjin Univ.
Lu, Meili Tianjin Univ. of Tech. & Education
Yi, Guosheng Tianjin Univ.
Wang, Jiang Tianjin Univ.
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0403 *Bifurcation Solution and Stability on the Unstirred Chemostat System with B-D Functional Response*
Guo, Jun Xi'an Technological
Feng, Xiaozhou Xi'an Technological Univ.
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0575 *Real-time Implementation and Application of Hodgkin-Huxley Model in Embedded System of Closed-Loop Electrophysiology Platform*
Gong, Bo Tianjin Univ.
Wang, Jiang Tianjin Univ.
Wei, Xile Tianjin Univ.
Chang, Siyuan Tianjin Univ.
- Wang, Ruofan Tianjin Univ. of Tech. & Education
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0744 *An Integrated Model of Clinical Information and Gene Expression for Prediction of Survival in Breast Cancer Patients*
Lu, Wenting Northwest Minzu Univ.
Guo, Ling Northwest Minzu Univ.
Mao, Leer Northwest Univ. for Nationalities
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1234 *ECBN: Ensemble Clustering Based on Bayesian Network Inference for Single-cell RNA-seq Data*
Zhang, Dexin China Univ. of GeoSci. (Wu Han)
Zhu, Yuan China Univ. of GeoSci. (Wu Han)
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1714 *Multi-scale Protein Complex Discovery Based on Graph Wavelet*
Wang, Yue Huazhong Agricultural Univ.
Xu, Ran Huazhong Univ. of Sci. & Tech.
Peng, Xiaoyu Wuhan Inst. of Shipbuilding Tech.
Yi, Ming China Univ. of GeoSci.
Zhu, Yuan China Univ. of GeoSci. (Wu Han)
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0041 *Study on Fatigue Fracture Period of Metal Pipes under Compound Vibration Loading*
Zhang, Zi Jun Jiangnan Univ.
Hua, Chun-Jian Jiangnan Univ.
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0042 *Research on Dual Frequency Excited Cutting Method of Metal Bar*
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Yang, Yinghua Northeastern Univ.
Zhao, Xin Northeastern Univ.
Liu, Xiaozhi Northeastern Univ.
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Yao, Dandan Northeastern Univ.
Liu, Xiaozhi Northeastern Univ.
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0499 *Electromagnetic Control of Variable Blank Holder Force*
Fan, Zengzeng Univ. of Jinan
Wang, Qiang Univ. of Jinan
He, Fang Univ. of Jinan
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0980 *SCAPSO-based Inverse Kinematics Method and Its Application to Industrial Robotic Manipulator*
Jin, Fei Southeast
Zhai, Junyong Southeast Univ.
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1404 *Global Automatic Recognition and Localization of Multi Screws Based on Image Mosaic*
Yin, Hang China Univ. of GeoSci., Wuhan
Yuan, Yan China Univ. of GeoSci.
Yao, Chaolong China Univ. of GeoSci.
Wang, Xiaoqi China Univ. of GeoSci., Wuhan
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1417 *On Path Generation Method for Laser Cleaning Robot Based on Line Structured Light*
Ma, Qingzeng Qilu Univ. of Tech. (Shandong Acad. of Sci.)
Zhang, Dongbin Laser Research Inst. of Shandong Acad. of Sci.
Jin, Shuo Laser Research Inst. of Shandong Acad. of Sci.
Yuan, Ren Laser Inst. of Shandong Acad. of Sci.
Cheng, Wei Laser Inst., Shandong Acad. of Sci.
Li, Yanlei Laser Inst., Qilu Univ. of Tech.(Shandong Acad. of Sci.)
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1710 *Robotic Arm Calibration and Teaching Method Based on Binocular Vi-*

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Hong, Xin China Univ. of GeoSci.
Wei, Longsheng China Univ. of GeoSci.
Liu, Yi CRRC Zhuzhou Locomotive Co., Ltd. & National Innovation Center of Advanced Rail Transit Equipment
- Xu, Chi China Univ. of GeoSci.
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1836 *Management Control and Early Warning Methods of Project Progress of Building Material Equipment Manufacturing Enterprises*
Fan, Tao Wuhan Univ. of Tech.
Zhang, Jin WHUT
Xia, Wanyang Wuhan Univ. of Tech.
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1849 *Research on Prediction Method of Finish Rolling Power Consumption of Multi-Specific Strip Steel Based on Random Forest Optimization Model*
Xiao, Xiong Univ. of Sci. & Tech. Beijing
Deng, Daoming Univ. of Sci. & Tech. Beijing
Xiao, Yuxiong Univ. of Sci. & Tech. Beijing
Guo, Qiang Univ. of Sci. & Tech. Beijing
Zhang, Yongjun Univ. of Sci. & Tech. Beijing
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1980 *Design of Intelligent Water Treatment System Based on Single Chip Microcomputer Technology*
Wu, Qixin Shanghai Inst. of Tech.
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1994 *Research and Application Prospect of PID Auto-tuning*
Xin, Chen Shenyang Ligong Univ.
Zhang, Wei Shenyang Ligong Univ.
Yang, Qing Shenyang Ligong Univ.
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2112 *Feature Matching Algorithm Based on SURF and Lowes Algorithm*
Wang, Xiaoqi China Univ. of GeoSci., Wuhan
Cao, Weihua China Univ. of GeoSci.
Yao, Chaolong China Univ. of GeoSci.
Yin, Hang China Univ. of GeoSci., Wuhan
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2236 *Design of An Automatic Testing System for Camera UI Test*
Ji, Pengfei Shenyang Aerospace Univ.
Qi, Yiwen Shenyang Aerospace Univ.
Zhang, Chi Shenyang Aerospace Univ.
Xing, Ning Shenyang Aerospace Univ.
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2279 *Automatic Docking System of Fuel Filler with CAD Model-based Tracking and Visual Servoing Control*
Song, Lei China State Ship Building Corporation
Chen, Ding China State Ship Building Corporation
Hou, Teng China State Ship Building Corporation
Wang, Tingting Hohai Univ.
Liu, Bo Hohai Univ.
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2280 *Aviation Plug Clustering Based Fault Detection Method Using Hyperspectral Image*
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Niu, Sicong Harbin Inst. of Tech.
Shen, Yi Harbin Inst. of Tech.
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2340 *Automated Production Line Monitoring Base on Wireless Mesh Sensor Network*
Wang, Lihui Hainan Univ.
Zhang, Yonghui Hainan Univ.
Chen, Zhenjia Hainan Univ.
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1263 *A Comparison Study of PSO with Different Update Equations in Solving Economic Dispatch Problem*
Chen, Naiyuan Nanjing Vocational Inst. of Transport Tech.
Zhou, Huiting Jiangsu Univ.
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1172 *Image Generation of Trichomonas Vaginitis Based on Mode Margin*
- Generative Adversarial Networks*
Meng, Lingjun Beijing Inst. of Tech.
Jin, Feng Beijing Inst. of Tech.
Zhang, Wenjuan Beijing Univ. of Tech.
Ge, Zhui Beijing Jiaotong Univ.
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0414 *An Improved Defect Detection Method for Substation Equipment*
Ying, Ying Zhejiang Univ.
Wang, Yizhou Zhejiang Univ.
Yan, Yunfeng Zhejiang Univ.
Dong, Zhekan Zhejiang Univ.
Qi, Donglian Zhejiang Univ.
Li, Chaoyong Zhejiang Univ.
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0205 *基于模拟退火优化粒子群的SHEPWM逆变器剩余谐波的研究 Study on Residual Harmonic of SHEPWM Inverter Based on Simulated Annealing Optimization of Particle Swarm*
Zhang, Wenyi Harbin Engineering Univ.
Liu, Xiaoyan Harbin Engineering Univ.
Qiao, Jiaqi Harbin Engineering Univ.
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0216 *分布式光伏并网的电网安全稳定评估 Safety and Stability Assessment of Distributed Photovoltaic -connected Grid*
Kang, Zhongjian China Univ. of Petroleum
Li, Weixiu China Univ. of Petroleum
Luo, Lin China Univ. of Petroleum
Wang, Shanshan China Electric Power Research Inst.
Zhao, Bing China Electric Power Research Inst.
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0494 *Monte-Carlo-Based Modeling and Simulation for Charging Operation of the Electric Vehicles*
Shi, Zewei Northeastern Univ. at Qinhuangdao
Han, Peng Northeastern Univ.
Li, Yan Northeastern Univ. at Qinhuangdao
Guo, Tian Northeastern Univ. at Qinhuangdao
Wang, Jinkuan Northeastern Univ.
Wang, Ying Northeastern Univ.
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0623 *An Improved Active Disturbance Rejection Controller for Hydraulic Valve-Controlled Hydraulic Motor*
Hu, Yifu Tianjin Univ.
Li, Donghui Tianjin Univ.
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1005 *A Multiphysics Simulation Method for Vibration Excitation and Detection in Coriolis Flowmeters*
Sun, Lijun Tianjin Univ.
Lian, Jinpeng Tianjin Univ.
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1032 *A Novel E-Nose Chamber Design for VOCs Detection in Automobiles*
Cheng, Lu Tianjin Univ.
Liu, Yin-Bo Tianjin Univ.
Meng, Qing-Hao Tianjin Univ.
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1200 *Lateral Overturning Dynamic Simulation and Analysis of Single Column Pier Girder Bridge*
Lai, Yongbo Jiangsu College of Information Tech.
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1690 *Spectral Reflectance Reconstruction from Camera Responses by Adaptively Constructing Weight Matrix Combining Colorimetric and Lightness Similarities*
Wang, Xin China Univ. of GeoSci. (Wuhan)
Jiang, Hui China Univ. of GeoSci.
Zhang, Jingjing China Univ. of GeoSci.(wuhan)
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2012 *A New Calculation Method for Membership Degree and Non-membership Degree of PFS*
Zhang, Qiang Air Force Engineering Univ.

- Chen, Guoming
Yan, Qimin
Air Force Engineering Univ.
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0150 *Research on Short-Term Load Forecasting Using K-means Clustering and CatBoost Integrating Time Series Features*
Zhang, Chenrui
Chen, Zhonghua
Zhou, Jing
Zhejiang Univ.
Hangzhou Electric Power Design Inst. Co. Ltd
School of Electrical Engineering, Zhejiang Univ.
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0264 *Multi-Agent Consensus Control of Distributed Inverter Air Conditioning Load Based on the Demand Response*
Liu, Peng
Chen, Lida
Ma, Tengxiao
Bai, Xingzhen
Xu, Hongxiang
Shandong Univ. of Sci. & Tech.
Shandong Univ. of Sci. & Tech.
Shandong Univ. of Sci. & Tech.
Shandong Univ. of Sci. & Tech.
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0316 *Optimal Economic Scheduling Based on Improved Fully Distributed Consistency Algorithm*
Guo, Xiaoyan
Mi, Yang
Shanghai Univ. of Electric Power
Shanghai Univ. of Electric Power
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0706 *Photovoltaic Power Regression Model Based on Gauss Boltzmann Machine*
Lu, Zhiying
Wang, Zehan
Ren, Yimo
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Wang, Ru-Xue
Shi, Bo-Feng
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Zhang, Jun
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Tianjin Univ.
Tianjin Huadian Nanjiang Thermal Power Co., Ltd
Tianjin Univ.
Tianjin Univ.
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1366 *Study on Single-phase Ground Fault Location of Distribution Network Based on MDS and DBSCAN Clustering*
Mu, Zhijun
State Grid Shandong Electric Power Company
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1474 *Photovoltaic Power Ramp Prediction Based on Sequential Difference*
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1666 *Improved PI and Repetitive Controller for Dual-Buck Inverter*
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Wang, Wu
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1864 *泛在电力物联网环境下的区域日最大负荷多步预测模型研究
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Huang, Xinyu
Chen, Jing
Wang, Yougang
Jiang, Hao
Miao, Xiren
Fuzhou Univ.
College of Electrical Engineering & Automation, Fuzhou Univ.
Fuzhou Univ.
Fuzhou Univ.
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1885 *Research on Time Synchronization Technology of Heterogeneous Network in Distribution Network Based on 5G*
Xiong, Wen
Shao, Shuai
Lao, Yongzhao
Cui, Shijie
Xu, Quan
Guangzhou Power Supply Bureau, Co,
Shenyang Inst. of Automation Chinese Acad. of Sci.
Guangzhou Power Supply Bureau, Co,
Shenyang Inst. of Automation Chinese Acad. of Sci.
China Southern Power Grid(CSG)
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- Air 1913 *考虑极端天气线路脆弱性的配电网分布式电源优化模型
Optimization Model of Distributed Generation in Distribution Network Considering the Vulnerability of Line in Extreme Weather*
Ma, Yufan
Li, Peng
Cao, Min
Yunnan Univ.
Yunnan Univ.
China South Power Grid Corp
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2001 *Study on the Operation of Integrated Energy Microgrid with Water Source Heat Pump*
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Huang, Wei
Huo, Xianxu
Wang, Xudong
China Electric Power Research Inst.
China Electric Power Research Inst.
China Electric Power Research Inst.
State Grid Tianjin Electric Power Co., Ltd. Electric Power Research Inst.
State Grid Tianjin Electric Power Co., Ltd. Electric Power Research Inst.
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2073 *CUDA-Based Parallel Computation Model for State Estimation*
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Kong, Xiangyu
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2322 *Research on Network Configuration and Voltage Control of DC Distribution Station*
Su, Fuwen
Wang, Dan
Ye, Ziliu
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Wuhan Univ. of Tech.
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2346 *Finite-time Distributed Cooperative Control of Microgrid Using Adaptive Virtual Impedance*
Ma, Lingyu
Zhang, Jiancheng
Li, Zhen
Shandong Management Univ.
Harbin Inst. of Tech.
Shandong Management Univ.
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0123 *Research of E-commerce Resource Allocation Method Based on Clustering*
Chen, Dongming
Du, Nanpan
Zhang, Qiang
Wang, Dongqi
Huang, Xinyu
Northeastern Univ.
Software College of Northeastern Univ.
Northeastern Univ.
Northeastern Univ.
Northeastern Univ.
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0153 *Binocular Camera Parallel Calibration Method Based on Sub-pixel*
Du, Juan
Tang, Yongchao
South China Univ. of Tech.
South China Univ. of Tech.
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0212 *A Forest Height Estimation Algorithm Based on the Random Forests Leaf Mean Encoding*
Li, Jiangeng
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Beijing Univ. of Tech.
Beijing Univ. of Tech.
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0237 *Pitaya Detection in Orchards Using the MobileNet-YOLO Model*
Li, Xiuli
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Wang, Fujie
Guo, Fang
Yeow, John T W
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0273 *A Classification Algorithm Based on Self-organizing Neural Network Using Growing-Combination Structure*
Cheng, Qi
Zhang, Min
Li, Ziwei
Cao, Yunpeng
He, Bo
Feng, Weixing
Harbin Engineering Univ.
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0275 *Ocean Surface Wind Prediction Based on GA-LIESN On-line Learning Model*
Lu, Zhiying
Ni, Tianqi
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| Yan, Jingchun | Tianjin Univ. | | Yang, Shujia | Tianjin Univ. |
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| Wang, Yanqiu | Tianjin Univ. | ▷ PTuB-42 | | |
| Yue, Shihong | Tianjin Univ. | 0734 | <i>Research on Multiple Digital Watermarking Algorithm Based on Double Scrambling</i> | |
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| 0380 | <i>Clustering Characteristics of UCI Dataset</i> | | Wang, Chenyu | Harbin No.9 High School |
| Sun, Chang | Tianjin Univ. | | Wang, Qiang | Harbin Engineering Univ. |
| Yue, Shihong | Tianjin Univ. | ▷ PTuB-43 | | |
| Li, Qi | Tianjin Univ. | 0746 | <i>The Virtual Training Platform for Computer Vision</i> | |
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| 0386 | <i>Identification of Early Esophageal Cancer Based on Data Augmentation</i> | | Chen, Wenjie | Beijing Inst. of Tech. |
| Li, Xinyi | Chongqing Univ. | | Sun, Yangyang | Beijing Inst. of Tech. |
| Chai, Yi | Chongqing Univ. | | Li, Ye | Beijing Inst. of Tech. |
| Chen, Weiqing | Chongqing Univ. Cancer Hospital | | Chen, Chen | Beijing Inst. of Tech. |
| Ao, Fei | Chongqing Univ. Cancer Hospital | ▷ PTuB-44 | | |
| ▷ PTuB-34 | | 0802 | <i>Similarity Measure of Time Series Based on Siamese and Sequential Neural Networks</i> | |
| 0394 | <i>Solid Component Fraction in Multi-Phase Flows Using Electrical Resistance Tomography and Kalman Filter</i> | | Li, Jianguo | Beijing Univ. of Tech. |
| Yang, Liu | Tianjin Univ. | | Xu, Changjian | Beijing Univ. of Tech. |
| Yue, Shihong | Tianjin Univ. | | Zhang, Ting | Beijing Univ. of Tech. |
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| 0578 | <i>Stereo Vision and Mask-RCNN Segmentation Based 3D Points Cloud Matching for Fish Dimension Measurement</i> | | Du, Yabing | Dalian Univ. of Tech. |
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| Li, Yanjun | Zhejiang Univ. City College | | Jia, Wenjuan | Dalian Univ. of Tech. |
| Suo, Feiyang | Zhejiang Univ. | | Liu, Mengmeng | Dalian Univ. of Tech. |
| Xiang, Ji | Zhejiang Univ. | ▷ PTuB-46 | | |
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| 0621 | <i>Insulator Detection Method Based on Multi-angle Region Proposal Network</i> | | Lin, Kai | Dalian Univ. of Tech. |
| Chen, Zhihao | Xiangtan Univ. | | Zhang, Chengkun | Dalian Univ. of Tech. |
| Xiao, Yewei | Xiangtan Univ. | | Han, Min | Dalian Univ. of Tech. |
| Zhou, Yan | Xiangtan Univ. | ▷ PTuB-47 | | |
| ▷ PTuB-37 | | 1007 | <i>Improved Collaborative Filtering Recommendation Algorithm Based on Weibo Content</i> | |
| 0642 | <i>A New Learning and Classification Framework for the Detection of Abnormal Heart Sound Signals Using Hybrid Signal Processing and Neural Networks</i> | | Xue, Juntao | Tianjin Univ. |
| Zeng, Wei | Longyan Univ. | | Ma, Ruohan | Tianjin Univ. |
| Lin, Zixiang | Longyan Univ. | | Zhao, Yunfeng | Tianjin Univ. |
| Yuan, Chengzhi | Univ. of Rhode Island | | Hei, Junjie | Tianjin Univ. |
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| Liu, Fenglin | Longyan Univ. | 1045 | <i>Efficient Image Dehazing by Improving Retinex Algorithm</i> | |
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| 0643 | <i>Particle Recognition in Dust Imagery Using Fractional Calculus and Discriminative Features</i> | | Li, Kaiyu | Tianjin Univ. |
| Wang, Zheng | Xi'an Univ. of Sci. & Tech. | | Ma, Ruohan | Tianjin Univ. |
| Zhang, Helin | Xi'an Univ. of Sci. & Tech. | ▷ PTuB-49 | | |
| Li, Dongyan | Xi'an Univ. of Sci. & Tech. | 1051 | <i>Epileptic Seizure Prediction in Scalp EEG Using An Improved HIVE-COTE Model</i> | |
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| Ding, Xudong | Tianjin Univ. | | Song, Yang | South East Univ. |
| Ren, Yimo | Tianjin Univ. | ▷ PTuB-50 | | |
| Sun, Xiaolei | Tianjin Central Observatory for Oceanic Meteorology | 1159 | <i>A New Convolutional Neural Network for Super-Resolution by Global and Local Residual</i> | |
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| 0677 | <i>A Light Wight Detection Network with An Anchor-based Pooling Module</i> | | Liu, Mingliang | Heilongjiang Univ. |
| Huang, Zhendong | Univ. of Sci. & Tech. of China | | Qin, Huabin | Heilongjiang Univ. |
| Chen, Chunlin | Univ. of Sci. & Tech. of China | | Guo, Zijian | Heilongjiang Univ. |
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| Ling, Qiang | Univ. of Sci. & Tech. of China | | Zhao, Mingyue | Tianjin Univ. |
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¹²⁰⁶ *Two-Stream Convolutional Neural Networks for Emergency Recognition in Images*
 Chen, Jia Univ. of Sci. & Tech. of China
 Duan, Shihui China Acad. of Information & Communications Tech.
 Long, Fei Chinaso Inc
 Wang, Yongxing Chinaso Co
 Wang, Song Univ. of Sci. & Tech. of China
 Ling, Qiang Univ. of Sci. & Tech. of China
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¹⁵³⁵ *Research on Detection and Tracking Technology of Quad-rotor Aircraft Based on Open Source Flight Control*
 Cao, Meng Beijing Inst. of Tech.
 Chen, Wenjie Beijing Inst. of Tech.
 Li, Ye Beijing Inst. of Tech.
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¹⁵⁸⁹ *Siamese Network with Channel-wise Attention and Multi-scale Fusion for Robust Object Tracking*
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 Liu, Ye Nanjing Univ. of Posts & Telecommunications
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¹⁶²⁰ *Cervical Cancer Cell Detection Based on Deep Convolutional Neural Network*
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¹⁶²⁹ *Object Tracking Based on Saliency and Adaptive Background Constraint*
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¹⁶⁴⁴ *Intelligent Instrument Recognition Scheme Based on Unattended Substation Inspection*
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¹⁶⁶³ *Improved KCF Long-term Gesture Tracking Based on GMM and ELM*
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¹⁷⁷⁶ *Classification Algorithms of Strip Surface Defects Based on PCA-ELM*
 Miao, Fengze Univ. of Sci. & Tech. Liaoning
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¹⁷⁸⁴ *End-to-end Visual Object Tracking with Motion Saliency Guidance*
 Zhang, Yucheng Beihang Univ.
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¹⁸⁵² *Robust Convex Clustering with Spectral Analysis-based Feature Selection*
 Fu, Yitu Northeastern Univ.
 Sun, Xiaodong China Coal Tech. Engineering Group
 Qing, Lan Northeastern Univ.
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¹⁹⁰⁷ *Fish Trajectory Extraction Based on Object Detection*
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 Liu, Meiqin Zhejiang Univ.
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¹⁹⁷⁶ *ResNet-based Image Classification of Railway Shelling Defect*
 Song, Xingguo Southwest Jiaotong Univ.
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- Cao, Zhongqing Southwest Jiaotong Univ.
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²⁰²⁵ *View-Decision Based Compound Match Learning for Vehicle Re-identification in UAV Surveillance*
 Song, Ye Shandong Univ.
 Liu, Chunsheng Shandong Univ.
 Zhang, Wang Shandong Univ.
 Nie, Zhaoying Shandong Univ.
 Luchang, Chen Shandong Univ.
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²⁰⁴⁹ *Crowd Counting for Static Images: A Survey of Methodology*
 Luo, Ying Beihang Univ.
 Lu, Jinhu Chinese Acad. of Sci.
 Zhang, Baochang Beihang Univ.
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²⁰⁹⁰ *Human Action Prediction Based on Skeleton Data*
 Zhang, Qipeng Beihang Univ.
 Wang, Tian Beihang Univ.
 Wu, Huai-Ning Beijing Univ. of Aeronautics & Astronautics
 Li, Mingmin CASC
 Zhu, Jianpeng Chinese Acad. of Sci.
 Snoussi, Hichem Univ. of Tech. of Troyes
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²⁰⁹⁵ *Few-sample Multi-organ Abdominal Image Segmentation with Mean Teacher Model*
 Chen, Pingyi Beihang Univ.
 Chen, Tianyu Beihang Univ.
 Yang, Zhiqiang Beihang Univ.
 Wang, Tian Beihang Univ.
 Zhang, Mengyi Nanjing Tech Univ.
 Snoussi, Hichem Univ. of Tech. of Troyes
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²¹⁶⁷ *Target Tracking Algorithm with Adaptive Learning Rate Complementary Filtering*
 Pan, Yulei Beijing Inst. of Tech.
 Bai, Yongqiang BeiJing Inst. of Techonlogy
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²¹⁷⁸ *Air Quality Controlling-Oriented Highly Efficient Method for Monitoring Particulate Matters*
 Zhang, Yonghui Beijing Univ. of Tech.
 Gu, Ke Beijing Univ. of Tech.
 Xia, Zhifang Beijing Univ. of Tech.
 Qiao, Junfei Beijing Univ. of Tech.
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²²⁷⁶ *Novel Detection Method on Polarization Spectral Imaging in Handwriting Identification*
 Zhang, Miao Harbin Inst. of Tech.
 Niu, Sicong Harbin Inst. of Tech.
 Feng, Jiawen Harbin Inst. of Tech.
 Shen, Yi Harbin Inst. of Tech.
- ▷ PTuB-71
²²⁸⁶ *Dynamic Gesture Recognition Based on DS Evidence Theory*
 Lei, Haoxin Zhengzhou Univ.
 Liu, Yanhong Zhengzhou Univ.
 Lei, Yang Zhengzhou Univ.
- ▷ PTuB-72
²³⁵⁹ *航拍视角下的实时车辆检测算法研究与实现
 Research and Implementation of Real-time Vehicle Detection Algorithm from Aerial Perspective*
 Lee, Victor Southeast Univ.
 Chai, Lin Southeast Univ.
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²³⁶³ *A Fast Reconstruction Method of 3D Object Point Cloud Based on Realsense D435*
 Ma, Wenyuan Beijing Univ. of Chemical Tech.
 Yang, Kehan Univ. of Deroit Mercy
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²⁴⁰⁷ *The Method on Stacked Particle Image Segmentation and Particle Size Measurement*
 Li, Yong Harbin Engineering Univ.

- Xiao, Jun China Acad. of Engineering Physics
Zhu, Qidan Harbin Engineering Univ.
- ▷ PTuB-75
0310 *The Determinants of Regional Credit Networks: Evidence from Chinese Guarantee System*
Wang, Yingli Acad. of Mathematics & Sys. Sci., Chinese Acad. of Sci.
- Lu, Chang Chinese Acad. of Sci.
Li, Hucheng Acad. of Mathematics & Sys. Sci., CAS
Zhou, Ye Chinese Acad. of Sci.
Yang, Xiaoguang Acad. of Mathematics & Sys. Sci., Chinese Acad. of Sci.
- ▷ PTuB-76
0848 *Spatial Dynamics of the Public Goods Game with Probabilistic Participation*
Wang, Xiaofeng Donghua Univ.
Kong, Weijian Donghua Univ.
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1049 *Discrete Opinion Dynamics with Social Bots on Signed Network*
Luo, Yun Westlake Univ.
Cheng, Chun Westlake Univ.
Yu, Changbin Westlake Univ.
- ▷ PTuB-78
0053 *The MPC Attitude Control with Integration for VELOX-II*
Zhang, Xiaohua Nanjing Univ. of Sci. & Tech.
Ling, Keck Voon Nanyang Technological Univ.
Lim, Wee Seng Nanyang Technological Univ.
Chong, Kwang Tong Nanyang Technological Univ.
Lu, Zhengliang Nanjing Univ. of Sci. & Tech.
Zhang, Xiang Nanjing Univ. of Sci. & Tech.
Liao, Wenhe Nanjing Univ. of Sci. & Tech.
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0363 *Adaptive Terminal Sliding Mode Control for the Combined Spacecraft Takeover Control*
Zhou, Heng National Univ. of Defense Tech.
Zhao, Yong National Univ. of Defense Tech.
Chen, Zhijun National Univ. of Defense Tech.
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0365 *Real-Time Simulation Platform Verification for RLV Attitude Control*
Li, Kang Tianjin Univ.
Zong, Qun Tianjin Univ.
Zhang, Ruilong Tianjin Univ.
Zhang, Xiuyun Tianjin Univ.
- ▷ PTuB-81
0388 *Cascade Control of Spacecraft Formation with Actuator Saturation*
Cui, Shihang China Acad. of Space Tech.
Li, Yong China Acad. of Space Technology
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0645 *Trajectory Generation for Quadrotor While Tracking A Moving Target in Cluttered Environment*
Xi, Lele Beijing Inst. of Tech.
Peng, Zhihong Beijing Inst. of Tech.
Jiao, Lei Beijing Inst. of Tech.
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0714 *Observer-like Model Reference Adaptive Augmenting Based Fixed-wing UAV Control*
Xiong, Jizhang Huazhong Univ. of Sci. & Tech.
Yang, Ye Beijing Aerospace Automatic Control Institution
Cheng, Zhongtao Huazhong Univ. of Sci. & Tech.
Liu, Lei Huazhong Univ. of Sci. & Tech.
Wang, Yongji Department of Control Sci. & Engineering, Huazhong Univ. of Sci. & Tech.
Fan, Huijin Huazhong Univ. of Sci. & Tech.
- ▷ PTuB-84
1011 *Obstacle Avoidance-based Control System Design of UAV with Suspended Payload*
Ren, Zhiheng Tianjin Univ.
Hu, Chaofang Tianjin Univ.
Wu, Hao Tianjin Univ.
Sun, Bing Han Tianjin Univ.
Guo, Yao Tianjin Univ.
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1021 *Vision-based Autonomous Landing of Unmanned Aerial Vehicle on A Motional Unmanned Surface Vessel*
Xu, Zhecheng Huazhong Univ. of Sci. & Tech.
Hu, Binbin Huazhong Univ. of Sci. & Tech.
Liu, Bin Huazhong Univ. of Sci. and Tech.
Wang, Xudong Huazhong Univ. of Sci. & Tech.
Zhang, Hai-Tao Huazhong Univ. of Sci. & Tech.
- ▷ PTuB-86
1147 *Adaptive Tracking Control for Spacecraft Hovering to Noncooperative Target with Trajectory Generator*
Zhang, Kai Southwest Jiaotong Univ.
Li, Bin Sichuan Univ.
- ▷ PTuB-87
1413 *Controller Design of Aero-engines under the Distributed Architecture with Time Delays*
Wang, Xinyue Dalian Univ. of Tech.
Du, Xian Dalian Univ. of Tech.
Wang, Xuefang Dalian Univ. of Tech.
Sun, Xi-Ming Dalian Univ. of Tech.
Li, Yingshun Shenyang Univ. of Tech.
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1688 *基于可行配置矩阵的航天器推力器配置构型方法*
Spacecraft Thruster Configuration Method Based on Feasible Configuration Matrix
Wang, Min Beijing Inst. of Control Engineering
Xie, Yongchun Beijing Inst. of Control Engineering
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1753 *Path Planning of Stand-off Jamming Electronic Warfare Aircraft*
Feng, Qi Northwestern Polytechnical Univ.
Hong, Chunshen Northwestern Polytechnical Univ.
Gao, Ruizhou Sci. & Tech. on Electro-optic Control Laboratory
- ▷ PTuB-90
1906 *Robust Attitude Tracking Control and Disturbance Rejection for Flexible Spacecraft*
Dong, Hanlin Harbin Inst. of Tech.
Yang, Xuebo Harbin Inst. of Tech.
- ▷ PTuB-91
1929 *Wind Disturbance Rejection Control Law Based on AESO for A Hybrid Tail-Sitter UAV*
Wang, Shuyang Beihang Univ.
Zhang, Jing Beihang Univ.
Yang, Lingyu Beihang Univ.
- ▷ PTuB-92
2108 *FSE-RBFNNs-Based Adaptive Tracking Control of Hypersonic Flight Vehicles with Uncertain Periodic Time-Varying Disturbances*
Dong, Zehong Air Force Engineering Univ.
Li, Yinghui Air Force Engineering Univ.
Zuo, Renwei Air Force Engineering Univ.
Xu, Haojun Aeronautics Engineering College
Lv, Maolong Delft Univ. of Tech.
- ▷ PTuB-93
2234 *Data-Driven Learning and Receding Horizon Control for Quadrotors*
Hu, Chen Hangzhou Dianzi Univ.
Lu, Qiang Hangzhou Dianzi Univ.
Yin, Ke Hangzhou Dianzi Univ.
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2292 *Simulation Verification of Flight Control of A Tilt Tri-rotor UAV Using X-plane*
He, Guang National Univ. of Defense & Tech.,
Yu, Li National Univ. of Defense Tech.
Jia, Shengde National Univ. of Defense Tech.
Wang, Xiangke National Univ. of Defense Tech.
- ▷ PTuB-95
0667 *Covered Vehicle Detection in Autonomous Driving Based on Faster RCNN*
Fan, Jiaqi Jilin Univ.
Huo, Tianjiao Jilin University
Li, Xin Jilin Univ.
Qu, Ting Jilin Univ.
Gao, Bingzhao Jilin Univ.

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| Chen, Hong | Jilin Univ. | ▷ PTuB-106 | |
| ▷ PTuB-96 | | 0452 | <i>Real-time Abnormal Behavior Recognition and Monitoring System Based on Panoramic Video</i> |
| 0077 <i>Neural Style Transfer for Picture with Gradient Gram Matrix Description</i> | | | |
| Jin, Heng | Beihang Univ. | | Beijing Univ. of Tech. |
| Wang, Tian | Beihang Univ. | | Beijing Univ. of Tech. |
| Zhang, Mengyi | Nanjing Tech Univ. | | Beijing Univ. of Tech. |
| Li, Mingmin | CASC | | Beijing Univ. of Tech. |
| Wang, Yan | Beihang Univ. | ▷ PTuB-107 | |
| Snoussi, Hichem | Univ. of Tech. of Troyes | 0473 | <i>Multi-meter Intelligent Detection and Recognition Method under Complex Background</i> |
| ▷ PTuB-97 | | | |
| 0088 <i>Deep Neural Network Compression Method Based on Product Quantization</i> | | | |
| Fang, Xiuqin | Xian Univ. of Tech. | | Jilin Univ. |
| Liu, Han | Xi'an Univ. of Tech. | | Jilin Univ. |
| Xie, Guo | Xi'an Univ. of Tech. | | Jilin Univ. |
| Zhang, Youmin | Concordia Univ. | | China Univ. of Petroleum |
| Liu, Ding | Xi'an Univ. of Tech.,China | | Jilin Univ. |
| ▷ PTuB-98 | | ▷ PTuB-108 | |
| 0168 <i>Generating Adversarial Examples with Image-To-Perturbation Network</i> | | 0474 | <i>Chip Surface Character Recognition Based on Improved LeNet-5 Convolutional Neural Network</i> |
| Wang, Desheng | Southwest Jiaotong Univ. | | |
| Jin, Weidong | Southwest Jiaotong Univ. | | Shanghai Univ. |
| Wu, Yunpu | Southwest Jiaotong Univ. | | ShangHai Univ. |
| ▷ PTuB-99 | | | Shanghai Univ. |
| 0203 <i>Deep Multi-scale Feature Fusion Convolutional Neural Network for Automatic Epilepsy Detection Using EEG Signals</i> | | ▷ PTuB-109 | |
| Qin, Hongshuai | Tianjin Univ. | 0480 | <i>Ship Detection in Remote Sensing Image Based on Faster R-CNN with Dilated Convolution</i> |
| Deng, Bin | Tianjin Univ. | | |
| Wang, Jiang | Tianjin Univ. | | Shanghai Univ. |
| Yi, Guo-Sheng | School of Electrical & Automation Eng., Tianjin Univ. | | Shanghai Univ. |
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| Wang, Ruofan | Tianjin Univ. of Tech. & Education | 0537 | <i>A Novel Person Re-ID Method Based on Multi-Scale Feature Fusion</i> |
| Zhang, Zhen | Tianjin Univ. | | |
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| 0241 <i>An Improved Few-Shot Learning for Insulator Classification in Railway 2C System</i> | | | |
| Liang, Li | SouthWest Jiaotong Univ. | | Chongqing Univ. of Posts & Telecommunications |
| Jin, Weidong | Southwest Jiaotong Univ. | | Chongqing Univ. of Posts & Telecommunications |
| Huang, Yingkun | Southwest Jiao Tong Univ. | | Chongqing Univ. of Posts & Telecommunications |
| ▷ PTuB-101 | | | Chongqing Univ. |
| 0250 <i>Deep Convolutional Neural Network for Detection of Disorders of Consciousness</i> | | ▷ PTuB-111 | |
| Xu, Zifan | Tianjin Univ. | 0568 | <i>Multi-scale Rotated Bounding Box-Based Deep Learning Method for Electric Railway Detection</i> |
| Wang, Jiang | Tianjin Univ. | | |
| Wang, Ruofan | Tianjin Univ. of Tech. & Education | | Zhejiang Univ. |
| Zhang, Zhen | Tianjin Univ. | | Zhejiang Univ. |
| Yang, Shuangming | Tianjin Univ. | | Zhejiang Univ. |
| ▷ PTuB-102 | | ▷ PTuB-112 | |
| 0306 <i>Parkinsonian State Online Modulation Based on BP Neural Network</i> | | 0603 | <i>Identification Method of Airport Violence Sorting Based on Deep Learning</i> |
| Liu, Chen | Tianjin Univ. | | |
| Zhao, Ge | Tianjin Univ. | | Shanghai Univ. |
| Wang, Jiang | Tianjin Univ. | | School of Mechanical & Electrical Automation, Shanghai Univ. |
| Li, Huiyan | Tianjin Univ. of Tech. & Education | | China Rural Tech. Development Center |
| ▷ PTuB-103 | | | Shanghai Univ. |
| 0313 <i>Reconstructing Neural Network Topology from Firing Activity</i> | | ▷ PTuB-113 | |
| Yang, Xu | Tianjin Univ. | 0605 | <i>Improved-YOLOv3 Network for Object Detection in Simulated Space Solar Power Systems Images</i> |
| Wang, Jiang | Tianjin Univ. | | |
| Liu, Chen | Tianjin Univ. | | China Univ. of GeoSci. |
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| 0398 <i>Re-identifying Pedestrians via Part Based Method</i> | | | China Univ. of GeoSci. |
| Lu, Pingli | Beijing Inst. of Tech. | ▷ PTuB-114 | |
| Wei, Yafei | Beijing Inst. of Tech. | 0658 | <i>Research on Prediction Method of Ship Rolling Motion Based on Deep Learning</i> |
| Gu, Xiaowei | Beijing Inst. of Tech. | | |
| Han, Wei | Beijing Inst. of Tech. | | Harbin Engineering Univ. |
| Li, Chao | North China Univ. of Tech. | | Harbin Engineering Univ. |
| ▷ PTuB-105 | | | Harbin Engineering Univ. |
| 0451 <i>Implementation of Person Tracking System in Panorama Based on Personalized Distribution</i> | | ▷ PTuB-115 | |
| Li, Jiangeng | Beijing Univ. of Tech. | 0685 | <i>An Improved Faster-RCNN Algorithm for Object Detection in Remote Sensing Images</i> |
| Zang, Zhibo | Beijing Univ. of Tech. | | |
| Xie, Haizheng | Beijing Univ. of Tech. | | China Univ. of GeoSci. |
| Wang, Guangsheng | Beijing Univ. of Tech. | | China Univ. of GeoSci. |
| | | | China Univ. of GeoSci. Wuhan |

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- Cai, Yunfei China Univ. of GeoSci.
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0739 *Research on Real-time Detection of Fire Protection Facilities Based on Improved YOLOv3 Algorithm*
Zhao, Xitong Wuhan Univ. of Sci. & Tech.
Cheng, Lei Wuhan Univ. of Sci. & Tech.
Kuang, Jia Wuhan Univ. of Sci. & Tech.
Liu, Jiangying Wuhan Univ. of Sci. & Tech.
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0764 *PublicGarbageNet : A Deep Learning Framework for Public Garbage Classification*
Zeng, Ming Tianjin Univ.
Lu, Xiangzhe Tianjin Univ.
Xu, Wenkang Tianjin Univ.
Zhou, Tongxi Tianjin Univ.
Liu, Yin-Bo Tianjin Univ.
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0808 *Enhancement and Fusion of Multi-Scale Feature Maps for Small Object Detection*
Xue, Zhijun Beijing Inst. of Tech.
Chen, Wenjie Beijing Inst. of Tech.
Li, Jing Beijing Inst. of Tech.
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0816 *Deep Instance Search Network for Remote Sensing Image Retrieval*
Wang, Honghu Beijing Inst. of Tech.
Zhou, Zhiqiang Beijing Inst. of Tech.
Bo, Dawei Military Representative Bureau of the Army Armament Department in Beijing
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0862 *A Keypoint-guided Pipeline for Safety Violation Identification*
He, Guoli Zhejiang Univ.
Qi, Donglian Zhejiang Univ.
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0931 *Fault Mode Recognition of Planetary Gears Based on CNN and Transfer Learning*
Tang, Jianguo Harbin Univ. of Sci. & Tech.
Zou, Yingyong Harbin Univ. of Sci. & Tech.
Yu, Jun Harbin Univ. of Sci. & Tech.
Zhang, Yongde Harbin Univ. of Sci. & Tech.
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0999 *A Composite Cost-Sensitive Neural Network for Imbalanced Classification*
Chen, Lei China Univ. of GeoSci.(Wuhan)
Zhu, Yuan China Univ. of GeoSci. (Wu Han)
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1047 *Novel Delay Partitioning Method for Global Exponential Stability of Generalized Neural Networks*
Song, Xingxing Qilu Univ. of Tech.
Lu, Hong Qian Qilu Univ. of Tech.
Wang, Renren Qilu Univ. of Tech.,Jinan
Chen, Hongwei Ji Nan Building Source Cement Products Co.LTD, Jinan, China
- ▷ PTuB-124
1084 *Adversarial Attacks for Object Detection*
Xu, Bo Nanyang Technological Univ.
Zhu, Jinlin Zhejiang Univ.
Wang, Danwei Nanyang Technological Univ.
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1131 *Improved YOLOv3 Algorithm for Ship Target Detection*
Chen, Liankai Jiangsu Univ. of Sci. & Tech.
Li, Bangyu Chinese Acad. of Sci.
Qi, Liang Jiangsu Univ. of Sci. & Tech.
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1148 *Enhancement of SSD by Fusing Feature Maps in Multiple Directions*
Du, Yang Univ. of Sci. & Tech. of China
Li, Jun Univ. of Sci. & Tech. of China
Zhang, Na Univ. of Sci. & Tech. of China
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1199 *Research on Brake Pad Surface Defects Detection Based on Deep Learning*
Zhang, Tao Dalian Nationalities Univ.
- Liu, Yuting Dalian Minzu Univ.
Yang, Yaning Dalian Minzu Univ.
Jin, Yinggu Dalian Minzu Univ.
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1269 *Classification of A Small-data-set Thyroid Nodules Based on Supplementary Feature Layer Improved VGG16*
Chen, Yifei Harbin Inst. of Tech.
Zhang, Xin Harbin Inst. of Tech.
Li, Dandan Harbin Inst. of Tech.
Jin, Jing Harbin Inst. of Tech.
Shen, Yi Harbin Inst. of Tech.
- ▷ PTuB-129
1340 *Graph Embedding Relation Network for Few-Shot Learning*
Liu, Zhen Beihang Univ.
Xia, Yitong Beihang Univ.
Zhang, Baochang Beihang Univ.
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1342 *Remote Sensing Image Segmentation Based on U-shaped Network with Atrous Spatial Pyramid*
Hou, Yunlong Wuhan Univ. of Sci. & Tech.
Zhu, Lei Wuhan Univ. of Sci. & Tech.
Chen, Qin Wuhan Univ. of Sci. & Tech.
- ▷ PTuB-131
1397 *Autonomous Decision-Making Generation of UAV Based on Soft Actor-Critic Algorithm*
Cheng, Yan Shandong Univ.
Song, Yong Shandong Univ.
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1433 *Low Altitude Small UAV Detection Based on YOLO Model*
Yuan, Xiyu Beihang Univ.
Xia, Jie BeiHang Univ.
Wu, Jiang Beihang Univ.
Shi, Jinxu Beihang Univ.
Deng, Lin Beihang Univ.
- ▷ PTuB-133
1436 *Water Supply Prediction Based on Initialized Attention Residual Network*
Long, Yuhao Shanghai Jiao Tong Univ.
Zhang, Yeming Shanghai Municipal Engineering Desing Inst.(Group) Co.,Ltd
Wang, Jingcheng Shanghai Jiao Tong Univ.
Bai, Miaoshun Shanghai Municipal Engineering Desing Inst.(Group) Co.,Ltd
- ▷ PTuB-134
1439 *Real-Time Possessing Relationship Detection for Sports Analytics*
Xu, Yinda Zhejiang Univ.
Peng, Yonggang Zhejiang Univ.
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1457 *A Cyber Intrusion Detection Method Based on Focal Loss Neural Network*
Cheng, Zhonghao Beijing Inst. of Tech.
Chai, Senchun Beijing Inst. of Tech.
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1466 *A Novel Industrial Intrusion Detection Method Based on Threshold-optimized CNN-BiLSTM-Attention Using ROC Curve*
Lan, Mindi Beijing Inst. of Tech.
Luo, Jun Beijing Inst. of Tech.
Chai, Senchun Beijing Inst. of Tech.
Chai, Runqi Cranfield Univ.
Zhang, Chen Beijing Inst. of Tech.
Zhang, Baihai Beijing Inst. of Tech.
- ▷ PTuB-137
1485 *Noise Modeling and Data Augmentation Using Conditional Adversarial Autoencoder*
Jiang, Yunkai China Univ. of GeoSci. (Wuhan)
Zhu, Yuan China Univ. of GeoSci. (Wu Han)
Liu, Yi CRRC Zhuzhou Locomotive Co., Ltd. & National Innovation Center of Advanced Rail Transit Equipment
Xu, Chi China Univ. of GeoSci.
- ▷ PTuB-138

- 1495 *Accurate Ship Segmentation via Ship Contour Prediction*
 Xiao, Xiaowu Beijing Inst. of Tech.
 Ai, Changjun Beijing Inst. of Tech.
 Wang, Weishen Military Representative Bureau of the Army Armament Department in Beijing
 Zhou, Zhiqiang Beijing Inst. of Tech.
 Li, Linhao Beijing Inst. of Tech.
 Chu, Jun Beijing Inst. of Tech.
 ▷ PTuB-139
- 1515 *The Four Arithmetic Operations for Handwritten Digit Recognition Based on Convolutional Neural Network*
 Wang, Kecheng Wuyi Univ.
 Xu, Linfeng Wuyi Univ.
 Tang, Cong Wuyi Univ.
 Pei, Zian Wuyi Univ.
 Wang, Hongtao Wuyi Univ.
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- 1529 *Arbitrary Oriented Ship Detection in Optical Remote Sensing Images via Partially Supervised Learning*
 Li, Linhao Beijing Inst. of Tech.
 Zhou, Zhiqiang Beijing Inst. of Tech.
 Miao, Ling-Juan Beijing Inst. of Tech.,
 Liu, Junfu Shijiazhuang Information Engineering Vocational College
 Xiao, Xiaowu Beijing Inst. of Tech.
 ▷ PTuB-141
- 1534 *Design of Expert System for Predicting and Evaluating Centrifugal Pump Operation Based on GRU-BP Neural Network*
 Li, Hanyu Univ. of Sci. & Tech.
 Liu, Yimin Wuhan Univ. of Sci. & Tech.
 ▷ PTuB-142
- 1543 *Survey on 6D Pose Estimation of Rigid Object*
 Chen, Jiale China Univ. of GeoSci. (Wuhan)
 Zhang, Lijun College of School of Automation, China Univ. of GeoSci., Wuhan, China, 430074
 Liu, Yi CRRC Zhuzhou Locomotive Co., Ltd. & National Innovation Center of Advanced Rail Transit Equipment
 Xu, Chi China Univ. of GeoSci.
 ▷ PTuB-143
- 1559 *Underwater Acoustic Source Localization Using LSTM Neural Network*
 Qin, Dongya Harbin Engineering Univ.
 Tang, Jialing Harbin Engineering Univ.
 Yan, Zheping Harbin Engineering Univ.
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- 1619 *Improved Visual Odometry Based on SSD Algorithm in Dynamic Environment*
 Wang, Enbao Beijing Information Sci. & Tech. Univ.
 Zhou, Yali Beijing Information Sci. & Tech. Univ.
 Zhang, Qizhi Beijing Information Sci. & Tech. Univ.
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- 1654 *3D Human Motion Capture Based on Neural Network and Triangular Gaussian Point Cloud*
 You, Qing Beijing Inst. of Tech.
 Chen, Wenjie Beijing Inst. of Tech.
 Li, Ye Beijing Inst. of Tech.
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- 1676 *Sentiment Analysis Based on GloVe and LSTM-GRU*
 Ni, Ru Univ. of Sci. & Tech. of China
 Cao, Huan Univ. of Sci. & Tech. of China
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- 1708 *Improving Multi-Speaker Tacotron with Speaker Gating Mechanisms*
 Zhao, Wei Zhejiang Univ.
 Xu, Li Zhejiang Univ.
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- 1830 *Enhanced Evolutionary Generative Adversarial Networks*
 Mu, Jinzhen Shanghai Aerospace Control Tech. Inst.
 Zhou, Yan Xiangtan Univ.
 Cao, Shuqing Shanghai Aerospace Control Tech. Inst.
 Zhang, Yu Shanghai Aerospace Control Tech. Inst.
- Liu, Zongming Shanghai Aerospace Control Tech. Inst.
 ▷ PTuB-149
- 1950 *A Short-term Traffic Forecasting Model Based on Wavelet Neural Network with Novel Teaching Learning Based Optimization*
 Zhang, Qingyong Wuhan Univ. of Tech.
 Ding, Yuechen Wuhan Univ. of Tech.
 Ye, Ziliu Wuhan Univ. of Tech.
 Su, Fuwen Wuhan Univ. of Tech.
 ▷ PTuB-150
- 1952 *The Study on the Application of BP Neural Network Based on Genetic Algorithm Optimization in Magnetic Flux Leakage (MFL) of Rail Top Surface Stripping Defects*
 Gong, Wendong Shandong Polytechnic
 Lin, Yuliang Shandong Polytechnic
 ▷ PTuB-151
- 1984 *Pedestrian Multi-target Tracking Based on YOLOv3*
 Tian, Sheng Hangzhou Dianzi Univ.
 Liu, Jun Hangzhou Dianzi Univ.
 Jin, Yuan-Dong Hangzhou Dianzi Univ.
 Deng, Chao-Yu Hangzhou Dianzi Univ.
 ▷ PTuB-152
- 2094 *基于长短期记忆网络的配电网线损预测方法研究
 Research on Forecasting Method of Power Grid Line Loss Based on LSTM*
 Kang, Zhongjian China Univ. of Petroleum
 Luo, Lin China Univ. of Petroleum
 ▷ PTuB-153
- 2111 *A Lightweight Face Recognition Method Based on Depthwise Separable Convolution and Triplet Loss*
 Yan, Wenyang Changchun Univ. of Tech.
 Liu, Taiting Changchun Univ. of Tech.
 Liu, Shuaishi Changchun Univ. of Tech.
 Geng, Yining Changchun Univ. of Tech.
 Sun, Zhongbo Jilin Univ.
 ▷ PTuB-154
- 2158 *Rain Removal Method Based on Densely Connected Deep Residual Network*
 Wang, Xiaoyuan Univ. of Jinan
 Cheng, Jin Univ. of Jinan
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- 2195 *Spatial-Temporal Evolution Prediction of Gas Distribution Based on PSO-Elman Neural Network*
 Shen, Chaonan Wuhan Univ. of Sci. & Tech.
 Cheng, Lei Wuhan Univ. of Sci. & Tech.
 Liu, Qin Wuhan Univ. of Sci. & Tech.
 Chen, Yang Wuhan Univ. of Sci. & Tech.
 Wu, Huaiyu Wuhan Univ. of Sci. & Tech.
 ▷ PTuB-156
- 2249 *Improved Frame Difference Algorithm Based on CNN for Moving Target Detection*
 Cui, Xuanxuan Nanjing Univ. of Sci. & Tech.
 Zhang, Weibin Nanjing Univ. of Sci. & Tech.
 Liu, Dan Chang'an Univ.
 ▷ PTuB-157
- 2265 *An Improved Convolutional Neural Network-based Approach for Short-term Wind Speed Forecast*
 Song, Fangbing North China Electric Power Univ.
 Zhang, Hao North China Electric Power Univ.
 Ma, Lele North China Electric Power Univ.
 Liu, Xiangjie North China Electric Power Univ., China
 ▷ PTuB-158
- 2285 *Target Tracking Based on SE-CNN and SiameseNet*
 Saiyin, Bayaer Beijing Inst. of Tech.
 Chen, Wenjie Beijing Inst. of Tech.
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- 2394 *Patient-specific Seizure Prediction with Scalp EEG Using Convolutional Neural Network and Extreme Learning Machine*
 Qin, Yingmei Tianjin Univ. of Tech. & Education
 Zheng, Hailing Tianjin Univ. of Tech. & Education
 Chen, Wei Tianjin Univ. of Tech. & Education
 Qin, Qing Tianjin Univ. of Tech. & Education

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| Han, Chunxiao | Tianjin Univ. of Tech. & Education | Liu, Xianda | Shenyang Inst. of Automation, Chinese Acad. of Sci. |
| Che, Yanqiu | Tianjin Univ. of Tech. & Education | Chen, Chunyu | Shenyang Inst. of Automation, Chinese Acad. of Sci. |
| ▷ PTuB-160 | | Wang, Xiaopeng | NSFOCUS |
| ⁰²⁵⁸ <i>A Service-oriented Adaptive Anonymity Algorithm</i> | | ▷ PTuB-167 | |
| Zhang, Min | Jiangnan Univ. | ¹⁸⁴⁰ <i>Authentication Technology in Industrial Control System Based on Identity Password</i> | |
| Tao, Wei | Jiangnan Univ. | Yang, Luyao | Chinese Acad. of Sci. |
| Li, Zhicong | Jiangnan Univ. | Shang, Wenli | Shenyang Inst. of Automation, Chese Acad. of Sci. |
| Zhou, Zhiping | Jiangnan Univ. | Chen, Chunyu | Shenyang Inst. of Automation, Chinese Acad. of Sci. |
| ▷ PTuB-161 | | Wang, Tianyu | Shenyang Inst. of Automation Chinese Acad. of Sci. |
| ⁰³⁹³ <i>Adaptive Fuzzy Detector-Based Secure Correct Control for Cyber-Physical Systems Subject to Heterogeneous Physical Attacks</i> | | Liu, Zhoubin | State Grid Zhejiang Electric Power CO. LTD. Research Inst. |
| Dong, Lewei | Nanjing Univ. of Sci. & Tech. | ▷ PTuB-168 | |
| Xu, Huiling | Nanjing Univ. of Sci. & Tech. | ¹⁶⁶¹ <i>基于异质平均场复杂网络的传染病动力学模型研究</i> | |
| ▷ PTuB-162 | | <i>Dynamics Model of Infectious Disease Based on Heterogeneous Mean Field Complex Network</i> | |
| ⁰⁶²⁵ <i>A Novel Cyber-attack Detection Approach Based on Kernel Extreme Learning Machine Using FR-Conjugate Gradient</i> | | Guo, Zhuang | East China Univ. of Sci. & Tech. |
| Gao, Jianlei | Beijing Inst. of Tech. | Qin, Yongrui | XI'AN JIAOTONG-LIVERPOOL Univ. |
| Li, Jun | Beijing Inst. of Tech. | Tang, Junlong | Tongji Univ. |
| Jiang, Hao | China Industrial Control Sys. Cyber Emergency Response Team | Li, Xuefeng | Tongji Univ. |
| Li, Yaobing | China Industrial Control Sys. Cyber Emergency Response Team | ▷ PTuB-169 | |
| ▷ PTuB-163 | | ¹⁸²⁸ <i>PRIMARY ENERGY CONSUMPTION STRUCTURE UNDER MULTI-FACTOR ORTHOGONAL DECOMPOSITION METHOD</i> | |
| ⁰⁷⁴¹ <i>An Optimization Method for Encrypting CAN Messages</i> | | Yan, Wei | Research Inst. of Petroleum Exploration & Development (RIPEd), PetroChina |
| Yao, Xinyu | Zhejiang Univ. | Chang, Yuwen | Research Inst. of Petroleum Exploration & Development (RIPEd), PetroChina |
| Sun, Hui | Zhejiang Univ. | ▷ PTuB-170 | |
| Jin, Xiangdong | Zhejiang Univ. | ²⁸⁹⁷ <i>Consensus Centrality Ranking of Nodes in Complex Networks: An Application to the Chinese Stock Market</i> | |
| Ding, Yifan | Zhejiang Univ. | Yang, Zhihui | Anhui Univ. of Finance & Economics |
| ▷ PTuB-164 | | Lai, Aolin | Anhui Univ. of Finance & Economics |
| ¹⁰⁶⁷ <i>Attack Graph Generation and Visualization for Industrial Control Network</i> | | ▷ PTuB-171 | |
| Feng, Yanli | Harbin Institue of Tech., Weihai | ¹⁰¹² <i>Research and Practice on Blended Teaching Model of "Sensing and Detection Technology"</i> | |
| Sun, Gongliang | Harbin Institue of Tech., Weihai | Liu, Hongli | Wuhan Univ. of Transportation |
| Liu, Zhiyao | China Industrial Control Sys. Cyber Emergency Response Team | ▷ PTuB-172 | |
| Wu, Chenrui | Harbin Institue of Tech., Weihai | ⁰⁴⁸² <i>Design and Implementation of Number Gesture Recognition System Based on Kinect</i> | |
| Zhu, Xiaoyang | Harbin Institue of Tech., Weihai | He, Xingxiu | Beijing Inst. of Tech. |
| Wang, Zibo | Harbin Institue of Tech., Weihai | Zhang, Jia | BeiJing Inst. of Techonlogy |
| Wang, Bailing | Harbin Inst. of Tech. | ▷ PTuB-173 | |
| ▷ PTuB-165 | | ⁰²²⁵ <i>Time-Optimal Trajectory Planning of Industrial Robot Based on Improved Particle Swarm Optimization Algorithm</i> | |
| ¹⁴⁶¹ <i>Zero Knowledge Proofs for Cloud Storage Integrity Checking</i> | | Shi, Buhai | South China Univ. of Tech. |
| Zhang, Faen | AlInnovation Tech. Ltd | Xu, Jiexiang | South China Univ. of Tech. |
| Fan, Xinyu | AlInnovation Tech. Ltd | ▷ PTuB-174 | |
| Lei, Xiang | Ainnovation.CO.LTD | ⁰⁴⁹⁷ <i>Kinematic Analysis and Three-dimensional Teaching of Six-Axis Robot Based on LinuxCNC</i> | |
| Wu, Jiahong | AInnovation Co. Ltd | Shi, Buhai | South China Univ. of Tech. |
| Soong, Jeff | Ainnovation | Jiang, Tong | South China Univ. of Tech. |
| Huang, Jiashui | Ainnovation | | |
| Guo, Jingming | Ainnovation | | |
| Tong, Chao | Ainnovation | | |
| ▷ PTuB-166 | | | |
| ¹⁸³⁴ <i>The Research and Application of Trusted Startup of Embedded TPM</i> | | | |
| Shang, Wenli | Shenyang Inst. of Automation, Chese Acad. of Sci. | | |
| Zhang, Xiule | Shenyang Ligong Univ. | | |
| Chen, Xin | Shenyang Univ. of Chemical Tech. | | |

Wednesday, July 29, 2020

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| PL6 大会报告6 Plenary Lecture 6 | 8:30-9:30 | | |
| Chair: Yang, Guang-Hong | | Northeastern Univ. | |
| ▶ PL-6 | 8:30-9:30 | | |
| PL6 <i>Complex Network Systems: A Control Science and Engineering Perspective</i> Yu, Xinghuo | | RMIT Univ., Australia | |
| PL7 大会报告7 Plenary Lecture 7 | 9:30-10:30 | | |
| Chair: Zhang, Ji-Feng | | Chinese Academy of Sciences | |
| ▶ PL-7 | 9:30-10:30 | | |
| PL7 <i>Adaptive Dynamic Programming for Optimal Control: Fundamental Theory, New Research Results and Applications</i> Zhang, Huaguang | | Northeastern Univ., China | |
| DF4 发展论坛4 Development Forum 2 | 15:00-17:00 | | |
| Chair: Deng, Feiqi | | South China University of Technology, China | |
| ▶ DF-4 | 15:50-17:50 | | |
| 随机系统的控制 <i>Control of Stochastic Systems</i> Liu, Zhi-Xin | | Academy of Mathematics and Systems Science, CAS, China | |
| Shen, Bo | | Donghua University, China | |
| Li, Xiaoyue | | Northeast Normal University, China | |
| Li, Wuquan | | Ludong University, China | |
| WeA01 Regular Session: Stability and Stabilization | 13:30-15:50 | | |
| Chair: Li, Chanying | | Acad. of Mathematics & Sys. Sci., CAS | |
| Co-Chair: Li, Xiaopeng | | Northeastern Univ. | |
| ▶ WeA01-1 | 13:30-13:50 | | |
| 0075 <i>Global Asymptotic Periodicity of Impulsive Cohen-Grossberg Neural Networks with Multi-Proportional Delays</i> Zhou, Liqun | | Tianjin Normal Univ. | |
| Zhao, Zhi-Xue | | Tianjin Normal Univ. | |
| ▶ WeA01-2 | 13:50-14:10 | | |
| 0160 <i>Power Transmission Line Inspection Robot Inverse Kinematics Modeling and Evaluation of Dexterity</i> Li, Xiaopeng | | Northeastern Univ. | |
| Xuan, Shiyu | | Northeastern Univ. | |
| Cao, Weilong | | Northeastern Univ. | |
| Zhang, Meng | | Northeastern Univ. | |
| Sun, Wanqi | | Northeastern Univ. | |
| ▶ WeA01-3 | 14:10-14:30 | | |
| 1622 <i>An Instability Theorem on LS-based Self-tuning Systems with Bounded Disturbances</i> Xu, Shuai | | Univ. of Chinese Acad. of Sci. | |
| Li, Chanying | | Acad. of Mathematics & Sys. Sci., CAS | |
| ▶ WeA01-4 | 14:30-14:50 | | |
| 1674 <i>Stability Analysis of Milling Process with Time-Varying Delays via Lyapunov-Krasovskii Functional</i> He, Jiang | | China Univ. of GeoSci.(Wuhan) | |
| Yan, Chen | | China Univ. of GeoSci.,Wuhan | |
| Wang, Hong-Zhang | | China Univ. of GeoSci. (Wuhan) | |
| Li, Dan-Yun | | China Univ. of GeoSci. | |
| ▶ WeA01-5 | 14:50-15:10 | | |
| 1803 <i>Finite-time Stabilization of Discrete-time Switched System</i> Pang, Zhengyang | | Ocean Univ. of China | |
| Sun, Minhui | | Ocean Univ. of China | |
| Xu, Xiaoping | | Ocean Univ. of China | |
| ▶ WeA01-6 | 15:10-15:30 | | |
| 1965 <i>Null Controllability of Impulsive Fractional Delayed Dynamical Systems with Constrained Control</i> Li, Xuemei | | Central South Univ. | |
| Liu, Xinge | | Central South Univ. | |
| ▶ WeA01-7 | 15:30-15:50 | | |
| 1995 <i>Stability Analysis of Linear Time-varying System with Sampled-data Observer</i> Chen, Ying | | Wenzhou Univ. | |
| Chen, Wenhai | | Wenzhou Univ. | |
| Gao, Lixin | | Wenzhou Univ. | |
| WeA02 Regular Session: Nonlinear Systems and Control (6) | 13:30-15:30 | | |
| Chair: Quan, Quan | | Beihang Univ. | |
| Co-Chair: Zheng, Ming Xuan | | Beihang Univ. | |
| ▶ WeA02-1 | 13:30-13:50 | | |
| 1871 <i>Tracking Control of Quadrotor UAV with Input Delay</i> Li, Shuo | | Jiangsu Normal Univ. | |
| Duan, Na | | Jiangsu Normal Univ. | |
| Xu, Zhi Zheng | | Jiangsu Normal Univ. | |
| Liu, Xiaoyang | | Jiangsu Normal Univ. | |
| ▶ WeA02-2 | 13:50-14:10 | | |
| 2062 <i>Projective Synchronization of A Fifth-order Memristor-Based Chaotic Circuit</i> Chi, Jun | | Huazhong Univ. of Sci. & Tech. | |
| Liu, Hui | | Huazhong Univ. of Sci. & Tech. | |
| Li, Zengyang | | Central China Normal Univ. | |
| ▶ WeA02-3 | 14:10-14:30 | | |
| 2274 <i>Partial State Feedback Sliding Mode Control of Double-pendulum Crane Systems Using Neural Networks</i> Chen, Qingrong | | Southwest Jiaotong Univ. | |
| Cheng, Wenming | | Southwest Jiaotong Univ. | |
| Du, Run | | Southwest Jiaotong Univ. | |
| ▶ WeA02-4 | 14:30-14:50 | | |
| 2283 <i>Takagi-Sugeno Fuzzy Model Based Attitude Control for Flexible Spacecraft via Disturbance Observer</i> Xu, Yutian | | Harbin Inst. of Tech., Shenzhen | |
| Wu, Ai-Guo | | Harbin Inst. of Tech. Shenzhen Graduate School | |
| Dong, Rui-Qi | | Harbin Inst. of Tech. Shenzhen Graduates School | |
| ▶ WeA02-5 | 14:50-15:10 | | |
| 2137 <i>State Compensation Linearization</i> Quan, Quan | | Beihang Univ. | |
| Ren, Jin-Rui | | Beihang Univ. | |
| ▶ WeA02-6 | 15:10-15:30 | | |
| 2306 <i>Adaptive Output Feedback Tracking Controller for Underactuated Surface Vessel with Unmeasurable Orientation</i> Zheng, Ming Xuan | | Beihang Univ. | |
| Ma, Baoli | | Beihang Univ. | |
| WeA03 Regular Session: Hybrid Systems and DEDS | 13:30-15:50 | | |
| Chair: Long, Lijun | | Northeastern Univ. | |
| Co-Chair: Wang, Peng | | FuZhou Univ. | |
| ▶ WeA03-1 | 13:30-13:50 | | |
| 0209 <i>一类切换线性系统的鲁棒弹性可靠控制</i> <i>Robust Resilient Reliable Control for A Class of Switched Linear Systems</i> Wang, Zhizhuo | | Northeast Univ. | |
| Jin, Ying | | Concordia Univ. | |
| Kang, Mingxin | | Northeastern Univ. | |
| Fu, Jun | | Northeastern Univ. | |
| ▶ WeA03-2 | 13:50-14:10 | | |
| 0417 <i>Decentralized Event-Triggered Control for Switched Systems under Stochastic Cyber Attacks and Actuator Failure</i> Zhao, Xiujian | | Shenyang Aerospace Univ. | |
| Qi, Yiwen | | Shenyang Aerospace Univ. | |
| Yuan, Shuo | | School of Automation, Shenyang Aerospace Univ. | |
| Xu, Xindi | | Shenyang Aerospace Univ. | |
| Tang, Yiwen | | Shenyang Aerospace Univ. | |
| ▶ WeA03-3 | 14:10-14:30 | | |
| 0551 <i>L₂-gain Analysis for Switched Saturated Systems Based on Anti-windup Technique</i> Zhang, Xinqun | | Liaoning Shihua Univ. | |
| Li, Xiaoyin | | Liaoning Shihua Univ. | |

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| Shi, Jiasheng Tong, Shizhong | Northeastern Univ. Liaoning Shihua Univ. | ▶ WeA04-7 2273 <i>Tripellant Hypersonic Wind Tunnel Modeling and Switched Finite-time Control</i> | 15:30–15:50 |
| ▶ WeA03-4 0533 <i>Stability Analysis and Design of Switched Saturated Systems Based on Antiwindup Technique</i> | 14:30–14:50 | Rong, Lei Man, Yuan Chen | Harbin Inst. of Tech. BEIJING AEROSPACE MEASUREMENT & CONTROL Tech. CO.LTD |
| Zhang, Xinquan Li, Xiaoyin Wang, Yuzhong Mu, Ke | Liaoning Shihua Univ. Liaoning Shihua Univ. Northeastern Univ. Liaoning Shihua Univ. | Lv, Yueyong Zou, Shuangquan | Harbin Inst. of Tech. Harbin Inst. of Tech. |
| ▶ WeA03-5 1580 <i>Decompositional Verification of Congestion Avoidance for Signalized Traffic Networks</i> | 14:50–15:10 | WeA05 Regular Session: Game Theory and Social Networks | 13:30–15:30 |
| Liu, Qian Long, Lijun | Northeastern Univ. Northeastern Univ. | Chair: Mu, Yifen Co-Chair: Liang, Haili | Chinese Acad. of Sci. Shanghai Jiao Tong Univ. |
| ▶ WeA03-6 1621 <i>Stability and L_1-gain Analysis for Switched Positive Systems: A Mixed Switching Strategy</i> | 15:10–15:30 | ▶ WeA05-1 0724 <i>Study on Inter-temporal Pricing to Suppress Negative Network Externalities of Merchants in Two-Sided Markets</i> | 13:30–13:50 |
| Wang, Peng Sun, Yaowei | FuZhou Univ. Zhengzhou Univ. of Aeronautics | Chen, Hao Xiong, Weiqing Xiong, Peichen | Ningbo Univ. NingBo Univ. Social Computing, Computer Sci. & Software Engineering Ningbo Univ. |
| ▶ WeA03-7 2434 <i>Reachable Set Estimation and Synthesis for Switched Systems with Event-triggered Control</i> | 15:30–15:50 | Zhao, Jiaying | Ningbo Univ. |
| Wang, Yijing Zhao, Rui Zuo, Zhiqiang | Tianjin Univ. Tianjin Univ. Tianjin Univ. | ▶ WeA05-2 0866 <i>Exploring the Scientific Research Collaboration Network in Sustainability Science in China</i> | 13:50–14:10 |
| WeA04 Regular Session: Variable Structure Control | 13:30–15:50 | Li, Peizhe | Shan Dong Univ. of Political Sci. & Law |
| Chair: Liu, Le Co-Chair: Chen, Yang | Yanshan Univ. Wuhan Univ. of Sci. & Tech. | ▶ WeA05-3 1612 <i>Almost Sure Exponential Stability of Altafini Model with Multiplicative Noise for Opinion Dynamics</i> | 14:10–14:30 |
| ▶ WeA04-1 0657 <i>Integral Sliding Mode Control for PMSM with Uncertainties and Disturbances via Nonlinear Disturbance Observer</i> | 13:30–13:50 | Yuan, Fanli Cui, Ying Liang, Haili Zhou, Zhao | Shanghai Univ. Shanghai Univ. Shanghai Jiao Tong Univ. East China Univ. of Sci. & Tech. |
| Li, Jianxiang Ren, Hongmei Wang, Songhua Fang, Yi Ming | Yanshan Univ. Yanshan Univ. Yanshan Univ. Yanshan Univ. | ▶ WeA05-4 1874 <i>情绪扩散机制缓解社会网络中的囚徒困境 Sentiment Contagion Dilutes Prisoner's Dilemmas on Social Networks</i> | 14:30–14:50 |
| ▶ WeA04-2 0675 <i>Discrete-Time Sliding Mode Filter with Parameter Adaptation</i> | 13:50–14:10 | Wei, Zhenlin Li, Kun | Hebei Univ. of Tech. Hebei Univ. of Tech. |
| Yu, Jingdong Jin, Shanhai Lv, Zhengxiang Xiong, Xiaogang | School of Engineering, Yanbian Univ. Yanbian Univ. Yanbian Univ. Harbin Inst. of Tech. Shenzhen Graduate School | ▶ WeA05-5 2333 <i>Some Explanatory Notes on Game Theoretical Method to Solve A MOP for the Flow Structure in Bubble Columns</i> | 14:50–15:10 |
| ▶ WeA04-3 0735 <i>Design of Terminal Sliding Mode Controller for A Quadrotor UAV with Disturbance Observer</i> | 14:10–14:30 | Mu, Yifen | Chinese Acad. of Sci. |
| Yu, Guangyao Chen, Yang Chen, Zhihuan Wu, Huaiyu Cheng, Lei | Wuhan Univ. of Sci. & Tech. Wuhan Univ. of Sci. & Tech. Wuhan Univ. of Sci. & Tech. Wuhan Univ. of Sci. & Tech. Wuhan Univ. of Sci. & Tech. | WeA06 Regular Session: Adaptive Control and Learning Control (3) | 13:30–15:30 |
| ▶ WeA04-4 0799 <i>Backstepping Sliding Mode Control for the Speed and Tension System of Reversible Cold Strip Rolling Mill Based on Extended State Observers</i> | 14:30–14:50 | Chair: Wang, Jun-Min Co-Chair: Xue, Wenchao | Beijing Inst. of Tech. Chinese Acad. of Sci. |
| Ding, Suyan Liu, Le Shao, Nuan Qiang, Jiaping | Yanshan Univ. Yanshan Univ. Department of Environmental Engineering Yanshan Univ. | ▶ WeA06-1 1459 <i>Adaptive Neural Networks Control for Markov Jump Nonlinear Systems with Nonstrict-Feedback Form and Uncertain Transition Rate</i> | 13:30–13:50 |
| ▶ WeA04-5 0804 <i>Double Closed-loop Integral Sliding Mode Control of Wheeled Mobile Robots with Disturbances</i> | 14:50–15:10 | Cao, Boqiang Nie, Xiaobing | Southeast Univ. Southeast Univ. |
| Wang, Tianqi Li, Li Li, Zhichen Wang, Xijuan | Yanshan Univ. Yanshan Univ. Yanshan Univ. Yanshan Univ. | ▶ WeA06-2 1875 <i>Adaptive Backstepping Control with Extended State Observer for Wheeled Mobile Robot</i> | 13:50–14:10 |
| ▶ WeA04-6 0977 <i>Observer-Based Non-singular Terminal Sliding Mode Control of Boost Converters</i> | 15:10–15:30 | Wang, Ke Liu, Yong Huang, Chengwei Peng, Cheng | Nanjing Univ. of Sci. & Tech. Nanjing Univ. of Sci. & Tech. Nanjing Univ. of Sci. & Tech. Nanjing Univ. of Sci. & Tech. |
| Ge, Yang Wang, Yanmin Ying, Zhao | Harbin Inst. of Tech. Harbin Inst. of Tech. Harbin Inst. of Tech. | ▶ WeA06-3 1890 <i>Fuzzy-Logic-Based Adaptive Internal Model Control for Load Frequency Control Systems with Electric Vehicles</i> | 14:10–14:30 |
| | | Song, Dongyi Shao, Yunfeng Zou, Suli Zhao, Xin Li, Shicai | Beijing Inst. of Tech. State Grid Lvliang Power Supply Company Beijing Inst. of Tech. Beijing Inst. of Tech. State Grid Huitong Jingcai (Beijing) Information Tech. Co., Ltd |
| | | Ma, Zhongjing | Beijing Inst. of Tech. |
| | | ▶ WeA06-4 1959 <i>ODE Compensation for An Unstable Heat Equation</i> | 14:30–14:50 |
| | | Yu, Xiu-Fang Wang, Jun-Min | Beijing Inst. of Tech. Beijing Inst. of Tech. |

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| ▶ WeA06-5 | 14:50–15:10 | 2330 | <i>A Tracking System Based on 2-DOF Motion Platform for Flight Simulator</i> | Du, Tingting Wang, Ke Li, Yanfa | Shanghai Maritime Univ. Shanghai STEP Electric Co Shanghai STEP Electric Corporation |
| 2087 <i>Research on Temperature Control System Based on IPSO Optimized Fuzzy PID</i> | | | | | |
| Gao, Long | Nantong Univ. | | | | |
| Yang, Yi | Nantong Univ. | | | | |
| Ren, Xiaolin | Nantong Univ. | | | | |
| Gu, Haiqin | Nantong Univ. | | | | |
| Han, Qingqing | Nantong Univ. | | | | |
| Yu, Jingya | Nantong Univ. | | | | |
| ▶ WeA06-6 | 15:10–15:30 | | | | |
| 2471 <i>On Q-learning Extended State Observer Based Control Design for Inverted Pendulum with Wind Disturbance</i> | | | | | |
| Tang, Guojie | Chinese Acad. of Sci. | | | | |
| Xue, Wenchao | Chinese Acad. of Sci. | | | | |
| Chen, Zhi-Xiang | The Rocket Force Univ. of Engineering | | | | |
| WeA07 | 13:30–15:30 | | | | |
| Regular Session: Intelligent Manufacturing and Industrial Intelligence | | | | | |
| Chair: Niu, Dan | Southeast Univ. | | | | |
| Co-Chair: Song, Pengwei | Univ. of Sci. & Tech. Beijing | | | | |
| ▶ WeA07-1 | 13:30–13:50 | | | | |
| 1160 <i>Research on Soft Measurement Method of Temperature Field in Cement Rotary Kiln</i> | | | | | |
| Fu, Dongmei | Univ. of Sci. & Tech., Beijing | | | | |
| Song, Pengwei | Univ. of Sci. & Tech. Beijing | | | | |
| Zhang, Xiaojun | Shenyang CAST Tech. Development Co.LTD | | | | |
| Liu, Gang | Shenyang CAST Tech. Development Co.LTD | | | | |
| ▶ WeA07-2 | 13:50–14:10 | | | | |
| 1403 <i>A 3D Steel Coils' Recognition Method Based on Multi-Scale Features and Pointnet</i> | | | | | |
| Liu, Zixuan | Southeast Univ. | | | | |
| Niu, Dan | Southeast Univ. | | | | |
| Li, Qi | Southeast Univ. | | | | |
| Chen, Xisong | Southeast Univ. | | | | |
| Ding, Li | Southeast Univ. | | | | |
| Liu, Jinbo | Nanjing Sciyou Automation Group Co., Ltd | | | | |
| ▶ WeA07-3 | 14:10–14:30 | | | | |
| 1558 <i>An Incremental Compression Storage Algorithm for Slicing 3D Model of DLP Printer</i> | | | | | |
| Ma, Yaojun | XJTU | | | | |
| Guo, Wenhua | Xi'an JiaoTong Univ. | | | | |
| He, Chenlong | Xi'an Jiaotong Univ. | | | | |
| Tao, Chen | Chinese Acad. of Sci. | | | | |
| Sun, Xi | Univ. of Tech. Belfort-Montbeliard | | | | |
| ▶ WeA07-4 | 14:30–14:50 | | | | |
| 2113 <i>Two-sided Based Material Allocation for Intermediate Inventory of Process Industry</i> | | | | | |
| Li, Yiran | Beijing Inst. of Tech. | | | | |
| Xia, Yuanqing | Beijing Inst. of Tech. | | | | |
| Meng, Ying | Northeastern Univ. | | | | |
| ▶ WeA07-5 | 14:50–15:10 | | | | |
| 1064 <i>Trajectory Data Protection based on Differential Privacy kmeans</i> | | | | | |
| Xu, Qiyuan | Suzhou Univ. of Sci. & Tech. | | | | |
| Chen, Zhenping | Suzhou Univ. of Sci. & Tech. | | | | |
| Fu, Baochuan | Suzhou Univ. of Sci. & Tech. | | | | |
| Shao, Xuelian | Suzhou Univ. of Sci. & Tech., | | | | |
| WeA08 | 13:30–15:30 | | | | |
| Regular Session: Motion Control (3) | | | | | |
| Chair: Zhang, Qingxin | Shenyang Aerospace Univ. | | | | |
| Co-Chair: Du, Tingting | Shanghai Maritime Univ. | | | | |
| ▶ WeA08-1 | 13:30–13:50 | | | | |
| 2182 <i>On Switching Control Design for Rigid-Flexible Coupling Motion Stage</i> | | | | | |
| Wei, Yutai | Guangdong Univ. of Tech. | | | | |
| Huang, Ruirui | Guangdong Univ. of Tech. | | | | |
| Hao, Peng | Guangdong Univ. of Tech. | | | | |
| Yang, Zhijun | Guangdong Univ. of Tech. | | | | |
| ▶ WeA08-2 | 13:50–14:10 | | | | |
| 2186 <i>Research on the Application of Improved Genetic Algorithm in Multi-vehicle Operation Scheduling of Steel Plant</i> | | | | | |
| Zhang, Qingxin | Shenyang Aerospace Univ. | | | | |
| Wu, Zhiyuan | Shenyang Aerospace Univ. | | | | |
| ▶ WeA08-3 | 14:10–14:30 | | | | |
| 0763 <i>High-Gain-Observer-Based Funnell Control for Motor Servo System with Quantized Input</i> | | | | | |
| Cheng, Yun | Beijing Inst. of Tech. | | | | |
| Ren, Xuemei | Beijing Inst. of Tech. | | | | |
| ▶ WeA08-5 | 14:50–15:10 | | | | |
| 0838 <i>Observer-Based Adaptive Integral Control for Multi-motor Drive Systems</i> | | | | | |
| Hu, Shuangyi | Beijing Inst. of Tech. | | | | |
| Ren, Xuemei | Beijing Inst. of Tech. | | | | |
| ▶ WeA08-6 | 15:10–15:30 | | | | |
| 0437 <i>Flying Velocity Constraint Control for Quad-rotor System Based on Finite-Time Control Technique</i> | | | | | |
| Wei, Jiajia | School of Electrical Engineering & Automation | | | | |
| Zhou, Jun | Hefei Univ. of Tech. | | | | |
| Du, Haibo | Hefei Univ. of Tech. | | | | |
| Wu, Di | Southeast Univ. | | | | |
| WeA09 | 13:30–15:50 | | | | |
| Regular Session: Signal Processing and Information Fusion (5) | | | | | |
| Chair: Wang, Lin | Dalian Maritime Univ. | | | | |
| Co-Chair: Xu, Degang | Central South Univ. | | | | |
| ▶ WeA09-1 | 13:30–13:50 | | | | |
| 1813 <i>Using Noninvasive Neural Signal to Recognize Single- and Multi-task States of Operators</i> | | | | | |
| Xia, Shengchao | Beijing Inst. of Tech. | | | | |
| Bi, Luzheng | Beijing Inst. of Tech. | | | | |
| Wang, Xiaoguang | Beijing Inst. of Tech. | | | | |
| ▶ WeA09-2 | 13:50–14:10 | | | | |
| 1867 <i>A Line Objects Recognition Algorithm Based on Non-subsampled Contourlet Transform</i> | | | | | |
| Jiang, Qinghua | Xi An Jiaotong Univ. | | | | |
| Yang, Yi | Xi An Jiaotong Univ. | | | | |
| Zhang, Meng | Xi An Jiaotong Univ. | | | | |
| Zhang, Sixian | Xi An Jiaotong Univ. | | | | |
| ▶ WeA09-3 | 14:10–14:30 | | | | |
| 1943 <i>A Super-resolution Reconstruction Algorithm Based on Feature Fusion</i> | | | | | |
| Wang, Lin | Dalian Maritime Univ. | | | | |
| Yang, Siqi | Dalian Maritime Univ. | | | | |
| Jia, Jingqian | Dalian Maritime Univ. | | | | |
| ▶ WeA09-4 | 14:30–14:50 | | | | |
| 2056 <i>Data Processing and Fusion Working Mechanism Scheme of MIMU Sensor Network</i> | | | | | |
| Huang, Wenye | Beihang Univ. | | | | |
| Zhang, Yumin | Beihang Univ. | | | | |
| Sheng, Wei | Beihang Univ. | | | | |
| Wang, Xiaogang | China Inst. of Water Resources & Hydropower Research | | | | |
| Liu, Lipeng | China Inst. of Water Resources & Hydropower Research | | | | |
| ▶ WeA09-5 | 14:50–15:10 | | | | |
| 2334 <i>Detection Method of Wet Spray Image in Complex Tunnel Construction Environment</i> | | | | | |
| Fang, Shiyu | Central South Univ. | | | | |
| Xu, Degang | Central South Univ. | | | | |
| Song, Qing | Central South Univ. | | | | |
| ▶ WeA09-6 | 15:10–15:30 | | | | |
| 2342 <i>Human Upper Limb Movement Recognition Based on Kernel Principal Component Analysis and Support Vector Machines</i> | | | | | |
| Wang, Fei | Northeastern Univ. | | | | |
| Fan, Zhibo | Northeastern Univ. | | | | |
| Shi, Ketao | Northeastern Univ. | | | | |
| Wu, Han | Northeastern Univ. | | | | |
| ▶ WeA09-7 | 15:30–15:50 | | | | |
| 2380 <i>Micro-Expression Recognition Based on 2D-3D CNN</i> | | | | | |
| Wang, Lin | Dalian Maritime Univ. | | | | |
| Jia, Jingqian | Dalian Maritime Univ. | | | | |

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| Mao, Nannan | Dalian Maritime Univ. | ► WeA11-4 | 14:30–14:50 |
| WeA10 | 13:30–15:50 | ¹⁹⁶⁴ <i>Fault Tolerant Control for A Class of Evolutionary Matrix Games</i> | |
| Regular Session: Navigation and Guidance (3) | | Ni, Yuan | Nanjing Univ. of Aeronautics & Astronautics |
| Chair: Zou, Yiqun | Central South Univ. | Yang, Hao | Nanjing Univ. of Aeronautics & Astronautics |
| Co-Chair: Guo, Yanbing | China Electronics Tech. Group Corporation | Jiang, Bin | Nanjing Univ. of Aeronautics & Astronautics |
| ► WeA10-1 | 13:30–13:50 | ► WeA11-5 | 14:50–15:10 |
| ¹⁵⁴⁹ <i>Micro Aerial Vehicle Yaw Estimation and Localization Based on Ultra-sonic Sensors in Indoor Environment</i> | | ¹⁹⁹⁰ <i>A Method for Fault Diagnosis of Aviation Engine Gas System</i> | |
| Xu, Jiwen | Beihang Univ. | Cui, Jianguo | Shenyang Aerospace Univ. |
| Yang, Lingyu | Beihang Univ. | Tian, Yan | Shenyang Aerospace Univ. |
| Xu, Jiang Peng | Beihang Univ. | Cui, Xiao | Shenyang Aerodynamics Research Inst. |
| Feng, Xiaoke | Beihang Univ. | Wang, Jinglin | Aviation Key Laboratory of Sci. & Tech. on Fault Diagnosis & Health Management |
| Zhang, Jing | Beihang Univ. | Jiang, Liying | Shenyang Aerospace Univ. |
| ► WeA10-2 | 13:50–14:10 | Yu, Mingyue | Automatization Engineering Colledge Shenyang Aerospace Univ. Liaoning Province |
| ¹⁵⁹⁰ <i>Angles-Only Relative Navigation in Spherical Coordinates Using Unscented Kalman Filter</i> | | ► WeA11-6 | 15:10–15:30 |
| Han, Fei | Shanghai Aerospace Control Tech. Research Inst. | ²²¹⁸ <i>Fault-tolerant Control for Multi-agent with Actuator Fault</i> | |
| Wang, Zhaolong | Shanghai Key Laboratory of Aerospace Intelligence Control Tech. | Zhang, Pu | Northwestern Polytechnical Univ. |
| Han, Yu | Shanghai Inst. of Spaceflight Control Tech. | Xue, Hui Feng | Northwestern Polytechnical Univ. |
| Liu, Chaozhen | CASC | Gao, Shan | Northwestern Polytechnical Univ. |
| ► WeA10-3 | 14:10–14:30 | WeA12 | 13:30–15:50 |
| ¹⁷⁰⁹ <i>An Instrumental-variable Method for Bearing-only Localization under Small Noise</i> | | Regular Session: Social/Economic Systems and Control | |
| Zou, Yiqun | Central South Univ. | Chair: Xu, Yaoqun | Harbin Univ. of Commerce |
| Gao, Bilu | Central South Univ. | Co-Chair: Tie, Lin | Beihang Univ. (Beijing Univ. of Aeronautics & Astronautics) |
| Tang, Xiafei | Changsha Univ. of Sci. & Tech. | ► WeA12-1 | 13:30–13:50 |
| Yu, Lingli | Central South Univ. | ¹⁶⁵⁹ <i>Supply Chain Coordination of Consumer Electronics Products Considering Product Quality Level</i> | |
| ► WeA10-4 | 14:30–14:50 | Xu, Yaoqun | Harbin Univ. of Commerce |
| ²⁰⁸⁴ <i>Geomagnetic Perceiving Navigation Method for Autonomous Underwater Vehicle Using An Adapted Search Strategy</i> | | Yu, Qijia | Harbin Univ. of Commerce |
| Li, Hong | Xi'an Univ. of Posts & Telecommunications | Zheng, Yi | Harbin Univ. of Commerce |
| ► WeA10-5 | 14:50–15:10 | ► WeA12-2 | 13:50–14:10 |
| ²¹⁶² <i>Regional Geomagnetic Map Construction Based on Support Vector Machine Residual Kriging</i> | | ¹⁸⁵¹ <i>Stock Price Volatility, Equity Balance and Corporate M&A</i> | |
| Liu, Tong | Beijing Inst. of Tech. | Zhu, Guanping | Xi'an Univ. of Tech. |
| Li, Xingyu | Beijing Inst. of Tech. | Hu, Wenxiu | Xi'an Univ. of Tech. |
| Fu, Mengyin | Beijing Inst. of Tech. | Che, Shanshan | Xi'an Univ. of Tech. |
| Liang, Zhaoxiang | Beijing Inst. of Tech. | Yang, Dong | People's Insurance Company of China |
| ► WeA10-6 | 15:10–15:30 | ► WeA12-3 | 14:10–14:30 |
| ²²⁴² <i>Maximum Correntropy Criterion Kalman Filter Based Target Tracking with State Constraints</i> | | ²⁰⁸⁶ <i>Research on CDS Spread of Credit Bonds in China Based on Vasicek Model</i> | |
| Zou, Yiqun | Central South Univ. | Yang, Ruicheng | Inner Mongolia Univ. of Finance & Economics |
| Zou, Shuang | School of Automation, Central South Univ. | You, Wei | Inner Mongolia Univ. of Finance & Economics |
| Tang, Xiafei | Changsha Univ. of Sci. & Tech. | Wang, Xuetao | Inner Mongolia Univ. of Finance & Economics |
| Yu, Lingli | Central South Univ. | ► WeA12-4 | 14:30–14:50 |
| ► WeA10-7 | 15:30–15:50 | ²³⁷⁰ <i>Optimization Model for Safety Investment of Prefabricated Building Construction</i> | |
| ²³⁸⁴ <i>The Optimized Design of the Navigation Filter</i> | | Chang, Chun Guang | Shenyang Jianzhu Univ. |
| Guo, Yanbing | China Electronics Tech. Group Corporation | Zhao, Teng | Shenyang Jianzhu Univ. |
| Miao, Ling-Juan | Beijing Inst. of Tech., | ► WeA12-5 | 14:50–15:10 |
| Zhang, Xi | Qianxun SI Inc | ²⁴⁷⁶ <i>The Applicability of SIMM in the Chinese Options Market Compared to SPAN</i> | |
| WeA11 | 13:30–15:30 | Shi, Ruoshi | Chinese Acad. of Sci. |
| Regular Session: Fault Diagnosis and Reliable Control (3) | | Zhao, Yanlong | Chinese Acad. of Sci. |
| Chair: Yang, Hao | Nanjing Univ. of Aeronautics & Astronautics | ► WeA12-6 | 15:10–15:30 |
| Co-Chair: Cui, Jianguo | Shenyang Aerospace Univ. | ⁰⁰³⁵ <i>Based on "Automatic Control Theory Experiment" MOOC+SPOC Teaching Management</i> | |
| ► WeA11-1 | 13:30–13:50 | Jiang, Zengru | Beijing Inst. of Tech. |
| ¹⁷⁴⁰ <i>Gaussian Mixture Model Based Fault Diagnosis for Elevator Overspeed and Automatic Reset</i> | | Jin, Honglong | Beijing Inst. of Tech. |
| Zheng, Qi | College of Control Sci. & Engineering, Zhejiang Univ. | ► WeA12-7 | 15:30–15:50 |
| Zhao, Chunhui | Zhejiang Univ. | ¹⁸⁶⁵ <i>Improvement for Root Locus Method Teaching by Introducing New Applications</i> | |
| ► WeA11-2 | 13:50–14:10 | Tie, Lin | Beihang Univ. (Beijing Univ. of Aeronautics & Astronautics) |
| ¹⁷⁴⁹ <i>Anomaly Detection and Remaining Useful Life Estimation Based on Degradation State for Bearings</i> | | WeA13 | 13:30–15:30 |
| Hu, Xiangzhi | Shanghai Jiao Tong Univ. | Regular Session: Multi-Agent Systems and Distributed Control (5) | |
| Li, Ning | Shanghai Jiao Tong Univ. | Chair: Lu, Shaobo | Chongqing Univ. |
| ► WeA11-3 | 14:10–14:30 | Co-Chair: Sun, Xinmiao | Univ. of Sci. & Tech. Beijing |
| ¹⁹⁶² <i>Fault Tolerant Control of Centralized Potential Games</i> | | ► WeA13-1 | 13:30–13:50 |
| Lu, Shi | Nanjing Univ. of Aeronautics & Astronautics | ²³⁷³ <i>Optimal Coverage Control of Multi-agent Systems in Constrained Environments with Line-of-sight Connectivity Preservation</i> | |
| Yang, Hao | Nanjing Univ. of Aeronautics & Astronautics | | |
| Jiang, Bin | Nanjing Univ. of Aeronautics & Astronautics | | |

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| Sun, Xinmiao Wang, Siqi Ding, Dawei | Univ. of Sci. & Tech. Beijing Univ. of Sci. & Tech. Beijing School of Automation & Electrical Engineering, Univ. of Sci. & Tech. Beijing | ► WeA14-6 2416 <i>Decentralized Multi-agent Robotics Sailing Coordination - A Weighted Graph Approach</i> Guo, Zoey | 15:10–15:30 Sun Yat-sen Univ. |
| ► WeA13-2 0206 <i>Distributed Self-triggered Circular Formation Control for Multi-robot Systems</i> Xu, Peng Wang, Xinyu Tao, Jin Xie, Guangming Xu, Minyi Zhou, Quan | Dalian Maritime Univ. Dalian Maritime Univ. Nankai Univ. Peking Univ. Dalian Maritime Univ. Aalto Univ. School of Electrical Engineering | ► WeA15 Regular Session: System Simulation, Integration and Evaluation Chair: Liu, Zhijun Co-Chair: Hu, Wenkai | 13:30–15:50 Northwestern Polytechnical Univ. China Univ. of GeoSci. |
| ► WeA13-3 0208 <i>Multi-Objective Optimal Based Fault Tolerant Control Allocation for Over-Actuated Electric Vehicles</i> Wan, Zhengyu Lu, Shaobo | Chongqing Univ. Chongqing Univ. | ► WeA15-1 1004 <i>Numerical Analysis on Aerodynamic Interference of A Novel Tilt-rotor UAV in Transition Mode</i> Huang, Huaping He, Guang Yu, Li Wang, Xiangke | 13:30–13:50 National Univ. of Defense Tech. National Univ. of Defense & Tech., National Univ. of Defense Tech. National Univ. of Defense Tech. |
| ► WeA13-4 0239 <i>Path Planning for Dense Drone Formation Based on Modified Artificial Potential Fields</i> Sun, Hang Qi, Juntong Wu, Chong Wang, Mingming | Tianjin Univ. Tianjin Univ. EFY Intelligent Control TianJin Univ. | ► WeA15-2 1761 <i>Design and Simulation of Fresh Air Conditioning Control System Based on Feedforward Compensation Decoupling</i> Gao, Huixiu Wei, Jun | 13:50–14:10 Univ. of Jinan Univ. of Jinan |
| ► WeA13-5 0521 <i>Adaptive Bipartite Time-Varying Formation Control for Multi-Agent Systems on Directed Graph</i> Yan, Chenhang Zhang, Wei Li, Xiaohang Su, Housheng | Shanghai Univ. of Engineering Sci. Shanghai Univ. of Engineering Sci. Shanghai Univ. of Engineering Sci. Huazhong Univ. of Sci. & Tech. | ► WeA15-3 2088 <i>Variable Cycle Engine Modeling Research Based on MATLAB Platform</i> Zeng, Xianyi | 14:10–14:30 School of Power & Energy, Northwestern Polytechnical Univ. |
| ► WeA13-6 0608 <i>Decentralized Control of Networked Systems with Unknown Control Directions and Uncertainties</i> Peng, Junmin Xiao, Shen-Ping Qin, Bin Huang, Chao Ou, Zhouquan | Hunan Univ. of Tech. Hunan Univ. of Tech. The Tech. of Hunan Univ. Zhejiang Univ. Control | ► WeA15-4 2379 <i>Simulating Industrial Alarm Systems by Extending the Public Model of A Vinyl Acetate Monomer Process</i> Yang, Guang Hu, Wenkai Cao, Weihua Wu, Min | 14:30–14:50 China Univ. of GeoSci. China Univ. of GeoSci. China Univ. of GeoSci. China Univ. of GeoSci. |
| WeA14 Regular Session: Multi-Agent Systems and Distributed Control (6) Chair: Li, Xianwei Co-Chair: Liang, Hongtao | Shanghai Jiao Tong Univ. Shaanxi Normal Univ. | ► WeA15-5 1332 <i>Economic, Energy, Exergy and Ecological (4E) Evaluation of A CCHP System Considering Feed-in Tariff</i> Zhou, Le Zhang, Weijun Liu, Xin | 14:50–15:10 Northeastern Univ. Northeastern Univ. Northeastern Univ. |
| ► WeA14-1 2314 <i>Distributed Cooperative Control Based on Dynamic Following Interaction Mechanism for UUV Swarm</i> Liang, Hongtao Qiang, Ning | Shaanxi Normal Univ. Shaanxi Normal University | ► WeA15-6 2145 <i>Numerical Simulation and Experiment for Impact Point Prediction of Parachute-Warhead System</i> Zhu, Hong Sun, Qinglin Han, Jinyang Chen, Zengqiang | 15:10–15:30 Nankai Univ. Nankai Univ. Aerospace Life-Support Equipment Co., Ltd Nankai Univ. |
| ► WeA14-2 2348 <i>A Dynamic Event-Triggered Approach to Multi-Agent Consensus</i> Li, Xianwei Tang, Yang Li, Shaoyuan | Shanghai Jiao Tong Univ. East China Univ. of Sci. & Tech. Shanghai Jiao Tong Univ. | ► WeA15-7 1223 <i>基于环路增量法的电传油门台系统精度分析 Accuracy Analysis of Throttle Control Quadrant System Based on Loop Increment Method</i> Zhang, Xinming Liu, Zhijun | 15:30–15:50 AVIC Beijing Keeven Aviation Instrument Co., LTD Northwestern Polytechnical Univ. |
| ► WeA14-3 2351 <i>多智能体平均一致性的快速收敛率算法 Average Consensus Algorithms of Multi-agent Systems with Fast Convergence Rate</i> Chai, Li Yi, Jingwen Zhang, Jingxin | Wuhan Univ. of Sci. & Tech. Wuhan Univ. of Sci. & Tech. Swinburne Univ. of Tech. | WeA16 Regular Session: Data-Driven Modeling and Control Chair: Yang, Ying Co-Chair: Tan, Wei | 13:30–15:30 Peking Univ. South China Univ. of Tech. |
| ► WeA14-4 2352 <i>Multiagent-based Sampled-data Frequency Control of Microgrid with Additive Noise</i> He, Shuqin Zong, Xiaofeng | China Univ. of GeoSci. China Univ. of GeoSci. | ► WeA16-1 0410 <i>数据驱动的计划性设备云服务实现机制及其应用研究 Research on Implementation Mechanism and Application of Data-Driven Planned Device Cloud Service</i> Tan, Wei | 13:30–13:50 South China Univ. of Tech. |
| ► WeA14-5 2406 <i>Resilient Network-level Design of Leader-follower Multi-vehicle Systems Against DoS Attacks</i> Zhang, Ting Li, Zhongkui | China Univ. of GeoSci. Peking Univ. Peking Univ. | ► WeA16-2 0783 <i>Intelligent Compensation for the Set Values of PID Controllers to Improve Boiler Superheated Steam Temperature Control</i> Ma, Liangyu Liu, Wenjie Chen, Tingting Li, Qianqian | 13:50–14:10 North China Electric Power Univ. North China Electric Power Univ. North China Electric Power Univ. North China Electric Power Univ. |

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| ▶ WeA16-3 0815 <i>Extended State Observer Based Backstepping Control for Active Suspension System Ride Comfort</i> | 14:10–14:30 | Chi, Jianning Yu, Xiaosheng Wang, Gang | Northeastern Univ. Northeastern Univ. Shanxi Xinhua Chemical Co. Ltd |
| ▶ WeA16-4 1464 <i>Online Output Estimation for Multimode Process with Dynamic Time-delay</i> | 14:30–14:50 | Chang, Lei Wang, Haoping Tian, Yang | Nanjing Univ. of Sci. & Tech. Nanjing Univ. of Sci. & Tech. Nanjing Univ. of Sci. & Tech. |
| ▶ WeA16-5 1725 <i>Multi-index Evaluation Based Reinforcement Learning Method for Cyclic Optimization of Multiple Energy Utilization in Steel Industry</i> | 14:50–15:10 | Chen, Pang Xie, Guo Liu, Han Liang, Lili Gao, Huan Wang, Dan Ji, Wenjiang | Xi'an Univ. of Tech. Xi'an Univ. of Tech. Xi'an Univ. of Tech. Xi'an Univ. of Tech. Xi'an Univ. of Tech. Xi'an Univ. of Tech. Xi'an Univ. of Tech. |
| ▶ WeA16-6 1877 <i>Battery State of Charge Estimation Using Long Short-Term Memory Network and Extended Kalman Filter</i> | 15:10–15:30 | Wang, Ze Wang, Linqing Han, Zhongyang Zhao, Jun | Dalian Univ. of Tech. Northeastern Univ. Dalian Univ. of Tech. Dalian Univ. of Tech. |
| ▶ WeA16-6 1877 <i>Battery State of Charge Estimation Using Long Short-Term Memory Network and Extended Kalman Filter</i> | 15:10–15:30 | Ni, Zichuan Yang, Ying Xiu, Xianchao | Peking Univ. Peking Univ. Peking Univ. |
| WeA17 Regular Session: Systems Biology and Life Systems | 13:30–15:30 | Chair: Wang, Pei Co-Chair: Ling, Guang | Henan Univ. Wuhan Univ. of Tech. |
| ▶ WeA17-1 0655 <i>Prediction of Drug-related Phenotypes Based on the Constructed Phenotype-gene-drug Heterogeneous Network</i> | 13:30–13:50 | Xu, Qiong Wang, Pei Chen, Aimin Lu, Jinhu | School of Mathematics & Statistics Henan Univ. Henan Univ. Chinese Acad. of Sci. |
| ▶ WeA17-2 1150 <i>Coexistence of Multi-attractor in Small Genetic Regulatory Networks</i> | 13:50–14:10 | Ling, Guang | Wuhan Univ. of Tech. |
| ▶ WeA17-3 1383 <i>A Convolutional Neural Network-Based Approach to Identify the Origins of Replication in <i>Saccharomyces Cerevisiae</i></i> | 14:10–14:30 | Wu, Feng Yang, Runtao Chen, Jingui Zhang, Chengjin | Shandong Univ. Shandong Univ. Your Univ., Company, or Organization, Eg. Chinese Acad. of Sci. Shandong Univ.(Weihai) |
| ▶ WeA17-4 1579 <i>Dynamic Analysis of the Extended Hindmarsh-Rose Neuron Model under Transcranial Magneto-Acoustical Stimulation</i> | 14:30–14:50 | Liu, Dan Song, Zhao Yi, Yuan Luo, Xiaoyuan | Yanshan Univ. Hebei Medical Univ. Yanshan Univ. Yanshan Univ. |
| WeA18 Regular Session: Pattern Recognition (5) | 13:30–15:30 | Chair: Chen, Zhen Co-Chair: Wang, Xiaogang | Beijing Inst. of Tech. Sichuan Univ. of Sci. & Engineering |
| ▶ WeA18-1 2304 <i>An Improved Sobel Face Gray Image Edge Detection Algorithm</i> | 13:30–13:50 | Tang, Xiaolin Wang, Xiaogang | Sichuan Univ. of Sci. & Engineering Sichuan Univ. of Sci. & Engineering |
| ▶ WeA18-2 0177 <i>A Deeply Supervised Convolutional Neural Network for Brain Tumor Segmentation</i> | 13:50–14:10 | Li, Bingbing Wu, Cheng Dong | Northeastern Univ. Northeastern Univ. |
| ▶ WeA18-3 0566 <i>The Surface Damage Identifications of Wind Turbine Blades Based on ResNet50 Algorithm</i> | 14:10–14:30 | Yang, Peng Dong, Chao-Yi Zhao, Xiaoyi Chen, Xiaoyan | Inner Mongolia Univ. of Tech. Inner Mongolia Univ. of Tech. Inner Mongolia Univ. of Tech. Inner Mongolia Univ. of Tech. |
| ▶ WeA18-4 1425 <i>Rail Defect Detection Method Based on Recurrent Neural Network</i> | 14:30–14:50 | Xu, Qinhua Zhao, Qin-Jun Yu, Gang Wang, Liguo Shen, Tao | Univ. of Jinan Univ. of Jinan Univ. of Jinan Jinan Railway Bureau Univ. of Jinan |
| ▶ WeA18-5 1930 <i>Graph Optimization Based Visual SLAM Fusing KeyPoints and Markers</i> | 14:50–15:10 | Chen, Zhen Zhou, Yang Zhang, Fengdi Xu, Min Liu, Xiangdong Li, Zhen | Beijing Inst. of Tech. Beijing Inst. of Tech. National Key Laboratory of Sci. & Tech. on Aerospace Intelligence Control Beijing Beijing Aerospace Automatic Control Inst. Beijing Inst. of Tech. Beijing Inst. of Tech. |
| WeA19 Regular Session: Neural Networks and Deep Learning (5) | 13:30–15:30 | Chair: Meng, Qing-Hao Co-Chair: Chi, Haihong | Tianjin Univ. Harbin Engineering Univ. |
| ▶ WeA19-1 1502 <i>Indoor Layout Estimation by Fusing Monocular RGB Image Features Extracted with HRNet</i> | 13:30–13:50 | Huang, Rongze Liu, Yin-Bo Jabeen, Meh Meng, Qing-Hao | Tianjin Univ. Tianjin Univ. Tianjin Univ. Tianjin Univ. |
| ▶ WeA19-2 1547 <i>Chinese Calligraphy Character Generating via CGAN with A Multi-subnet Parallel and Cascade Generator</i> | 13:50–14:10 | Zhou, Xiaoxue Zhang, Ziyang Chen, Xin Qin, Mengxi | China Univ. of GeoSci. China Univ. of GeoSci. China Univ. of GeoSci. China Univ. of GeoSci. |
| ▶ WeA19-3 1562 <i>Convolutional Neural Network Pruning: A Survey</i> | 14:10–14:30 | Xu, Sheng Huang, Anran Chen, Lei Zhang, Baochang | Beihang Univ. Beihang Univ. Beihang Univ. Beihang Univ. |
| ▶ WeA19-4 1583 <i>Cross-Corpus Speech Emotion Recognition Based on Hybrid Neural Networks</i> | 14:30–14:50 | Rehman, Abdul Liu, Zhen-Tao Li, Dan-Yun Wu, Baohan | China Univ. of GeoSci. China Univ. of GeoSci. China Univ. of GeoSci. China Univ. of GeoSci. |
| ▶ WeA19-5 1616 <i>Real-Time Sign Language Recognition Based on Video Stream</i> | 14:50–15:10 | Zhao, Kai Zhang, Kejun Zhai, Yu Wang, Daotong Su, Jianbo | Shanghai Jiao Tong Univ. Shanghai Lingzhi Tech. Ltd Shanghai Lingzhi Tech Shanghai Lingzhi Tech. Ltd Shanghai Jiaotong Univ. |
| ▶ WeA19-6 1668 <i>Aerial Video Multi-target Detection with Memory Module</i> | 15:10–15:30 | Chi, Haihong Gao, Xiangrui | Harbin Engineering Univ. Harbin Engineering Univ. |

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| WeA20 | 13:30–15:50 | |
| Regular Session: Neural Networks and Deep Learning (6) | | |
| Chair: Qin, Na | Southwest Jiaotong Univ. | |
| Co-Chair: Yin, Zhong | Univ. of Shanghai for Sci. & Tech. | |
| ▶ WeA20-1 | 13:30–13:50 | |
| ¹⁷¹¹ Defect Detection of Axle Box Cover Device Fixing Bolts in Metro Based on Convolutional Neural Network | | |
| Yang, Yao | Southwest Jiaotong Univ. | |
| Hu, Yuanjiang | Guangzhou Yunda Intelligent Tech. Co., Ltd | |
| Chen, Lingling | Southwest Jiaotong Univ. | |
| Liu, Xiaoman | Guangzhou Yunda Intelligent Tech. Co., Ltd | |
| Qin, Na | Southwest Jiaotong Univ. | |
| Liu, Zhenyi | Guangzhou Yunda Intelligent Tech. Co., Ltd | |
| ▶ WeA20-2 | 13:50–14:10 | |
| ¹⁷⁶⁸ Anchor-Free Network for Multi-class Object Detection in Remote Sensing Image | | |
| Zhao, Guochuan | Southwest Univ. of Sci. & Tech. | |
| Pang, Jie | Southwest Univ. of Sci. & Tech. | |
| ▶ WeA20-3 | 14:10–14:30 | |
| ¹⁷⁶⁹ Cross-Subject Emotion Recognition from EEG Using Convolutional Neural Networks | | |
| Zhong, Xiaolong | Univ. of Shanghai for Sci. & Tech. | |
| Yin, Zhong | Univ. of Shanghai for Sci. & Tech. | |
| Zhang, Jianhua | East China Univ. of Sci. & Tech. | |
| ▶ WeA20-4 | 14:30–14:50 | |
| ¹⁷⁹⁷ Network-based Synchronous Control of Memristive Neural Networks with Denial of Service Attacks | | |
| Cai, Xinyu | Nanjing Univ. of Sci. & Tech. | |
| Zhang, Yijun | Nanjing Univ. of Sci. & Tech. | |
| Jiang, Zhenpeng | Nanjing Univ. of Sci. & Tech. | |
| ▶ WeA20-5 | 14:50–15:10 | |
| ¹⁸¹⁵ Steel Surface Defects Classification Method Based on Self-paced Learning | | |
| Liang, Delong | Northeastern Univ. | |
| Chen, Da-Li | Northeastern Univ. | |
| Liu, Shixin | Northeastern Univ. | |
| Jia, Xu | Liaoning Univ. of Tech. | |
| Zhao, Chunna | Yunnan Univ. | |
| ▶ WeA20-6 | 15:10–15:30 | |
| ²⁰²⁴ A Method of Face Repair Based on Encoder-decoder and Dual Discrimination Network | | |
| Cui, Can | Sichuan Univ. of Sci. & Engineering | |
| Zhao, Jun | Sichuan Univ. of Sci. & Engineering | |
| ▶ WeA20-7 | 15:30–15:50 | |
| ²²²² A New Model of Associative Memory Neural Network Based on An Improved Memristor | | |
| Wan, Geliang | China Univ. of GeoSci. | |
| Wang, Leimin | China Univ. of GeoSci. | |
| Zou, Huayu | Chian Univ. of GeoSci. | |
| Jiang, Shan | China Univ. of GeoSci. | |
| WeA21 | 13:30–15:30 | |
| Invited Session: Analysis, Synthesis and Applications of Multiple-Time-Scale Systems | | |
| Organizer: Wang, Yan-Wu | Huazhong Univ. of Sci. & Tech. | |
| Organizer: Yang, Chunyu | China Univ. of Mining & Tech. | |
| Chair: Wang, Yan-Wu | Huazhong Univ. of Sci. & Tech. | |
| Co-Chair: Yang, Chunyu | China Univ. of Mining & Tech. | |
| ▶ WeA21-1 | 13:30–13:50 | |
| ⁰⁸⁵² 多时间尺度系统稳定性分析 Stability Analysis of Multiple-Time-Scale Systems | | |
| Yang, Wu | Huazhong Univ. of Sci. & Tech. | |
| Wang, Yan-Wu | Huazhong Univ. of Sci. & Tech. | |
| ▶ WeA21-2 | 13:50–14:10 | |
| ⁰⁸⁵³ State Estimation of A Class of Nonlinear Singularly Perturbed Systems Through Discrete Measurements | | |
| Liu, Yunli | Guangxi Univ. | |
| Chen, Wu-Hua | Guangxi Univ. | |
| Lu, Xiaomei | Guangxi Univ. | |
| Deng, Xiaoqing | Guangxi Univ. | |
| Chen, Jialin | Guangxi Univ. | |
| ▶ WeA21-3 | 14:10–14:30 | |
| ¹¹⁴⁶ Finite-Frequency H_2 Control for Continuous Linear Time-Invariant Systems | | |
| Zou, Yun | Nanjing Univ. of Sci. & Tech., China | |
| Quan, Hongzheng | Nanjing Univ. of Sci. & Tech. | |
| Cai, Chenxiao | Inst. of Automation, Nanjing Univ. of Sci. & Tech. | |
| ▶ WeA21-4 | 14:30–14:50 | |
| ¹²¹⁵ Composite Sub-optimal Control for Nonlinear Singularly Perturbed Systems with Unknown Slow Dynamics via Reinforcement Learning | | |
| Liu, Xiaomin | China Univ. of Mining & Tech. | |
| Yang, Chunyu | China Univ. of Mining & Tech. | |
| Zhou, Linna | China Univ. of Mining & Tech. | |
| Fu, Jun | Northeastern Univ. | |
| ▶ WeA21-5 | 14:50–15:10 | |
| ¹⁴²¹ Lyapunov Redesign of Singularly Perturbed Systems via Artificial-Delay Estimator | | |
| Xu, Jing | East China Univ. of Sci. | |
| Zhong, Derong | Nanjing Univ. of Sci. & Tech. | |
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| Invited Session: Sensing and Control with Multi-Agents | | |
| Organizer: Ghosh, Bijoy | Texas Tech Univ. | |
| Organizer: Hu, Xiaoming | Royal Inst. of Tech. | |
| Chair: Hu, Xiaoming | Royal Inst. of Tech. | |
| Co-Chair: Hu, Jiangping | Univ. of Electronic Sci. & Tech. of China | |
| ▶ WeA22-1 | 13:30–13:50 | |
| ⁰⁵⁴⁷ Distributed Affine Formation Tracking Control of Multiple Fixed-Wing UAVs | | |
| Xu, Yang | Westlake Univ. | |
| Lin, Zhiyun | Hangzhou Dianzi Univ. | |
| Zhao, Shiyu | Westlake Univ. | |
| ▶ WeA22-2 | 13:50–14:10 | |
| ¹¹⁴² Distributed Best Response Dynamics for Nash Equilibrium Seeking in Potential Games | | |
| Huang, Shijie | Acad. of Math & Sys. Sci. | |
| Yi, Peng | Tongji Univ. | |
| ▶ WeA22-3 | 14:10–14:30 | |
| ¹¹⁸⁸ Relative Angle Measurements Based Shape-Similar Formation for Mobile Robots with Input Time-Delay | | |
| Luo, Rui | Univ. of Electronic Sci. & Tech. of China | |
| Peng, Zhinan | Univ. of Electronic Sci. & Tech. of China | |
| Hu, Jiangping | Univ. of Electronic Sci. & Tech. of China | |
| Ghosh, Bijoy | Texas Tech Univ. | |
| ▶ WeA22-4 | 14:30–14:50 | |
| ¹²¹⁹ Convergence of Distributed Stochastic Primal-Dual Algorithm | | |
| Wang, Yinghui | Inst. of Sys. Sci. | |
| Lei, Jinlong | Tongji Univ. | |
| Hong, Yiguang | Chinese Acad. of Sci. | |
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| Organizer: Li, Shihua | Southeast Univ., China | |
| Organizer: Wang, Xiang-Yu | Southeast Univ. | |
| Organizer: Xu, Qingsong | Univ. of Macau | |
| Organizer: Du, Haibo | Hefei Univ. of Tech. | |
| Chair: Sun, Haibin | Qufu Normal Univ. | |
| Co-Chair: Du, Haibo | Hefei Univ. of Tech. | |
| ▶ WeA23-1 | 13:30–13:50 | |
| ¹³²⁷ A Coupled Finite-Time Attitude Controller and Finite-Time Observer with An Unknown Constant Drift Bias | | |
| Wang, Linan | School of Electrical Engineering & Automation | |
| Du, Haibo | Hefei Univ. of Tech. | |
| Wu, Di | Southeast Univ. | |
| ▶ WeA23-2 | 13:50–14:10 | |
| ¹³²⁹ Adaptive Fuzzy PI Tracking Control for A Class of Switched Nonlinear Systems | | |
| Li, Hongyao | Qufu Normal Univ. | |
| Sun, Haibin | Qufu Normal Univ. | |
| Hou, Linlin | Qufu Normal Univ. | |
| Lan, Qi-Xun | Henan Univ. of Urban Construction | |
| ▶ WeA23-3 | 14:10–14:30 | |
| ¹³⁶⁵ Precision Tracking Control of Piezoelectric-Driven Motion System Based on Enhanced ADRC | | |

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| Wang, Junxiao | Southwest Univ. | Liu, Mei | Lanzhou Univ. |
| Xu, Qingsong | Univ. of Macau | Yi, Chenfu | Jiangxi Univ. of Sci. & Tech. |
| ► WeA23-4 | 14:30–14:50 | Shi, Yang | Yangzhou Univ. |
| ¹⁸⁴⁴ Chattering-Free Discrete-time Fast Terminal Sliding Mode Control of Automotive Electronic Throttle with Disturbances | | Sun, Zhongbo | Jilin Univ. |
| Song, Mengying | Southwest Univ. | Chen, Liangming | Lanzhou Univ. |
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| Du, Haibo | Hefei Univ. of Tech. | ► WeA25-3 | 14:10–14:30 |
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| WeA24 | 13:30–15:30 | Wang, Zi-Peng | Univ. of Jinan |
| Invited Session: Navigation, Guidance and Control of Unmanned Autonomous Vehicles | | Wu, Huai-Ning | Beijing Univ. of Aeronautics & Astronautics |
| Organizer: He, Fenghua | Harbin Inst. of Tech. | Huang, Tingwen | Texas A& M Univ. |
| Organizer: Chen, Songlin | Harbin Inst. of Tech. | ► WeA25-4 | 14:30–14:50 |
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| Chair: He, Fenghua | Harbin Inst. of Tech. | Sun, Lingyao | Chinese Acad. of Sci. |
| Co-Chair: Chen, Songlin | Harbin Inst. of Tech. | Sun, Shiyong | Inst. of Automation, Chinese Acad. of Sci. |
| ► WeA24-1 | 13:30–13:50 | Fu, Yuanbo | Beijing Hospital of Traditional Chinese Medicine, Capital Medical Univ. |
| ²⁰²⁰ A Smooth Guidance Method for Sun-Pointing Satellites Constrained by the Deviation of Earth-Pointing | | Zhao, Xiaoguang | Inst. of Automation, the Chinese Acad. of Sci. |
| Ji, Haoran | National Univ. of Defense Tech. | ► WeA25-5 | 14:50–15:10 |
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| ²³⁰² A CNN-based Vocal Recognition Algorithm for IARC Mission 8 | | Li, Shuai | Stevens Inst. of Tech. |
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| Lin, Zhaochen | Harbin Inst. of Tech. | Invited Session: Advances in Distributed Control and Optimization of Cyber-physical Systems | |
| Liu, Xiyang | Harbin Inst. of Tech. | Organizer: Lv, Yuezu | Southwest Univ. |
| ► WeA24-3 | 14:10–14:30 | Organizer: Zhao, Yu | Northwestern Polytechnical Univ. |
| ²³⁰³ An Improved LADRC Algorithm for Quadrotors | | Organizer: Duan, Zhisheng | Peking Univ. |
| Lin, Zhaochen | Harbin Inst. of Tech. | Chair: Zhao, Yu | Northwestern Polytechnical Univ. |
| Liu, Xiyang | Harbin Inst. of Tech. | Co-Chair: Wen, Guanghui | Southwest Univ. |
| Niu, Yinbao | Harbin Inst. of Tech. | ► WeA26-1 | 13:30–13:50 |
| Hao, Ning | Harbin Inst. of Tech. | ¹⁸⁴⁶ Specified-time Distributed Resource Allocation with Sampled-data Information | |
| He, Fenghua | Harbin Inst. of Tech. | Wen, Guanghui | Southwest Univ. |
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| ²³¹⁵ A Lightweight Target Detection Network for Embedded Platforms | | ► WeA26-2 | 13:50–14:10 |
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| Huo, Xin | Harbin Inst. of Tech. | Zhao, Yu | Northwestern Polytechnical Univ. |
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| Wang, Caixia | Yanzhou Coal Group Company | | |
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