

# CONFERENCE PROGRAM

September 21-23, 2024  
2024年9月21-23日

Zhoushan, China  
中国·舟山



The logo for the International Conference on Information Communication and Signal Processing (ICICSP). It features a stylized globe icon to the left of the text 'ICICSP', which is rendered in a bold, white, sans-serif font with a blue shadow effect.

2024 7th International Conference on  
Information Communication and Signal Processing  
2024年第7届信息通信与信号处理国际会议

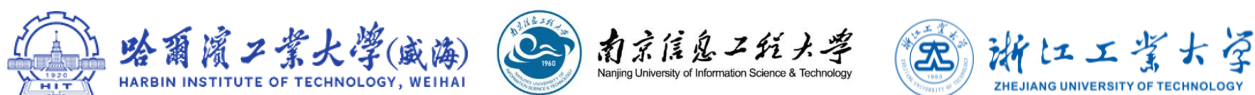
Information within Reach, Communication beyond Scope  
信息触手可及，通信连接未来



照片直播

**Co-sponsor (主办单位)**

**Host (承办单位)**

**Co-organizer (协办单位)**


请添加会议秘书微信号 ICICSP 2024, 以免错过重要通知

# TABLE OF CONTENT

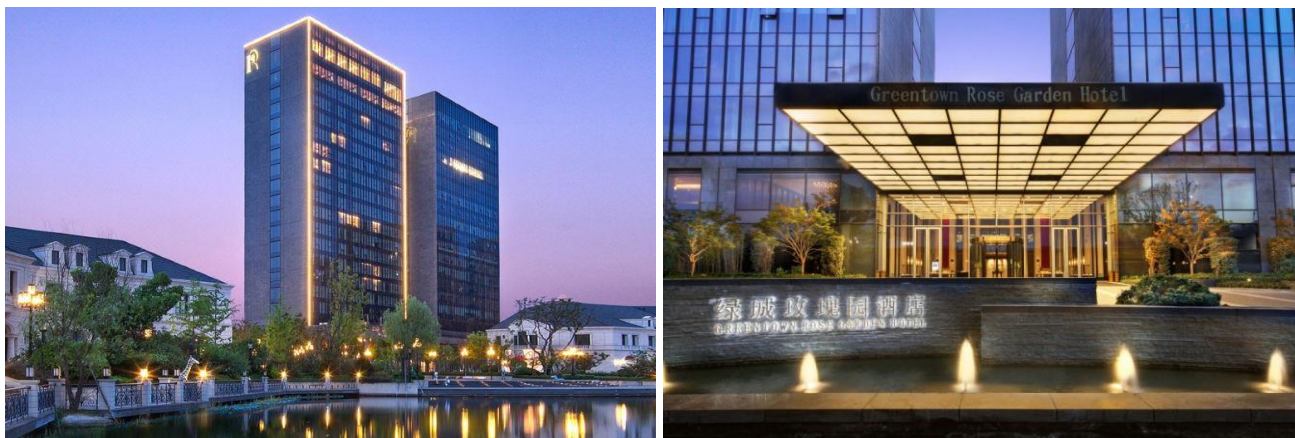
General Information .....	04
Welcome Message.....	07
Conference Committee .....	08
Agenda Overview .....	13
Keynote Speaker .....	19
Invited Speaker .....	24
Biographies Of Invited Speakers .....	27
<b>Oral Sessions:</b>	
Oral Session 1: Radar Detection and Signal Processing .....	33
Oral Session 2: Intelligent Image and Signal Processing .....	34
Oral Session 3: Image Detection and Object Recognition .....	35
Oral Session 4: Digital Signal Detection, Recognition and Analysis .....	36
Oral Session 5: Control System and Signal Measurement Based on Machine Learning .....	37
Oral Session 6: Modern Communication Systems and Signal Analysis.....	38
<b>Poster Sessions:</b>	
Poster Session 1: Digital Image and Signal Processing Methods .....	39
Poster Session 2: Mobile Edge Computing, Resource Allocation and Signal Analysis in NGN.....	41
<b>Special Sessions:</b>	
Special Session 1-A&B: Acoustic Measurement and Signal Processing of Aircraft and Their Equipment .....	43
Special Session 2-A&B: Waveform Diverse Array and Its Applications (Array processing technology and its applications) .....	45
Special Session 3-A&B: Underwater Acoustics, Ocean Exploration, and Artificial Intelligence .....	47
Special Session 4-A&B: Target Detection, Estimation, Classification and Tracking.....	49
Special Session 5: Sparse Representation and Deep Learning for Mechanical Fault Diagnosis .....	51
Special Session 6-A&B: RIS, IoT, AI Methods, and Applications in Reliable and Covert Communication, Signal Processing of Image Recognition, Health Diagnosis, etc .....	52
Special Session 7: Advanced Digital Signal Analysis in Healthcare: Innovations and Interdisciplinary Applications.....	54
Special Session 8: Integrated Sensing and Communications for Internet of Things.....	55
<b>Online Sessions:</b>	
Online Session 1: Signal Acquisition, Interference Detection, and Speech Recognition .....	56
Online Session 2: Intelligent Recognition and Detection Technology Based on Machine Vision.....	57

Note



# GENERAL INFORMATION

## A Conference Venue



### Greentown Rose Garden Hotel 舟山绿城玫瑰园酒店

No.8 Xiangzhang Street, Dinghai District, Zhoushan, Zhejiang, China (中国浙江省舟山市定海区香樟街8号)

Check in: 15:00 Check out: 12:00

Room Booking: Ms. Yu (俞经理) | Tel.: +86-15957097009 | E-mail: 327687415@qq.com

(单间 350 元/每晚含 1 早; 双人间 420 元/每晚含 2 早)

## B Onsite Registration

Arrive at Registration desk → Inform the staff of your paper ID → Sign-in → Claim your conference kit.

## C Devices Provided by the Organizer

Oral/Special Session: Laptops (with MS-Office & Adobe Reader) / Projectors & Screen / Laser Sticks

Poster Session: Poster display stand, clear tape, mark pen.

## D Materials Provided by the Presenter

Oral Session: Slides (pptx or pdf version). Format 16:9 is preferred.

Poster Session: A1 size Printed poster. **Please print your poster before your arrival at the registration desk.**

请报告人自行打印海报, 并于签到日当天转交给会议签到现场的工作人员。

## E Duration of Each Presentation

Keynote Speech: 40min, including Q&A.

Oral Session: 10min, including Q&A.

Invited Talk: 20min, including Q&A.

Poster Session: 5~10min

Special Session: 10min, including Q&A.


## F Notice

- Please wear your delegate badge (name tag) for all the conference activities. Lending your participant card to others is not allowed.
- Please take good care of your valuables at any time during the conference. The conference organizer does not assume any responsibility for the loss of personal belongings of the participants during conference day.  
会议期间请务必随身携带贵重物品, 会议不对任何物品丢失负责。
- Accommodation is not provided. Delegates are suggested make early reservation.  
参会者请提前自行预订酒店房间。
- Please show the badge and meal coupons when dining.  
就餐时请同时出示代表证与餐券。



# GENERAL INFORMATION

## G Zoom Meeting ID

	Room	Meeting ID	Link
 <b>zoom</b> <a href="#">Zoom Download</a>	A	870 8637 3775	<a href="https://us02web.zoom.us/j/87086373775">https://us02web.zoom.us/j/87086373775</a>
	B	813 7055 9816	<a href="https://us02web.zoom.us/j/81370559816">https://us02web.zoom.us/j/81370559816</a>
	C	847 5747 7223	<a href="https://us02web.zoom.us/j/84757477223">https://us02web.zoom.us/j/84757477223</a>
	D	889 4569 2461	<a href="https://us02web.zoom.us/j/88945692461">https://us02web.zoom.us/j/88945692461</a>
	E	889 2306 5196	<a href="https://us02web.zoom.us/j/88923065196">https://us02web.zoom.us/j/88923065196</a>

Note:

1. We recommend that you install the Zoom platform on your computer. New Zoom users can skip the registration step and enter the meeting ID directly to participate the online session. Zoom 新用户无需注册, 输入会议号 meeting ID 即可参会。
2. Prior to the formal conference, presenter shall join the test room to make sure everything is on the right track.
3. Please rename your Zoom Screen Name in below format before entering meeting room.

### Name Setting:

Keynote Speaker: KN-Name

Author: Paper ID-Name

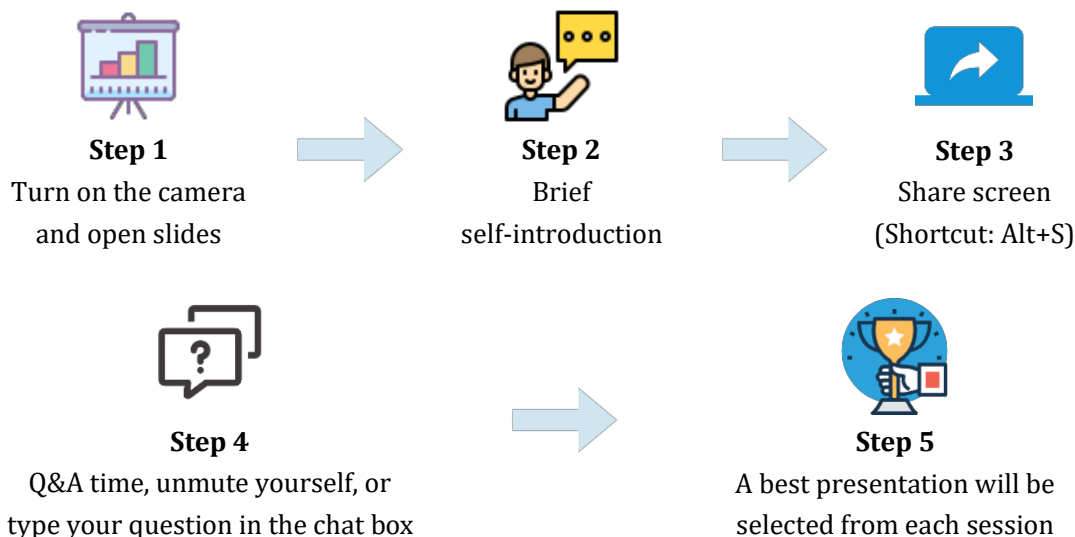
Committee: Position-Name

Listener: Listener-Name

### Useful Links:

✓ [Conference Banner](#) ✓ [Zoom Background](#)

### Presentation Process by Zoom Meeting



### About Online Presentation

- Every presenter has 10 minutes, including Q & A.
- The best presentation certificate and all authors' presentation certificates will be sent after conference by email.
- We'll record the whole conference. If you do mind, please inform us in advance. We'll stop to record when it's your turn to do the presentation.

# GENERAL INFORMATION

## H Meeting Room at Greentown Rose Garden Hotel

Floor	Rooms	Activities
1F	文澜阁 Wenan Pavilion	Parallel Sessions
2F	宴会厅 Gaojiazhuang Hall	Plenary Meeting, Poster Sessions, Dinner Banquet
3F	文渊阁 Wenyuan Pavilion	Parallel Sessions, 博士生论坛
	文津阁 Wenjin Pavilion	Parallel Sessions
	文溯阁 Wensu Pavilion	Parallel Sessions
19F	相待厅 VIP Room	Parallel Sessions
	遇见餐厅 Dining Bar	Lunch & Dinner Buffet

The PLENARY MEETING on Sept. 22 will also be live on WeChat.



Live Broadcast



## WELCOME MESSAGE

Dear All,

We are pleased to welcome you to 2024 7th International Conference on Information Communication and Signal Processing (ICICSP 2024) in September 21-24, 2024, Zhoushan, China. The conference is co-sponsored by Zhejiang University (China) and IEEE, hosted by Ocean College (Zhejiang University), co-hosted by Xi'an Jiaotong University, Xidian University, and etc.

The annual international conference is aimed to bring together the researchers, experts, and scholars around the world to exchange their research results and address open issues in fields of information communication and signal processing. We hope ICICSP would be able to achieve its objective in providing an effective forum for academicians, researchers, and practitioners to advancing knowledge, research, and technology for humanity.

In past six years, ICICSP was held successfully in Singapore 2018, Weihai 2019, Virtual 2020, and Shanghai 2021, Shenzhen 2022, Xi'an 2023. This year's program will consist of 4 keynote speeches, successively delivered by Prof. Haijun Zhang (University of Science and Technology Beijing), Prof. Hongbin Li (Stevens Institute of Technology), Prof. Honggang Zhang (Zhejiang University), and Prof. Yonghui Li (University of Sydney). Followed by 8 special sessions, 6 oral sessions, 2 online sessions, 2 poster sessions, and more than 20 invited talks.

It is pleasing to note that the agenda of this conference covers a wide range of interesting topics related to all theoretical and practical aspects, but not limited to modern signal theory and analysis methods, acoustic signal detection and classification, target detection and algorithm, digital image analysis and computing, digital signal processing and methods, advanced information theory and data computing, integrated sensing and communications, etc.

Our deepest gratitude goes to the Advisory Board, Organizing Committee, International Scientific Committee, institutions, and volunteer who have directly and indirectly supported the success of this seminar. Wish you a very productive conference with exciting and encouraging discussions and exchange of knowledge so that together we can anticipate a future of ground-breaking knowledge, research, and technology.

Finally, we wish you a very successful conference! Hope you will enjoy your stay in Zhoushan.

Conference Organizing Committees, ICICSP 2024

Zhoushan



# CONFERENCE COMMITTEE

## Conference Advisory Committees

Haijun Zhang, University of Science and Technology Beijing (China)  
 Yonghui Li, University of Sydney (Australia)  
 Hongbin Li, Stevens Institute of Technology (USA)  
 Trung Q. Duong, Queen's University Belfast (UK)

## Conference Honorary Chair

Xianyi Gong, Zhejiang University (China)

## Conference General Chairs

Fengchong Qu, Zhejiang University (China)  
 Wen Xu, Zhejiang University (China)  
 Gang Li, Tsinghua University (China)

## Conference Program Chairs

Dirk Slock, EURECOM (France)  
 Fei Ji, South China University of Technology (China)  
 Chengpeng Hao, Institute of Acoustics, Chinese Academy of Sciences (China)  
 Yang Shi, Northwestern Polytechnical University (China)

## Steering Committee Chair

Liang Yu, Northwestern Polytechnical University (China)

## Conference Program Co-Chairs

Haitao Xiao, Xi'an Jiaotong University (China)  
 Zhichao Zhang, Nanjing University of Information Science and Technology (China)  
 Zhen Chen, City University of Hong Kong, China

## Publicity Chairs

Long Yang, Northwestern Polytechnical University (China)  
 Jingwei Xu, Xidian University (China)  
 Xiang Feng, Harbin Institute of Technology (Weihai, China)  
 Xiaoping Li, University of Electronic Science and Technology of China (China)  
 Weize Sun, Shenzhen University (China)  
 Menghan Hu, East China Normal University (China)

## Pulication Chairs

Xingbin Tu, Zhejiang University (China)  
 Local Organizing Committees  
 Jiang Zhu, Zhejiang University (China)  
 Yan Wei, Zhejiang University (China)  
 Zubin Liu, Zhejiang University of Technology (China)  
 Xinhui Zhu, Zhejiang University (China)

## Conference Treasurer

Chengliang Zong, Fudan University (China)





# CONFERENCE COMMITTEE

## Technical Program Committees (in no particular order)

Boxiao Chen, Xidian University, China  
 Yan Zhou, Xiangtan University, China  
 Haigang Zhang, Harbin Engineering University, China  
 Zhifang Pan, Wenzhou Medical University, China  
 Xueli Sheng, Harbin Engineering University, China  
 Chun Jiang, Shanghai Jiao Tong University, China  
 Mariani Stefano, Politecnico di Milano, Italy  
 Yongqing Wu, University of Chinese Academy of Sciences, China  
 Jinlong Zhang, Henan University, China  
 Duan Rui, Northwestern Polytechnical University, China  
 Chengpeng Hao, University of Chinese Academy of Sciences, China  
 Yuxiang Zhang, Harbin Engineering University, China  
 Maoshen Jia, Beijing University of Technology, China  
 Vladimir Georgiev, American University in Bulgaria, Bulgaria  
 Jingjing Wang, Beihang University, China  
 Xiao Han, Harbin Engineering University, China  
 Cao Zeng, Xidian University, China  
 Hui Yuan, Shandong University, China  
 Suoping Li, Lanzhou University of Technology, China  
 Yuanfa Ji, Guilin University of Electronic Technology, China  
 Dong Zhen, Hebei University of Technology, China  
 Feng Xie, Anhui University, China  
 Xiaofang Mu, Taiyuan Normal University, China  
 Bin Liao, Shenzhen University, China  
 El-Bay Bourennane, University of Burgundy, France  
 Zihang Ding, Air Force Engineering University, China  
 Xinbo Zhao, Northwestern Polytechnical University, China  
 Yongbo Zhao, Xidian University, China  
 Xu Peng, Institute of Mechanics Chinese Academy of Sciences, China  
 Yan Ma, Northwestern Polytechnical University, China  
 Xiaohong Shen, Northwestern Polytechnical University, China  
 Haowei Ti, Chiang Mai University, Thailand  
 Haihong Tao, Xidian University, China  
 Peizhen Zhang, Guangdong Ocean University, China  
 Liangang Lv, First Institute of Oceanography, China  
 Qun Yan, Aircraft Strength Research Institute of China Aviation Industry Corporation of China Limited Xi'an, China  
 Dengfeng Yao, Beijing Union University/Tsinghua University, China  
 Fangli Ning, Northwestern Polytechnical University, China  
 Hai Liu, China University of Mining and Technology, China  
 Xianpeng Wang, Hainan University, China  
 Zhichao Zhang, Nanjing University of Information Science and Technology, China  
 Liu Hai, China University of Mining and Technology, China  
 Tai-Chiu Hsung, Chu Hai College of Higher Education, Hong Kong, China  
 Ing. Carl James Debono, University of Malta, Malta  
 Longxiang Guo, Harbin Engineering University, China  
 Mukesh Singh Boori, Samara National Research University, Russia  
 Carl James Debono, University of Malta, Malta  
 Rui Wang, Yantai University, China  
 Haitao Xiao, Xi'an Jiaotong University, China

## CONFERENCE COMMITTEE

### Technical Program Committees (continued)

Tao Tan, Macao Polytechnic University, China  
 Li Xie, Zhejiang University, China  
 Dongming Li, Southeast University, China  
 Yan Wei, Zhejiang University, China  
 Kang Li, Xidian University, China  
 Jun Wang, National University of Defense Technology, China  
 Qiong Wu, Jiangnan University, China  
 Wen-Qian Jing, East China Jiaotong University, China  
 Jingjing Cai, Xidian University, China  
 Yan Li, Beijing Institute of Technology, China  
 Tianming Ma, Shanghai University of Engineering Science, China  
 Assc. Meng Sun, Nanjing University of Aeronautics and Astronautics, China  
 Kai Liang, Luoyang Institute of Science and Technology, China  
 Jian Yuan, Qilu University of Technology, China  
 Le Wang, North China University of Technology, China  
 Jinwei Wang, Yantai University, China  
 Feng Xi, Nanjing University of Science and Technology, China  
 Hui Ma, Xidian University, China  
 Shuai Yao, Southeast University, China  
 Xuyang Chen, Xidian University, China  
 Weike Feng, Air Force Engineering University, China  
 Lin Geng, Anhui University, China  
 Yingchun Li, Harbin Institute of Technology, China  
 Margi Patel, Indore Institute of Science and Technology, India  
 Pengfei Jiang, Qingdao Branch, Institute of Acoustics, Chinese Academy of Sciences, China  
 Zou Jun, Nanjing University of Science and Technology, China  
 Yong Wang, Northwestern Polytechnical University, Xi'an, China  
 Zhen Chen, Shenzhen University, China  
 Mei Sun, Taishan University, China  
 Haitao Liu, East China Jiaotong University, China  
 Zhicheng Yang, Northwestern Polytechnical University, China  
 Xiang Feng, Harbin Institute of Technology, China  
 Peizhe Xin, State Grid Economic and Technological Research Institute Co., Ltd., China  
 Dingyu Hu, Transportation Shanghai University of Engineering Science, China  
 Xiaoping Li, University of Electronic Science and Technology of China, China  
 Tingting Yang, Southwest Jiaotong University, China  
 Ying Jiang, First Institute of Oceanography, China  
 Qian Tang, Xi'an Jiaotong University, China  
 Pengfei He, Yantai University, China  
 Lingji Xu, Sun Yat-sen University, China  
 Yifeng Wu, Sun Yat-sen University, China  
 Haitao Wang, Northwestern Polytechnical University, China  
 Cheng Chen, Northwestern Polytechnical University, China  
 Xue-Gang Li, Wuhan Second Ship Design and Research Institute, China  
 Jiahua Zhu, National University of Defense Technology, China  
 Xiongpeng He, Xidian University, China  
 Wei Cheng, Northwestern Polytechnical University, China  
 Benliang Xie, GuiZhou university, China  
 Xiao-Zheng Zhang, Hefei University of Technology, China  
 Juan Avalos, Instituto Politécnico Nacional, Mexico



## CONFERENCE COMMITTEE

### Technical Program Committees (continued)

Aifei Liu, Northwestern Polytechnical University, China  
 Yubo Qi, State Key Laboratory of Acoustics, Institute of Acoustics, Chinese Academy of Sciences, China  
 Shiqi Liu, Shenzhen University, China  
 Jingwei Xu, Xidian University, China  
 Suqing Yan, Guilin University of Electronic Technology, China  
 Haiqiang Niu, Institute of Acoustics, Chinese Academy of Sciences, China  
 Chao-Hsien Hsieh, Qufu Normal University, China  
 Xin Zhang, Beijing University of Posts and Telecommunications, China  
 Bifang He, Guizhou University, China  
 Xiao Peng, Sun Yet-sun University, China  
 Ankan Bhattacharya, Hooghly Engineering & Technology College, India  
 Haojin Tang, Guangzhou University, China  
 Xiaoqiang Hua, National University of Defense Technology, China  
 Hong Shi, Taiyuan Normal University, China  
 Yuhang Xiao, Shenzhen University, China  
 Ruosi Zha, Sun Yat-sen University, China  
 Anqi Liu, Technology and Engineering Center for Space Utilization, Chinese Academy of Science, China  
 Haoquan Guo, Shanghai Marine Electronic Equipment Research Institute, China  
 Yonglin Zhang, Institute of Acoustics, Chinese Academy of Sciences, China  
 Lulu Wang, Artificial Intelligence Research Center (AIRC), National Innovation Institute of Defense Technology (NIIDT), China  
 Jianbo Wang, Faculty of Physics Changchun University of Science and Technology ChangChun, China  
 Xiue Bao, Beijing Institute of Technology, China  
 Yauhen Arnatovich, Northwestern Polytechnical University, China  
 Ailen Garcia, Occidental Mindoro State College, Philippines  
 Yanhui Guo, University of Illinois Springfield, USA  
 Xudong Zhang, Kean University, Union, New Jersey, USA  
 Siyuan Cang, Southern Marine Science and Engineering Guangdong Laboratory (Guangzhou), China  
 Florance G, New Horizon college of Engineering, India  
 Yutian Wu, University of Science and Technology Beijing, China  
 Haojuan Yuan, Shanghai Aerospace Electronic Technology Institute, China  
 Chi Zhang, System Engineering Research Institute of China State Shipbuilding Corporation Limited, Beijing, China  
 Wei Men, Tsinghua University, China  
 Yuan Zhao, Shenzhen Institute of Artificial Intelligence and Robotics for Society, China  
 Jia Meng, China Nuclear Power Engineering Corporation, Ltd, China  
 Haonan Hu, The University of Sheffield, UK  
 Yuan Gao, Shanghai University, China  
 Qiushi Chen, Air Force Engineering University, China  
 Xuedong Zhang, Institute of Acoustics, Chinese Academy of Sciences, China  
 AMJAD ALI AMJAD, Zhejiang University, China  
 Linsen Huang, Chongqing Technology and Business University, China  
 Zonglong Bai, North China Electric Power University, China  
 Hao Zhang, Qingdao University of Technology, China  
 Ling Chen, Shanghai Aircraft Design & Research Institute, China  
 Xuanzhi Zhao, Kunming University of Science and Technology, China  
 Zhiqiang Wang, China Academy of Launch Vehicle Technology, China  
 Yuan Jiang, Beijing Institute of Radio Metrology and Measurement, China  
 Zheyu Gao, Xi'an Polytechnic University, China  
 Arfat Ahmad Khan, Khon Kaen University, Thailand

## CONFERENCE COMMITTEE

### Technical Program Committees (continued)

Hongyang An, University of Electronic Science and Technology of China, China

Pengcheng Wan, Aviation University of Air Force, China

Lu Wang, Northwestern Polytechnical University, China

Jun Tao, Fudan University, China

Zubin Liu, Sound and Vibration Lab, Zhejiang University of Technology, China

Li Li, Xi'an Peihua University, China

Zhe Chen, Guilin University of Electronic Technology, China

Hailong Kang, Xidian University, China

Kazyuki Sakoda, National Institute of Fitness and Sports in Kanoya, Japan

Xubin Liang, Northwest Institute of Nuclear Technology, China

Cheng Fang, University of Newcastle, Australia

Tianyu Cao, Shanghai Jiao Tong University, Shanghai, China

Lili Fang, Beijing Institute of Technology, China

Rui Ding, Shandong Institute of Space Electronic Technology, China

Ma Hongchao, Inspur Electronic Information Industry Co., Ltd., China

Baofeng Guo, Shijiazhuang Campus, Army Engineering University, China

Junchao Yang, Chongqing Technology and Business University, China

Zhihui Li, National University of Defense Technology, China

Xue Qing, University of Macau, Macau, China

Mengdi Zhang, China University of Mining and Technology, China

Wangjie Chen, 8511 Institute, China

Manami Kanamaru, Shibaura Institute of Technology, Japan

Ran Wang, Shanghai Maritime University, China

Xiaochun Cheng, Middlesex University, UK

Zainal Rasyid Mahayuddin, University Kebangsaan Malaysia, Malaysia

Xiaoyu Tang, South China Normal University, China

Wan Nural Jawahir Hj Wan Yussof, Universiti Malaysia Terengganu, Malaysia

Shengfeng Zhang, The 723 Institute of CSIC, China

Keyi Wang, Xidian University, China

Qiqi Kou, China University of Mining and Technology, China

Aodi Liu, He'nan Province Key Laboratory of Information Security, China

Gyu Myoung Lee, Liverpool John Moores University, UK

Xinwei Liu, Zhejiang Wanli University, China

S. GANDHIYA VENDHAN, Bharathiar University, India

# AGENDA OVERVIEW

Session Time	Saturday, September 21, 2024	Venue
10:00-12:00	Zoom Testing for Online Participants	Room A: 870 8637 3775
10:00-17:00	On-site Registration & Materials Collection	1F Lobby <Greentown Rose Garden Hotel>
19:30-21:00	Chinese Forum 中文论坛: <b>ICICSP 第二届声学阵列测量博士研究生论坛</b>	3F 文渊阁 Wenyuan Pavilion

Session Time	Sunday, September 22, 2024   Plenary Meeting	
2F 宴会厅 Gaojiazhuang Hall   Online Room A: <b>870 8637 3775</b>		
08:00-	On-site Registration at Lobby 1F <Greentown Rose Garden Hotel>	
09:00-	<b>Opening Ceremony</b>	Chairperson: <b>Dr. Xingbin Tu</b> , Zhejiang University, China
09:00-09:10	<b>Welcome Address</b>	<b>Prof. Shuxi Cheng</b> Vice Dean of Office of Scitech Research, Zhejiang University, China 程术希 浙江大学科学技术研究院 副院长
	<b>Opening Speech</b>	<b>Prof. Deqing Mei</b> Party Chief of college of Oceanography, Zhejiang University, China 梅德庆 浙江大学海洋学院 党委书记
09:10-09:20	Committee Group Photo	
09:20-10:00	<b>Keynote Speech</b>	<b>Prof. Haijun Zhang</b> , University of Science and Technology Beijing, China Fellow of IEEE and AAIA <i>Speech Title: Resource Management in 6G</i>
10:00-10:40	<b>Keynote Speech (Online)</b>	<b>Prof. Hongbin Li</b> , Stevens Institute of Technology, USA Fellow of IEEE <i>Speech Title: Non-Line-of-Sight RF Sensing with Smart Metasurfaces</i>
10:40-11:10	Group Photo & Coffee Break	
11:10-11:50	<b>Keynote Speech</b>	<b>Prof. Honggang Zhang</b> , Zhejiang University, China Fellow of IEEE and AAIA <i>Speech Title: The Establishment of NetGPT and Its Advancements</i>
11:50-12:30	<b>Keynote Speech (Online)</b>	<b>Prof. Yonghui Li</b> , University of Sydney, Australia Fellow of IEEE <i>Speech Title: Beyond 5G towards a Super-connected World</i>
12:30-13:30	Lunch Buffet / 遇见餐厅 Dining Bar 19F	





# AGENDA OVERVIEW

Session Time	Sunday, September 22, 2024   Parallel Sessions		Venue
13:30-15:40	<b>Oral Session 1</b>	<b>Radar Detection and Signal Processing</b> Presentation: SP016, SP024, SP041, SP079, SP084, SP117, SP902, SP097, SP155, SP159, SP044, SP075	19F 相待厅 VIP Room
	<b>Special Session 1 &lt;Part A&gt;</b>	<b>Acoustic Measurement and Signal Processing of Aircraft and Their Equipment</b> 特别专题 1-航空飞行器及其设备的声学测量和信号处理  Invited Talk: Cyrille Breard, Zhigang Chu, Xiaoquan Yang Presentation: SP059, SP911, SP1002, SP1004, SP1005	3F 文渊阁 Wenyuan Pavilion Room A: <u>870 8637 3775</u>
	<b>Special Session 2 &lt;Part A&gt;</b>	<b>Waveform Diverse Array and Its Applications (Array processing technology and its applications)</b> 特别专题 2-波形分集阵列及其应用 (阵列处理技术及其应用)  Invited Talk: Chengwei Zhou, Xiangrong Wang, Qiuchen Liu, Lei Yu Presentation: SP071, SP077, SP102, SP107, SP055	1F 文澜阁 Wenan Pavilion Room B: <u>813 7055 9816</u>
	<b>Special Session 5</b>	<b>Sparse Representation and Deep Learning for Mechanical Fault Diagnosis</b> 特别专题 5-基于稀疏表示和深度学习的机械故障诊断  Invited Talk: Chunlin Zhang Presentation: SP5001, SP5002, SP5003, SP5004	3F 文津阁 Wenjin Pavilion Room C: <u>847 5747 7223</u>
	<b>Special Session 6 &lt;Part A&gt;</b>	<b>RIS, IoT, AI Methods, and Applications in Reliable and Covert Communication, Signal Processing of Image Recognition, Health Diagnosis, etc.</b> 特别专题 6-智能反射表面、物联网、人工智能技术在抗干扰通信、隐蔽通信、图像识别、以及健康诊断等领域的研究与应用  Invited Talk: Haitao Xiao, Limeng Dong, Di Zhang Presentation: SP095, SP167, SP906, SP6002, SP6003	3F 文溯阁 Wensu Pavilion Room D: <u>889 4569 2461</u>
	<b>Poster Session 1</b>	<b>Digital Image and Signal Processing Methods</b>  Presentation: SP002, SP011, SP038, SP046, SP056, SP061, SP067, SP069, SP082, SP087, SP091, SP094, SP098, SP108, SP132, SP142, SP166, SP036, SP141	2F 宴会厅 A Gaojiazhuang Hall
	<b>Poster Session 2</b>	<b>Mobile Edge Computing, Resource Allocation and Signal Analysis in NGN</b>  Presentation: SP013, SP015, SP019, SP050, SP073, SP080, SP085, SP090, SP092, SP113, SP114, SP140, SP163, SP005, SP045, SP043, SP063, SP074, SP088	2F 宴会厅 B Gaojiazhuang Hall
	15:40-16:00	Coffee Break	

# AGENDA OVERVIEW

Session Time	Sunday, September 22, 2024   Parallel Sessions		Venue
16:00-18:20	<b>Oral Session 2</b>	<b>Intelligent Image and Signal Processing</b> Presentation: SP048, SP062, SP121, SP133, SP064, SP093, SP901, SP910, SP908-A, SP104	19F 相待厅 VIP Room
	<b>Oral Session 3</b>	<b>Image Detection and Object Recognition</b> Presentation: SP110, SP122, SP131, SP020, SP033, SP053, SP070, SP161, SP904, SP030	1F 文澜阁 Wenan Pavilion
	<b>Special Session 1 &lt;Part B&gt;</b>	<b>Acoustic Measurement and Signal Processing of Aircraft and Their Equipment</b> 特别专题 1-航空飞行器及其设备的声学测量和信号处理  Invited Talk: Xun Wang, Yu Liang, Zubin Liu  Presentation: SP1006, SP1007, SP1008-A, SP1009, SP1010, SP1011, SP1012-A, <b>SP1013</b>	3F 文澜阁 Wenyuan Pavilion Room A: <u>870 8637 3775</u>
	<b>Special Session 8</b>	<b>Integrated Sensing and Communications for Internet of Things</b> 特别专题 8-物联网中的通感一体化技术  Presentation: SP903, SP8001, SP8002, SP8003, SP8004, SP8005	3F 文津阁 Wenjin Pavilion Room C: <u>847 5747 7223</u>
	<b>Special Session 6 &lt;Part B&gt;</b>	<b>RIS, IoT, AI Methods, and Applications in Reliable and Covert Communication, Signal Processing of Image Recognition, Health Diagnosis, etc.</b> 特别专题 6-智能反射表面、物联网、人工智能技术在抗干扰通信、隐蔽通信、图像识别、以及健康诊断等领域的应用  Invited Talk: Harutoshi Ogai, Bo Wang, Zhengyuan Xu  Presentation: SP6004, SP6005, SP6006, <b>SP6007</b>	3F 文溯阁 Wensu Pavilion Room D: <u>889 4569 2461</u>
	<b>Special Session 7 (Fully Online)</b>	<b>Advanced Digital Signal Analysis in Healthcare: Innovations and Interdisciplinary Applications</b> 特别专题 7-数字信号分析在健康医疗中的应用: 创新方法与跨学科应用  Presentation: SP7001, SP7002, SP7003, SP7004, SP7005, <b>SP7006</b>	 Room B: <u>813 7055 9816</u>

## AGENDA OVERVIEW

Sunday, September 22, 2024   Dinner Banquet <ICICSP 2024 AWARD CEREMONY & HANDOVER CEREMONY>			
18:30-21:00	Chairperson	TBA	
	Warm-up Speech	TBA	
	Awarding 2024	<ul style="list-style-type: none"> <li>◇ Best Paper/Best Student Paper Award 最佳论文奖 &amp; 最佳学生论文奖</li> <li>◇ Best Reviewer Award 最佳审稿人奖</li> <li>◇ Best Contribution Award 最佳贡献奖</li> <li>◇ Outstanding Contribution Award 卓越贡献奖</li> </ul>	
	Handover Ceremony	TBA	
			2F 宴会厅 Gaojiazhuang Hall

*Please show the badge and meal coupons before your entry. 晚宴入场时请同时出示您的代表证与餐券。*



# AGENDA OVERVIEW

Session Time	Monday, September 23, 2024   Parallel Sessions		Venue
09:00-12:10	<b>Oral Session 4</b>	<b>Digital Signal Detection, Recognition and Analysis</b> Presentation: SP003, SP017-A, SP022, SP034, SP135, SP153, SP021, SP035, SP068	19F 相待厅 VIP Room
	<b>Oral Session 5</b>	<b>Control System and Signal Measurement Based on Machine Learning</b> Presentation: SP025, SP027, SP029, SP083, SP089, SP109, SP154-A, SP169	3F 文渊阁 Wenyuan Pavilion
	<b>Special Session 2 &lt;Part B&gt;</b>	<b>Waveform Diverse Array and Its Applications (Array processing technology and its applications)</b> 特别专题 2-波形分集阵列及其应用 (阵列处理技术及其应用) Presentation: SP118, SP123, SP125, SP126, SP127, SP130, SP147 SP149, SP160, SP907, SP2001, SP2002, SP2003, SP2004, SP2005	1F 文澜阁 Wenan Pavilion Room B: <u>813 7055 9816</u>
	<b>Special Session 3 &lt;Part A&gt;</b>	<b>Underwater Acoustics, Ocean Exploration, and Artificial Intelligence</b> 特别专题 3-水下声学、海洋探索和人工智能 Invited Talk: Wei Guo, Tengjiao He, Wei Men Presentation: SP037, SP124, SP152, SP3001, SP3002, SP3003, SP3004, SP3005, SP3006-A, SP3007, SP3008, SP3009	3F 文津阁 Wenjin Pavilion Room C: <u>847 5747 7223</u>
	<b>Special Session 4 &lt;Part A&gt;</b>	<b>Target Detection, Estimation, Classification and Tracking</b> 特别专题 4-目标检测、估计、识别和跟踪 Invited Talk: Xiao Han, Tiancheng Li, Yongwei Wang Presentation: SP023, SP026, SP028, SP039, SP040, SP042, SP049, SP051, SP101, SP120, SP144, SP145, SP146	3F 文溯阁 Wensu Pavilion Room D: <u>889 4569 2461</u>
	<b>Online Session 1 (Fully Online)</b>	<b>Signal Acquisition, Interference Detection, and Speech Recognition</b> Presentation: SP018, SP072, SP106, SP119, SP105, SP134, SP139, SP012, SP164, SP150	zoom Room A: <u>870 8637 3775</u>
	<b>Online Session 2 (Fully Online)</b>	<b>Intelligent Recognition and Detection Technology Based on Machine Vision</b> Presentation: SP052, SP099, SP128, SP156, SP165, SP170, SP909, SP136, SP096, SP066	zoom Room E: <u>889 2306 5196</u>
	12:00-13:00	Lunch Buffet / 遇见餐厅 Dining Bar 19F	

# AGENDA OVERVIEW

Session Time	Monday, September 23, 2024   Parallel Sessions		Venue
13:00-15:50	<b>Oral Session 6</b>	<b>Modern Communication Systems and Signal Analysis</b> Presentation: SP905, SP032, SP100, SP148, SP047, SP065, SP078, SP014, SP151, SP076-A	3F 文渊阁 Wenyuan Pavilion
	<b>Special Session 3 &lt;Part B&gt;</b>	<b>Underwater Acoustics, Ocean Exploration, and Artificial Intelligence</b> 特别专题 3-水下声学、海洋探索和人工智能 Invited Talk: <a href="#">Xingbin Tu</a> Presentation: SP3010, SP3011, SP3012, SP3013, SP3015, SP3016, SP3017, SP3018, SP3019, SP3020	3F 文津阁 Wenjin Pavilion Room C: <a href="tel:84757477223">847 5747 7223</a>
	<b>Special Session 4 &lt;Part B&gt;</b>	<b>Target Detection, Estimation, Classification and Tracking</b> 特别专题 4-目标检测、估计、识别和跟踪 Invited Talk: <a href="#">Jun Wang</a> , <a href="#">Jianbo Zhou</a> , <a href="#">Chuanqi Zhu</a> Presentation: SP4001, SP4002, SP4003, SP4004, SP4005, SP4006, SP4007, SP4008, SP4009, SP4010, SP402	3F 文溯阁 Wensu Pavilion Room D: <a href="tel:88945692461">889 4569 2461</a>
17:30-19:00	Dinner Buffet / 遇见餐厅 Dining Bar 19F		





# KEYNOTE SPEAKER

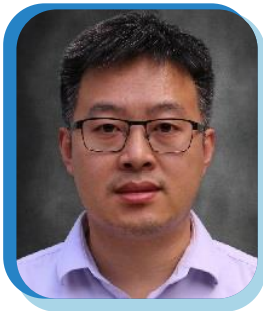
09:20-10:00 Saturday, September 22, UTC+8h

2F 宴会厅 Gaojiazhuang Hall

Room A: 870 8637 3775



Live Broadcast



## Prof. Haijun Zhang

University of Science and Technology Beijing, China

Fellow of IEEE and AAIA

### Speech Title: Resource Management in 6G

**Abstract:** This talk will identify and discuss technical challenges and recent results related to resource management in 6G mobile network. The talk is mainly divided into four parts. The first part will introduce 6G mobile networks, discuss about the 6G mobile networks architecture, and provide some main technical challenges in 6G mobile networks. The second part will focus on the issue of resource management in 6G networks and provide different recent research findings that help to develop engineering insights. The third part will address the machine learning and deep learning method based future 6G networks and address some key research problems. The last part will summarize by providing a future outlook of resource management in 6G mobile network.

**Biography:** Haijun Zhang (Fellow of IEEE and AAIA) is currently a Full Professor and Dean at the University of Science and Technology Beijing, China. He was a postdoctoral research fellow in the Department of Electrical and Computer Engineering at the University of British Columbia (UBC), Canada. He serves/ served as Track Co-Chair of WCNC 2020, Symposium Chair of Globecom'19, TPC Co-Chair of INFOCOM 2018 Workshop on Integrating Edge Computing, Caching, and Offloading in Next Generation Networks, and General Co-Chair of GameNets'16. He serves as an Editor of IEEE Transactions on Information Forensics and Security, IEEE Transactions on Network Science and Engineering, and IEEE Transactions on Communications. He received the IEEE CSIM Technical Committee Best Journal Paper Award, in 2018, IEEE ComSoc Young Author Best Paper Award, in 2017, and IEEE ComSoc Asia-Pacific Best Young Researcher Award, in 2019. He is the Chair of IEEE TCGCC and a distinguished Lecturer of IEEE. He is a Fellow of IEEE and AAIA.

## KEYNOTE SPEAKER

10:00-10:40 Saturday, September 22, UTC+8h

2F 宴会厅 Gaojiazhuang Hall

Room A: 870 8637 3775



Live Broadcast



### Prof. Hongbin Li

Stevens Institute of Technology, USA

Fellow of IEEE

### Speech Title: Non-Line-of-Sight RF Sensing with Smart Metasurfaces

**Abstract:** The proliferation of wireless communications has made radio frequency (RF) sensing increasingly ubiquitous. Remarkably, without requiring dedicated radio transmitters, RF sensing technologies enable us to leverage ambient wireless sources, such as cellular and WiFi signals, to illuminate the environment and sense surroundings with a simple mobile device. However, most RF sensors are unable to look around the corner and locate non-line-of-sight (NLOS) targets. For NLOS RF sensing, a traditional approach involves deploying multiple transmitters and receivers across the surveillance area. The resulting system is a distributed radar, which is bulky, expensive, and environmentally unfriendly due to excessive RF emissions. The rise of reconfigurable intelligent surface (RIS) offers a lightweight, low-cost, and energy-efficient solution to the NLOS sensing problem. A planar structure with numerous adjustable metamaterial elements, RIS was first embraced by the wireless communication community for its ability to control the radio environment. In this talk, we explore new NLOS RF sensing opportunities with RIS, discussing fundamental signal processing related issues and explaining how to optimize a RIS-aided system across various sensing scenarios and system configurations.

**Biography:** Hongbin Li is the Charles and Rosanna Batchelor Memorial Chair Professor at the Department of Electrical and Computer Engineering, Stevens Institute of Technology, Hoboken, NJ, USA. His general research interests include statistical signal processing, machine learning, radars, and wireless communications. He was a member of the SPTM and SAM technical committees of the IEEE Signal Processing Society. He served on the editorial boards for IEEE Transactions on Wireless Communications, IEEE Signal Processing Letters, IEEE Transactions on Signal Processing, and Elsevier Signal Processing, and was involved in guesting editing for several IEEE and non-IEEE journals. He received a number of research recognitions including the IEEE Jack Neubauer Memorial Award in 2013 and Provost's Award for Research Excellence in 2019. He is a Fellow of IEEE. Additional information can be found at: <https://www.stevens.edu/profile/hli>.

## KEYNOTE SPEAKER

11:10-11:50 Saturday, September 22, UTC+8h

2F 宴会厅 Gaojiazhuang Hall

Room A: 870 8637 3775



Live Broadcast



### Prof. Honggang Zhang

Zhejiang University, China

Fellow, IEEE and AAIA

### Speech Title: The Establishment of NetGPT and Its Advancements

**Abstract:** Recently the trend of mutual integration and collaborative evolution between the booming foundation models (e.g., Large Language Models - LLMs) and the incoming telecommunication networks (e.g. 6G) has been emerging. In response to this kind of trend, a LLMs-based telecommunication system, i.e., NetGPT (Network-enabled Generative Pre-Trained Transformer), has been put forward. Within this talk, the fundamental concept, the general architecture and functionalities, and the newest representative advancements of NetGPT, as well as the recent specific practices on how to build up NetGPT, will be deeply discussed. Moreover, by taking advantage of network-native AI, the relevant potential core technologies, the key approaches & algorithms, as well as the candidate networking models will be envisioned for achieving the challenging goal of NetGPT.

**Biography:** Dr. Honggang ZHANG- IEEE Fellow, AAIA Fellow, Full Professor (03/2008-03/2022), Adjunct Professor (04/2022-), College of Information Science and Electronic Engineering; Co-Director, York-Zhejiang Lab for Cognitive Radio and Green Communications; Zhejiang University, China; Chief Managing Editor of Intelligent Computing (12/2021-), a Science Partner Journal (SPJ), Zhejiang Lab & AAAS (American Association for the Advancement of Science); International Chair Professor of Excellence (12/2012 -12/2014), CominLabs Excellence Center (Laboratoire d'Excellence), Université Européenne de Bretagne (UEB) & Supélec (<https://project.inria.fr/chaireueb/>), France; Honorary Visiting Professor, the University of York, UK (08/2010-08/2018). Dr. Honggang ZHANG received the Ph.D. degree in Electrical Engineering from Kagoshima University, Japan, in March 1999. Prior to that, he received the Bachelor of Engineering and Master of Engineering degrees, both in Electrical Engineering, from Huazhong University of Science & Technology (HUST), China, in 1989, and Lanzhou University of Technology, China, in 1992, respectively. From October 1999 to March 2002, he was with the Shin-Kawasaki Research Center, Telecommunications Advancement Organization (TAO) of Japan, as a TAO Research Fellow. From April 2002 to November 2002, he joined the TOYOTA IT Center, where he performed research and development on software-defined radio (SDR) with applications to Intelligent Transport Systems (ITS). From December 2002 to August 2004, he has been with the UWB (Ultra-Wideband) Research Consortium, Communications Research Laboratory (CRL) and National Institute of Information and Communications Technology (NICT) of Japan, where his R&D responsibilities were focused on UWB wireless communications, IEEE 802.15.3a & 4a WPAN standardizations, Wireless 1394 and "1394-over-UWB" smart home networks. He was the founding member of UWB Forum and the principle author and contributor for proposing DS-UWB in IEEE 802.15 WPAN standardization task group, for which he initiated the "Soft-Spectrum Adaptation (SSA)" technique and contributed to its worldwide developments. From September 2004 to February 2008, he has been with CREATE-NET (<https://create-net.fbk.eu/>), where he led its wireless teams in exploring Cognitive Radio (CR) and its integration with Ultra-Wideband (UWB)

technologies for dynamic open-spectrum wireless communications and networks evolution (i.e. UWB-CR: Ultra-Wideband Cognitive Radio) while participated a number of European FP6/FP7 projects (EUWB, PULSERS 2). Dr. Honggang ZHANG has served as the Chair of the Technical Committee on Cognitive Networks (TCCN) of the IEEE Communications Society (ComSoc) during 2011-2012. He was the Co-Chair of IEEE Globecom 2008 Symposium and IEEE ICC 2013 Symposium. He was the founding TPC Co-Chair of CrownCom 2006 (International Conference on Cognitive Radio Oriented Wireless Networks and Communications 2006) and the Steering Committee Member of CrownCom 2006-2009. He was the General Co-Chair of IEEE GreenCom 2010 (The 2010 IEEE International Conference on Green Computing and Communications) and the TPC Co-Chair of IEEE OnlineGreenComm 2014 (The 2014 IEEE Online Conference on Green Communications). Dr. Honggang ZHANG has been the Lead Guest Editor of the IEEE Communications Magazine feature topic issues on "Green Communications" (2010-2011). He was the Series Editor of IEEE Communications Magazine (Green Communications and Computing Networks Series). He is the co-editor/co-author of two books with the titles of "Cognitive Communications - Distributed Artificial Intelligence (DAI), Regulatory Policy & Economics, Implementation" (Wiley) and "Green Communications: Theoretical Fundamentals, Algorithms and Applications" (CRC Press), respectively.

## KEYNOTE SPEAKER

11:50-12:30 Saturday, September 22, UTC+8h

2F 宴会厅 Gaojiazhuang Hall

Room A: 870 8637 3775



Live Broadcast



### Prof. Yonghui Li

University of Sydney, Australia

Fellow of IEEE

### Speech Title: Beyond 5G towards a Super-connected World

**Abstract:** Connected smart objects, platforms and environments have been identified as the next big technology development, enabling significant society changes and economic growth. The entire physical world will be connected to the Internet, referred to as Internet of Things (IoT). The intelligent IoT network for automatic interaction and processing between objects and environments will become an inherent part of areas such as electricity, transportation, industrial control, utilities management, healthcare, water resources management and mining. Wireless networks are one of the key enabling technologies of the IoT. They are likely to be universally used for last mile connectivity due to their flexibility, scalability and cost effectiveness. The attributes and traffic models of IoT networks are essentially different from those of conventional communication systems, which are designed to transmit voice, data and multimedia. IoT access networks face many unique challenges that cannot be addressed by existing network protocols; these include support for a truly massive number of devices, the transmission of huge volumes of data burst in large-scale networks over limited bandwidth, and the ability to accommodate diverse traffic patterns and quality of service (QoS) requirements. Some IoT applications have much stringent latency and reliability requirements which cannot be accommodated by existing wireless networks. Addressing these challenges requires the development of new wireless access technologies, underlying network protocols, signal processing techniques and security protocols. In this talk, I will present the IoT network development, architecture, key challenges, requirements, potential solutions and recent research progress in this area, particularly in 5G and beyond 5G.

**Biography:** Yonghui Li is now a Professor and Director of Wireless Engineering Laboratory in School of Electrical and Information Engineering, University of Sydney. He is the recipient of the Australian Research Council (ARC) Queen Elizabeth II Fellowship in 2008 and ARC Future Fellowship in 2012. He is an IEEE Fellow. His current research interests are in the area of wireless communications. Professor Li was an editor for IEEE transactions on communications, IEEE transactions on vehicular technology and guest editors for several special issues of IEEE journals, such as IEEE JSAC, IEEE IoT Journals, IEEE Communications Magazine. He received the best paper awards from several conferences. He has published one book, more than 300 papers in premier IEEE journals and more than 200 papers in premier IEEE conferences. His publications have been cited more than 20000 times.



# INVITED SPEAKERS



**Cyrille Breard**

Researcher

Commercial Aircraft Corporation of China Ltd, China

**Speech Title:** Acoustic measurement and machine learning



**Prof. Zhigang Chu**

褚志刚

Chongqing University, China

**Speech Title:** High-performance beamforming, a sound source identification



**Prof. Xiaoquan Yang**

杨小权

Shanghai University, China

**Speech Title:** Theory and Application of Aerodynamic Noise Identification



**Prof. Xun Wang**

王洵

Beihang University, China

**Speech Title:** Aircraft online structural health monitoring via ambient noise



**Prof. Yu Liang**

余亮

Northwestern Polytechnical University, China

**Speech Title:** Challenges and techniques of acoustic testing in closed wind tunnels



**Prof. Chengwei Zhou**

周成伟

University of Sydney, Australia

**Speech Title:** Deep Reconstruction Network for Robust Adaptive Beamforming



**Prof. Xiangrong Wang**

王向荣

Beihang University, China

**Speech Title:** Cognitive Sparse Beamforming: Regularized Antenna Switching and Optimum Design



**Qiuchen Liu**

刘秋晨

Associate Researcher

Shenzhen University, China

**Speech Title:** One-bit radar imaging and its applications



**Dr. Lei Yu**

于雷

National University of Defense Technology, China

**Speech Title:** The application of FDA radar in UAV swarm detection and localization



**Wei Guo**

郭微

Associate Researcher

National University of Defense Technology, China

**Speech Title:** Research on DEMON Spectrum Analysis of a Long Horizontal Array



**Prof. Xiao Han**

韩笑

Harbin Engineering University, China

**Speech Title:** Analysis and utilization of under-ice acoustic propagation characteristics in the Arctic



**Prof. Tiancheng Li**

李天成

Northwestern Polytechnical University, China

**Speech Title:** From Target Tracking to Targeting Track: Modeling and Implementation



# INVITED SPEAKERS



**Prof. Yongwei Wang**  
 王永威  
 Zhejiang University, China  
**Speech Title:** AI Security: Adversarial Attacks & Defenses



**Assoc. Prof. Jun Wang**  
 王俊  
 National University of Defense Technology, China  
**Speech Title:** High confidence underwater small target recognition based on multi-view sonar imaging



**Assoc. Prof. Jianbo Zhou**  
 周建波  
 Northwestern Polytechnical University, China  
**Speech Title:** Passive source DOA and range estimation with horizontal linear array in reliable acoustic paths deep ocean



**Dr. Chuanqi Zhu**  
 朱传奇  
 Southeast University, China  
**Speech Title:** Research on high-fidelity acquisition for the radiated noise features of underwater targets



**Assoc. Prof. Haitao Xiao**  
 肖海涛  
 Xi'an Jiaotong University, China  
**Speech Title:** Deep transfer Learning for Unknown Interference Recognition and Damage Diagnosis



**Assoc. Prof. Limeng Dong**  
 董理蒙  
 Northwestern Polytechnical University, China  
**Speech Title:** Enhancing Wireless Physical Layer Security Transmission via Reconfigurable Intelligent Surface(RIS)



**Assoc. Prof. Di Zhang**  
 张迪  
 Zhengzhou University, China  
**Speech Title:** The Theory and Application of Short Packet Communication for the Universal Internet of Things



**Prof. Harutoshi Ogai**  
 Waseda University, Japan  
**Speech Title:** The Theory and Application of Automatic Driving



**Assoc. Prof. Bo Wang**  
 王博  
 Nanjing University, China  
**Speech Title:** Optimal Dispatch of Renewable Power Systems: Forecasting, Modeling and Solution



**Assoc. Prof. Zhengyuan Xu**  
 徐铮元  
 Nanjing Audit University, China  
**Speech Title:** PSOS: improved stacking integrated learning model for gastric cancer prediction by using personal physical examination dataset



**Assoc. Prof. Zubin Liu**  
 刘祖斌  
 Zhejiang University of Technology, China  
**Speech Title:** Solution of acoustic inverse problem based on the acoustic radiation modes



**Tengjiao He**  
 何腾蛟  
 Doctor  
 Shanghai Jiao Tong University, China  
**Speech Title:** An order-reduced adiabatic mode model for three-dimensional underwater sound propagation: From theory to application

## INVITED SPEAKERS



**Dr. Wei Men**

门伟

Tsinghua University, China

**Speech Title:** Integrated underwater acoustic detection and communication: from waveform design to signal processing



**Dr. Xingbin Tu**

涂星滨

Zhejiang University, China

**Speech Title:** TBA



**Assoc. Prof. Chunlin Zhang**

张春林

Northwestern Polytechnical University, China

**Speech Title:** Fault signature extraction of rolling bearings under variable speed via time-frequency overlap group sparse representation



# BIOGRAPHIES OF INVITED SPEAKERS

## Cyrille Breard

TBA

## Prof. Zhigang Chu 褚志刚

Zhigang Chu was born in Jiangsu, China, in 1978. He received the B.S., M.S. and PH.D. degrees from Chongqing University, Chongqing, China, in 1999, 2002 and 2012, respectively. He is currently a Professor and a Head of Department of Mechanical and Vehicle Engineering with the Chongqing University, Chongqing, China. He is also the Chief Expert of the B&K China. His current research interests include sensor array signal processing, acoustic vibration comfort and intelligent control.

## Prof. Xiaoquan Yang 杨小权

TBA

## Prof. Xun Wang 王洵

Dr. Xun Wang received his Ph.D. in "Estimation of multiple sound sources with data and model uncertainties" in Dec 2014 from the Sorbonne University - University of Technology of Compiègne, France. He was a postdoctoral fellow at the Aix-Marseille University, France, between Mar 2015 and Sept 2016 and a Research Associate at HKUST from Oct 2016 and Feb 2020. He joined the Beihang University, China, in Apr 2020 and has been a Full Professor since Feb 2022. Dr. Xun Wang has published over 40 research papers (including 26 first-author papers) in leading journals in acoustics, signal processing, and hydraulic/oceanic engineering. His research interests include acoustical inverse problems, acoustic imaging, structural health monitoring, and uncertainty quantification.

## Prof. Liang Yu 余亮

Prof. Liang Yu is currently with the School of Civil Aviation, Northwestern Polytechnical University, Xi'an, China, and also with the State Key Laboratory of Airliner Integration Technology and Flight Simulation, Shanghai, China. Dr. Liang Yu is committed to promoting the research direction of "acoustic sensing and intelligent signal processing of mechanical equipment", developing advanced acoustic measurement, fault diagnosis, and intelligent signal processing methods for mechanical equipment. Dr. Liang Yu has published nearly 200 research papers, including more than 70 papers as the first/corresponding author in journals such as MSSP, JSV, and TIM. Dr. Liang Yu is a member of the organizing committees of four international conferences (ICICSP, MEAE, ICMIE, and MAES, serving nine sessions). Dr. Liang Yu is also the conference chairman of the 10th Asia Conference on Mechanical Engineering and Aerospace Engineering (MEAE 2024). Dr. Liang Yu has twice been invited to give plenary reports at international conferences. He is a reviewer for 34 international journals and a guest editor of four special issues. Additional information can be found at: <https://teacher.nwpu.edu.cn/2023050020.html>.



## BIOGRAPHIES OF INVITED SPEAKERS

### Prof. Chengwei Zhou 周成伟

Chengwei Zhou received his Ph.D. degree in Electronic Science and Technology from Zhejiang University, Hangzhou, China, in June 2018. He was a Visiting Researcher at University of Technology Sydney, Sydney, Australia, from April 2017 to October 2017. He served as a Postdoctoral Research Fellow at the State Key Laboratory of Industrial Control Technology, the College of Control Science and Engineering, Zhejiang University, from 2018 to 2020. Since June 2020, he has been with the College of Information Science and Electronic Engineering, Zhejiang University, where he is currently a Tenure-Track Professor. He is also a member of the State Key Laboratory of Industrial Control Technology and the Key Laboratory of Collaborative Sensing and Autonomous Unmanned Systems of Zhejiang Province. His research interests are in the areas of array signal processing, direction-of-arrival estimation, adaptive beamforming, with applications to UAV surveillance.

Dr. Zhou currently serves as an Associate Editor for International Journal of Communication Systems, Franklin Open, and an Editorial Board Member of Journal of Signal Processing (in Chinese). He was also a Committee Member for several IEEE international conferences, including the 11th IEEE Sensor Array and Multichannel Signal Processing Workshop (IEEE SAM 2020) and the 13th IEEE/CIC International Conference on Communications in China (IEEE/CIC ICC 2024), and serves as a Co-Chair for the Special Session "Exploiting Diversities in Advanced Array Systems: New Applications and Trends" in the 49th IEEE International Conference on Acoustics, Speech, and Signal Processing (IEEE ICASSP 2024). He was the recipient of the 2021 IEEE Signal Processing Society Young Author Best Paper Award, IEEE ICASSP 2023 Top 3% Paper Recognition, 2019 IET Communications Premium Award, and IEICE ISAP 2020 Best Paper Award.

### Prof. Xiangrong Wang 王向荣

Xiangrong Wang, Professor, School of Electronic and Information Engineering, Beihang University. Technical Committee Member of IEEE SAM Community, Editorial board member of IEEE Transactions on Radar Systems, editorial board member of Elsevier Digital Signal Processing. She is mainly engaged in the research of array signal processing, radar signal processing and integrated sensing and communications, etc. She has been responsible for 3 projects of National Natural Science Foundation. She has published more than 40 journal papers and over 60 conference papers, and published a text book "Advanced Digital Signal Processing: From Theory to Applications", a book "Sparse Sensing and Sparsity Sensed in Multi-sensor Array Applications" by Springer Nature Publisher, two invited book chapters, and 2 papers have been highly cited by ESI; 8 China invention patents were granted and 2 US invention patents were granted. She was the winner of IEEE AES Barry Carlton Award (2023), the winner of Youth Talent Support Program of the China Association for Science and Technology (2017), the winner of Beijing Nova Program (2022). She was awarded the Yangtze River Scholar (Young Program, 2022), and Marie-Curie-Research-Fellowship (2022).

### Qiuchen Liu 刘秋晨

Qiuchen Liu, Associate researcher, Department of Electronic and Information Engineering, Shenzhen University. She is mainly engaged in research on inverse synthetic aperture radar imaging, synthetic aperture radar imaging, array signal processing, and related fields. She has been responsible for the Young Scientists Fund of the National Natural Science Foundation of China and a sub-project of the National Key Research and Development Program of China. As a core technical personnel, she has participated in many national and provincial scientific research projects, including the project of Innovative Research Team of Ministry of Education of China (No.2), 173 Program of China, etc. In recent years, she has published 10 papers in authoritative academic journals, such as IEEE Trans. Geosci. Remote Sens., and has been granted 4 invention patents.



# BIOGRAPHIES OF INVITED SPEAKERS

## Dr. Lei Yu 于雷

Lei Yu, lecturer, College of Electronic Science and Technology, National University of Defense Technology, Member of Chinese Institute of Electronics, and youth editorial board of 《Guidance and Fuzing》. He is mainly engaged in the research of signal processing and system design of new digital array radar system. He is in charge of a Natural Science Foundation of NUDT for young scientists and has participated as a technical core member in multiple national and military-level scientific research projects. In recent five years, he has published 12 papers in authoritative academic journals as the first author, including IEEE Trans. Aerosp. Electron. Syst., Sci. China Inform. Sci., IEEE Trans. Veh. Technol., IEEE Geosci. Remote Sens. Lett., and Journal of Radars, with 7 papers indexed by SCI. He has also been granted 7 invention patents. He has received the Zhou Mingli Scholarship from the National University of Defense Technology (2023) and the Guanghua Scholarship (2019).

## Wei Guo 郭微

Wei Guo, a Research Associate at the National University of Defense Technology, specializes in sonar signal processing, underwater target feature analysis and target identification, including line spectrum estimation, weak target detection, etc. She has contributed to numerous projects such as the National Key Research and Development Program of China, projects of Military Science and Technology Commission, foundation strengthening, among others. More than 10 articles and patents have been published or authorized. She has also served as a guest editor for Remote Sensing on a special issue "Advanced Array Signal Processing for Target Imaging and Detection" in 2023 and 2024.

## Prof. Xiao Han 韩笑

Xiao Han received the B.S., M.S., and Ph.D. degrees in underwater acoustic engineering from Harbin Engineering University, Harbin, China, in 2011, 2014, and 2016, respectively, where he is currently a professor with the College of Underwater Acoustic Engineering. He serves as the youth editorial board or editorial board member of several journals, such as Acta Acustica, Journal of Signal Processing, Journal of Marine Science and Application. He serves as a member of the Underwater Communication Professional Committee of the China Communications Society, a member of the Youth Working Committee of the China Naval Architecture Engineering Society. He has published 2 monographs and more than 40 research articles in related journals. He is the holder of 22 patents (5 of which have been converted). He won the first prize of Heilongjiang Provincial Science and Technology Progress Award, the first prize of Ocean Engineering Science and Technology Award, etc. His research interests include underwater acoustic communication and networking, polar acoustic and information technology.

## Prof. Tiancheng Li 李天成

Tiancheng Li is currently a professor with Northwestern Polytechnical University since 2019, who had been a Marie Skłodowska-Curie Individual Researcher with the University of Salamanca, Spain, from 2014 to 2018. He has coauthored more than 50 refereed papers on eminent journals, such as IEEE SPM and TSP. His research interests include multi-sensor information fusion and Radar target detection and tracking. He is an Area Editor of the prestigious journal Information Fusion, and an Associate Editor for 8 peer-reviewing journals including FITEE, Journal of Radars, and Journal of Signal Processing. He is the General Chair of ICCAIS 2021 and named in the World's top 2% of Scientists List since 2022. He is the recipient of the Best Paper Award in 2017 and Distinguished Editorial Board Member Award in 2020 from the journal FITEE, and was awarded the Second-class Natural Science Award by the CAA and the First-class Natural Science Award by Shaanxi Province. He was awarded the National Science Fund for Excellent Young Scholars.

# BIOGRAPHIES OF INVITED SPEAKERS

## Prof. Yongwei Wang 王永威

Yongwei Wang is ZJU100 Young Professor at Shanghai Institute for Advanced Study, Zhejiang University. Previously, he received his PhD in Electrical and Computer Engineering from University of British Columbia in 2021, and his M.Sc. and B.S. degrees from Northwestern Polytechnical University in 2017 and 2014, respectively. He was also a Research Fellow at Nanyang Technological University from 2021 till 2023. His research focuses on adversarial attacks, AI Content Generation (AIGC) and AIGC detection. He has published about 40 papers in prestigious conference/journals such as IEEE TPAMI, Medical Image Analysis, ICLR, KDD, AAAI, WWW, ACM MM etc. He served as Session Chair in IEEE ICIP and Program Committees of several top AI conferences.

## Assoc. Prof. Jun Wang 王俊

Dr. Wang is an associate professor in the College of Meteorology and Oceanography, National University of Defense technology. He received the B.S. degree in optical information science and technology and the Ph.D. degree in optical engineering from the College of Optoelectronic Science and Engineering, NUDT in 2010 and 2016, respectively. In 2013, he studied as a joint Ph.D student in the University of New South Wales, Australia. He has achieved two provincial science and technology progress awards. In 2021, he was selected as a young talent of NUDT. His current research interests include fiber optic sensing, unmanned underwater detection, underwater acoustic imaging and signal processing.

## Assoc. Prof. Jianbo Zhou 周建波

JianBo Zhou obtained his M.S. and Ph.D. degrees in underwater acoustic engineering from Harbin Engineering University, Harbin, China, in 2013 and 2018, respectively. His research interests include ocean ambient noise and underwater detection in deep oceans and continental slope areas. He serves as a guest editor for several publications, including Electronics, Jove, and Remote Sensing. Additionally, he is a member of the Electronic Technology Academic Committee of the Chinese Society of Naval Architecture and Marine Engineering. He holds over 10 patents for his inventions and has published more than 30 papers in prestigious venues such as JASA, JASA EL, APPL ACOUST, APPL ACOUST, and ACTA ACUSTICA.

## Dr. Chuanqi Zhu 朱传奇

TBA

## Assoc. Prof. Haitao Xiao 肖海涛

Haitao Xiao is an associate professor and doctoral supervisor at the School of Information and Communication Engineering, Xi 'an Jiaotong University, and a visiting researcher at Waseda University. He received the Ph.D. degree from Waseda University, Japan. He was selected into the "Overseas Talent Introduction Project of the International Exchange Program" of the Ministry of Social Security of China in 2018, and won the winning award of the "Source Creation Cup" Innovation and Creativity Competition of JKW in 2022. He is committed to the research of intelligent wireless communication and data computing fields such as smart antennas, intelligent mobile Ad hoc networks, intelligent reliable communications, satellite signal processing and positioning, intelligent fault diagnosis and damage diagnosis.

# BIOGRAPHIES OF INVITED SPEAKERS

## Assoc. Prof. Limeng Dong 董理蒙

Limeng Dong was born in Xi'an China. He received the bachelor's, master's, and Ph.D. degrees from the School of Electronics and Information, Northwestern Polytechnical University, Xi'an, China, in 2012, 2015, and 2019, respectively. From 2015 to 2017, he was a Visiting Ph.D Student with the School of Electrical Engineering and Computer Science, University of Ottawa, ON, Canada. From 2019 to 2021, he was a Postdoctoral Researcher with the Ministry of Education Key Lab for Intelligent Networks and Network Security, School of Information and Communications Engineering, Xi'an Jiaotong University, Xi'an, China. He is currently an Associate Professor with the School of Electronics and Information, Northwestern Polytechnical University. His research interests include physical layer security of MISO, MIMO, cognitive radio, cell-free communications and reconfigurable intelligent surface aided wireless communications.

## Assoc. Prof. Di Zhang 张迪

Di Zhang currently is an Associate Professor at Zhengzhou University, he is also a Visiting Scholar of Korea University. He is serving as an area editor of KSII Transactions on Internet and Information Systems, has served as the guest editor of IEEE Wireless Communications and IEEE Network. He received the First Prize Award for Science and Technology Progress of Henan Province in 2023, the First Prize Award for Science and Technology Achievements from Henan Department of Education in 2023, and the ITU Young Author Recognition in 2019. His research interests are the wireless communications and networking, especially the short packet communications and its applications.

## Prof. Harutoshi Ogai

Harutoshi Ogai is a Professor of Information, Production, and Systems with Waseda University. He was born in Kitakyushu, Japan, and acquired the Ph.D. degree from Tokyo Institute of Technology. He was the director of the Automated Driving Joint Research Center of the Kitakyushu Industry-university-research Cooperation Association and Waseda University. His research interests include Process Control, Process Modeling and Simulation, Process Analysis and Data Mining, signal process, Automatic Control, and Bridge Diagnosis.

## Assoc. Prof. Bo Wang 王博

Bo Wang is currently an associate professor with the School of Management and Engineering, Nanjing University, Nanjing, China. He was a Research Assistant of the Global COE Program, Waseda University, Ministry of Education, Culture, Sports, Science and Technology, Japan. He was a Special Research Fellow of the Japan Society for the Promotion of Science (JSPS). He is a Committee Member of Chinese Association of Automation (CAA) Energy Internet Committee, a Committee Member of Chinese Society of Optimization, Overall Planning and Economic Mathematics Risk Management Committee, and a Committee Member of Systems Engineering Society of Jiangsu. His research interests include power system planning, renewable generation forecasting, data-driven decision-making, and artificial intelligence algorithms.

## Assoc. Prof. Zhengyuan Xu 徐铮元

Haitao Xiao is an associate professor and doctoral supervisor at the School of Information and Communication Engineering, Xi'an Jiaotong University, and a visiting researcher at Waseda University. He received the Ph.D. degree from Waseda University, Japan. He was selected into the "Overseas Talent Introduction Project of the International Exchange Program" of the Ministry of Social Security of China in 2018, and won the winning award of the "Source Creation Cup" Innovation and Creativity Competition of JKW in 2022. He is committed to the research of intelligent wireless communication and data computing fields such as smart antennas, intelligent mobile Ad hoc networks, intelligent reliable communications, satellite signal processing and positioning, intelligent fault diagnosis and damage diagnosis.

# BIOGRAPHIES OF INVITED SPEAKERS

## Assoc. Prof. Zubin Liu 刘祖斌

TBA

## Tengjiao He 何腾蛟

Dr. Tengjiao He is currently a postdoctoral researcher at Shanghai Jiao Tong University. His research interests encompass underwater acoustics, computational acoustics, and acoustics in moving media, employing analytical, numerical, and experimental methods. He has authored more than 10 peer-reviewed journal papers, primarily as the first author (80% of his publications), in journals such as The Journal of the Acoustical Society of America and The Journal of Sound and Vibration. His research has been supported by the National Natural Science Foundation of China (NSFC) for Young Scientists, the China Scholarship Council (CSC)-ISVR joint project (Soton, UK), and Stable Support Funding from NKLUT. He has delivered over five presentations at international and domestic conferences, including the Acoustical Society of America (ASA) meetings, the International Conference on Underwater Acoustics (ICUA), and the Acoustical Society of China

## Wei Men 门伟

Dr. Wei Men is a postdoctoral fellow at the Department of Electronic Engineering, Tsinghua University. He received the B.S. degree and Ph.D. degree in underwater acoustic engineering from Harbin Engineering University, in 2018, and 2023, respectively. His research interests are underwater acoustic communications and networks, and integrated detection and communication. He is the recipient of the Best Paper Award from IEEE ICICSP in 2022.

## Xingbin Tu 涂星滨

TBA

## Assoc. Prof. Chunlin Zhang 张春林

CHUNLIN ZHANG received the B.S. and Ph.D. degrees in mechanical engineering from Xi'an Jiaotong University, Xi'an, China, in 2011 and 2017, respectively. He then joined the School of Aeronautics, Northwestern Polytechnical University, Xi'an, where he is currently an associate professor. From 2014 to 2016, he was a visiting scholar with the University of Michigan, Ann Arbor, MI, USA. His main research interests include structural vibrations, dynamics and fault diagnosis, and nonlinear vibration energy harvesting.

# ORAL SESSION 1

## Oral Session 1: Radar Detection and Signal Processing

Chairperson:

**13:30-15:30**

**Sunday, September 22**

19F 相待厅 VIP Room

Time	Paper ID	Speech Title & Presenter
13:30-13:40	SP016	Radar Jamming Waveform Optimization Method based on Self-Adaption Deep Fool Adversarial Attacks <i>Boshi Zheng, Beijing Institute of Technology, China</i>
13:40-13:50	SP024	Scatterer Model Assisted Altitude Estimation in FDA Radar <i>Yihuan Lin, Shenzhen University, China</i>
13:50-14:00	SP041	Radar Weak Target Detection Method Based on Deep Manifold Network <i>Zhonghao Wan, National University of Defense Technology, China</i>
14:00-14:10	SP079	Monte Carlo Counterfactual Regret Minimization for Waveform Optimization in Radar and Jammer Games <i>Liqun Xia, Academy of Military Science, China</i>
14:10-14:20	SP084	An Intelligent Particle Filter Based Joint Probability Data Association Algorithm for Long-duration Multi-target Tracking in Clutter Environment <i>Xihao Wang, University of Electronic Science and Technology of China, China</i>
14:20-14:30	SP117	Enhanced Extraction of Short Pulse Micro-Doppler Features from Underwater Targets Utilizing Modified Inverse Radon Transform <i>Xuhui Chen, Institute of Acoustics Chinese Academy of Sciences, University of Chinese Academy of Sciences, China</i>
14:30-14:40	SP902	Sparse Optimization based Estimation Methods for High-resolution Range Profiles of Ships in Non-Gaussian Sea Clutter <i>Kun Zhang, Donghai Laboratory, China</i>
14:40-14:50	SP097	Enhanced Convergence Speed For DOA Estimation Utilizing Covariance-Free SBL Algorithm <i>Han Cao, Xidian University, China</i>
14:50-15:00	SP155	Multi-Source 2D DOA Estimation of Uniform Circular Array Based on Deep Learning <i>Zixuan Hu, Ocean University of China, China</i>
15:00-15:10	SP159	Memoryless Continuous-Phase Chirp Spread Spectrum for Mud Pulse Telemetry <i>Jiaxun Lu, Zhejiang University, China</i>
15:10-15:20	SP044	Task Scheduling Algorithm for Multifunctional Integration System Based on Dynamic Aperture Partition Antenna <i>Juan Rong, Shanghai Radio Equipment Research Institute, China</i>
15:20-15:30	SP075	Research on demodulation algorithms for cross medium communication combining acoustic and electromagnetic waves <i>Mingjinghan Wang, Zhejiang University, China</i>

## ORAL SESSION 2

### Oral Session 2: Intelligent Image and Signal Processing

Chairperson:

**16:00-17:40**

**Sunday, September 22**

19F 相待厅 VIP Room

Time	Paper ID	Speech Title & Presenter
16:00-16:10	SP048	Intrinsic Image Decomposition-Based Fusion Method Based on Smoothing Filter-based Intensity Modulation (SFIM) <i>Phonekham Hansana, Hunan University, China</i>
16:10-16:20	SP062	A Simple and Effective Deep Registration Algorithm for SAR Images <i>Hui Fang, Xidian university, China</i>
16:20-16:30	SP121	Multi-map Fusion for Vision-and-Language Navigation in Continuous Environment <i>Yan Zhou, Xiangtan University, China</i>
16:30-16:40	SP133	Multimodal Deep Fusion Model and Assistant Diagnostic Software for ECG Arrhythmia Classification <i>TBA, Zhejiang University, China</i>
16:40-16:50	SP064	Mainlobe Interference Suppression with Pattern Maintenance Based on Dual-Polarized Conformal Array <i>Tongtao Zhu, Hefei University of Technology, China</i>
16:50-17:00	SP093	Automatic Modulation Classification Based on Time-Attention Mechanism and LSTM Neural Networks <i>Tongyao Liu, University of Electronic Science and Technology of China, China</i>
17:00-17:10	SP901	Qt-based Imaging Study of Collision Avoidance Sonar Echo data <i>Xu Jin, Second Research Department Hangzhou applied acoustics research institute, Hangzhou, China</i>
17:10-17:20	SP910	An Attention based CNN-LSTM hybrid approach for Music Genre Classification <i>TBA, Zhejiang University, China</i>
17:20-17:30	SP908-A	Infrared and optical image fusion and segmentation based on Bayesian Gauss Markov Potts model <i>Li Wang, Central South University, China</i>
17:30-17:40	SP104	GNSS Spoofing Detection Method Based on BP Neural Network <i>Yang Zhang, Air Force Engineering University, China</i>



## ORAL SESSION 3

### Oral Session 3: Image Detection and Object Recognition

Chairperson:

**16:00-17:40**

**Sunday, September 22**

1F 文澜阁 Wenan Pavilion

Time	Paper ID	Speech Title & Presenter
16:00-16:10	SP110	Cross-modal Collaboration for Augmented Few-Shot Image Classification <i>Chunxiang He, Xidian University, China</i>
16:10-16:20	SP122	Stacking Ensemble Learning for Seabed Sediment Classification <i>Ting Zhao, Harbin Engineering University, China</i>
16:20-16:30	SP131	A Fast Image matching approach in fatigue testing of wall plate structures <i>ZHANG Wendong, AVIC Aircraft Strength Research Institute, China</i>
16:30-16:40	SP020	Infant Crying Recognition Method of Limited Data Based on Self-supervised Learning <i>Bin Wang, Nanjing University of Aeronautics and Astronautics, China</i>
16:40-16:50	SP033	Underwater multi-targets recognition with ResNet convolutional neural network of SE block optimization <i>Xiaoqi Zhao, Harbin Engineering University, China</i>
16:50-17:00	SP053	Unsupervised Change Detection with Constant False Alarm Rate in Heterogeneous Remote Sensing Images Based on Copula Theory <i>Weiming Li, Tsinghua University, China</i>
17:00-17:10	SP070	Automatic Syllable Segmentation of Chinese Speech Based on Types Recognition and Alignment <i>Linjia Sun, Beijing Language and Culture University, China</i>
17:10-17:20	SP161	SAR Target Recognition Preprocessing Based on Reconfigurable Computing Architecture <i>Han Fang, China Telecom Corporation Ltd., China</i>
17:20-17:30	SP904	Towards Latent Fingerprint Recognition: Evaluating the Performance of Advanced Algorithms <i>Xinwei Liu, Zhejiang Wanli University (ZWU), Ningbo, Zhejiang, China</i>
17:30-17:40	SP030	EFIM: An Exploring Feature-Invariant Module for Domain Generalization <i>Chenyu Ma, Xiamen University, China</i>

## ORAL SESSION 4

### Oral Session 4: Digital Signal Detection, Recognition and Analysis

Chairperson:

09:00-10:30

Monday, September 23

19F 相待厅 VIP Room

Time	Paper ID	Speech Title & Presenter
09:00-09:10	SP003	An Improved Adaptive Filtering Methodology for Through-the-Earth Extremely Low Frequency Electromagnetic Signals  <i>Baishi Yu, Shanghai Jiao Tong University &amp; Hanjiang National Laboratory, China</i>
09:10-09:20	SP017-A	Matched Field Processing For 1-Bit Signal Based on Atomic Norm Minimization  <i>Yidi Li, Sun Yat-sen University, China</i>
09:20-09:30	SP022	A Direct Position Determination Algorithm for Underwater Acoustic Broadband Pulse Signal  <i>Long Zhang, Shanghai Marine Electronic Equipment Research Institute, China</i>
09:30-09:40	SP034	A Distributed Costas Encoded Jamming Signal for the Uplink of Satellite Communication  <i>Yuyan Tan, Xidian University, China</i>
09:40-09:50	SP135	Tomographic Retrieval of the Rain Area of Interest of Continuous Rainfall Process Using Microwave Signal Links of LEO Satellite Constellation  <i>Wenxiao Wang, Jilin Province Hongyu Construction Limited Company, China</i>
09:50-10:00	SP153	Shortwave Signal Recognition Based on the AP-TCN Model  <i>Yu Li, Ocean University of China, China</i>
10:00-10:10	SP021	Intelligent Reflecting Surface Aided 2D-DOA Estimation for NLOS Target  <i>Min Duan, Shenzhen University, China</i>
10:10-10:20	SP035	Near-Field Source Localization Using the SPICE Method for Limited Snapshots  <i>Yiding Gao, University of Chinese Academy of Sciences, China</i>
10:20-10:30	SP068	A Beamspace-Based Orthogonal Matching Pursuit DOA Estimation Algorithm  <i>Zhongchuan Sun, East China Electronic Engineering Institute, China</i>

## ORAL SESSION 5

### Oral Session 5: Control System and Signal Measurement Based on Machine Learning

Chairperson:

09:00-10:20

Monday, September 23

3F 文渊阁 Wenyuan Pavilion

Time	Paper ID	Speech Title & Presenter
09:00-09:10	SP025	Modified Dual-Observer Structure and Radial Basis Function Neural Networks for Linear Active Disturbance Rejection Control  <i>Wanqi Guo, Waseda University, Japan</i>
09:10-09:20	SP027	A Micro-Doppler Curve Parameter Estimation Method Based on the Short-Time Ambiguity Function Entropy and the Sparse Bayesian Learning  <i>Yuyang Shao, Xidian University, China</i>
09:20-09:30	SP029	Teacher Fine-Tuning-Based Quantization Distillation  <i>Rongjin Zhuang, Xiamen University, China</i>
09:30-09:40	SP083	Multi-Objective Evolutionary Algorithm for Construction Branched Pipe Routing  <i>Yizhe Liu, Shenzhen University, China</i>
09:40-09:50	SP089	A Machine Learning-Based Online Evaluation Method for Statistical Properties of Random Number Generators  <i>Qian Sun, Institute of Semiconductors, Chinese Academy of Sciences, China</i>
09:50-10:00	SP109	Frenet-Artificial Potential Field Method for Vehicle Obstacle Avoidance Path Planning  <i>Qingdian Tang, Beihang University, China</i>
10:00-10:10	SP154-A	Aerodynamic Noise Localization and Control of Rotating Airfoil Blades  <i>Jianhai Ye, Wenzhou University, China</i>
10:10-10:20	SP169	An Enhanced Synchronization Approach by Combining PMF-FFT and Improved Costas Loop for DSSS  <i>Zhang Rong, University of Electronic Science and Technology of China, China</i>

## ORAL SESSION 6

### Oral Session 6: Modern Communication Systems and Signal Analysis

**13:00-14:40**
**Monday, September 23**

Chairperson:

3F 文渊阁 Wenyuan Pavilion

Time	Paper ID	Speech Title & Presenter
13:00-13:10	SP905	Reliable hidden communication scheme based on SCFDM-TDCS system <i>Xin Gou, Sichuan Jiuzhou Electric Appliance Group Co., LTD, China</i>
13:10-13:20	SP032	Joint Latency and Energy Consumption for Federated Learning Over NOMA-UAV Networks <i>Jingjing Wang, Beihang University, China</i>
13:20-13:30	SP100	Pervasive Communications: Modular Wireless Sensor and Actuator Network System Design <i>Bin Sun, University of Jinan, China</i>
13:30-13:40	SP148	UAMP-SBL based Channel Estimation for Underwater Acoustic Communications with Receiver Array <i>Huaji Ma, Southeast University, China</i>
13:40-13:50	SP047	Autonomous Ground Vehicle Navigation with GNSS/5G Integration <i>Jun Yu, Tongji University, China</i>
13:50-14:00	SP065	Performance of RIS-Aided Short-Packet NOMA Networks with Hardware Impairments and Imperfect SIC <i>Yanan Li, Henan University, China</i>
14:00-14:10	SP078	Improving Accuracy of Network Bandwidth Prediction Using Multi-channel Gaussian Process Regression <i>Shude Chen, University of the Ryukyus, Japan</i>
14:10-14:20	SP014	Robust underwater acoustic channel estimation in impulsive noise environment <i>Weizhe Li, Harbin Engineering University, China</i>
14:20-14:30	SP151	Enhancing NR Physical-Layer Key Generation via Beamwidth Adaptations <i>Wanting Ma, Southeast University, China</i>
14:30-14:40	SP076-A	Sound field separation based on the 3D acoustic vector sensor array by using the equivalent source method in a sparsity framework <i>Xianglong Zeng, East China Jiaotong University, China</i>

# POSTER SESSION 1

## Poster Session 1: Digital Image and Signal Processing Methods

Chairperson:

**13:30-15:40**

**Sunday, September 22**

2F 宴会厅 A

Gaojiazhuang Hall

Frame #	Paper ID	Speech Title & Presenter
01	SP002	Multi-Feature Fusion TOA Algorithm Based on Deep Learning and Compressed Sensing <i>Haoran Ji, Hunan University, China</i>
02	SP011	Target detection and anti-clutter using energy priority idea based on 77-79 GHz radar <i>Jiadong Pu, Harbin Institute of Technology, Weihai, China</i>
03	SP038	Transformer Enhanced YOLO Network for Ship Detection in Optical Remote Sensing Images <i>Rusheng Ju, National University of Defense Technology, China</i>
04	SP046	Adaptive Guided Filtering Based BM3D Sonar Image Denoising Algorithm <i>Jiahui Wu, Harbin Engineering University, China</i>
05	SP056	Active Control of Road Impulse Noise Based on Modified Error-constrained FNxLMS <i>Zifei Wang, Tongji University, China</i>
06	SP061	A Feature Extraction Method of Underwater Targets <i>Bo Li, The 705 Research Institute, China Shipbuilding Industry Corporation, China</i>
07	SP067	Bridging Modalities: Improving Thermal Face Recognition with Low-Quality Cross-Modality Synthesis <i>Chengxi Dong, Kunming University of Science and Technology, China</i>
08	SP069	Research on CAD Image Classification Method Based on Deep Neural Networks: Transfer Learning with ResNet Model <i>Shikai Liu, Nanjing Audit University, China</i>
09	SP082	Direction of Arrival Estimation Based on Machine Learning <i>Zhenyu Zhang, Nanjing University of Science and Technology, China</i>
10	SP087	Diagonal Loading Method with Small Snapshot Number and Steering Vector Errors <i>Feixue Yang, Nanjing University of Science and Technology, China</i>
<b>Break Time: 10 Minutes</b>		
11	SP091	Design and Implementation of 24GHz FMCW Radar <i>Guanshuai Wang, Nanjing University of Science and Technology, China</i>
12	SP094	A New Track Initiation Method for HFCSSMR <i>Mengxiao Zhao, Air Force Engineering University, China</i>
13	SP098	FPGA Implementation of Short Message Authentication Based on the SM4 Algorithm <i>Kuangjie Jiang, Nanjing University of Science and Technology, China</i>
14	SP108	Maximum Likelihood DOA Estimation Using a Clustering Based Hybrid Optimization Algorithm <i>Zhengliang Zhu, National University of Defense Technology, China</i>
15	SP132	DLSC-Net: Double Level Spatio-temporal Context-aware Network for Continous Sign Language Recognition <i>Ziyang Deng, Nanchang University, China</i>
16	SP142	Micro-Motion Feature Analysis and Extraction of UAV Based on SET-CFD <i>Xinjun Zha, Nanjing University of Science and Technology, China</i>

- |    |       |   |
|----|-------|---|
| 17 | SP166 | A Novel Extracellular Spike Detection Algorithm Based on Improved Complete Ensemble Empirical Mode Decomposition with Adaptive Noise<br><i>Canhong Long, Guizhou University of Finance and Economics, China</i> |
| 18 | SP036 | Human Pose Estimation Based on Enhanced Lightweight High-Resolution Network<br>Shuxian Guo, Taiyuan Normal University, China  |
| 19 | SP141 | Hybrid-driven 2D DOA estimation based on uniform circular arrays Algorithm<br>Wenxuan Wang, Ocean University of China, China  |
- 





## POSTER SESSION 2

### Poster Session 2: Mobile Edge Computing, Resource Allocation and Signal Analysis in NGN

Chairperson:

13:30-15:40

Sunday, September 22

2F 宴会厅 B

Gaojiazhuang Hall

Frame #	Paper ID	Speech Title & Presenter
01	SP013	Optimal Design of Group Orthogonal MIMO Radar Waveforms Bases on Quantum Genetic Algorithm <i>Zhimin Qu, Beihang University, China</i>
02	SP015	A BWO-VMD-CNN-BiLSTM-Attention Model for HF communication foF2 Prediction in the Chinese Middle Latitude Region <i>Zhenhai Lu, National University of Defense Technology, China</i>
03	SP019	PAPR Reduction of OCDM on Underwater Acoustic Communication <i>Haoyang Liu, Qilu University of Technology (Shandong Academy of Science), China</i>
04	SP050	Integrated Communication And Radar Detection Based-on Single Modulator At W-band <i>Dongju Du, Shanghai University, China</i>
05	SP073	Two-step Timing Synchronization Algorithm for OFDM Systems <i>Xianliang Wu, Nanjing University of Science and Technology, China</i>
06	SP080	Approximate False Alarm Probability of Hchirp System based on LoRa <i>Yizhen Jia, Nanjing University of Science and Technology, China</i>
07	SP085	Anti-jamming technique of multi-beam LOFAR spectrum estimation based on spatial deconvolution <i>Tianlin Qi, Harbin Engineering University, China</i>
08	SP090	Improved Algorithm Based On PMF-FFT In Spread Spectrum Ranging System <i>Xinyi Yao, Nanjing University of Science and Technology, China</i>
09	SP092	A Secure Communication Scheme Based on ECC and PUF <i>Jiacheng Zhang, Nanjing University of Science and Technology, China</i>
10	SP113	Explicit Analysis of Age of Synchronization in IoT Networks <i>Zhiwei Jin, Hohai University, China</i>
<b>Break Time: 10 Minutes</b>		
11	SP114	Optimizing Age of Information in Random Access Networks with Correlated Sources <i>Long Liang, Hohai University, China</i>
12	SP140	Shortwave signal modulation recognition based on multi-scale depthwise separable convolution <i>Jiayi Jin, Ocean University of China, China</i>
13	SP163	Anti drone Combat with Improved Synchronization Delay Interference <i>Zhuocheng Liu, Unit 92985 of the People's Liberation Army, China</i>
14	SP005	Signal source location algorithm based on deep learning and MVDR <i>Manxin Yang, University of Chinese Academy of Sciences, China</i>
15	SP045	A Deep Network Solution for DOA Estimation of Adjacent Signals with Uncertain Number <i>Liyuan Zhu, Shanghai Radio Equipment Research Institute, China</i>
16	SP043	A Compressed Tensor-based Subspace Framework for 2D-DOA and Polarization Estimation <i>Liangliang Li, Hainan University, China</i>

- 
- 17 SP063 Interrupted Transmitting and Receiving Parameters Design and Echo Reconstruction Method of Pulse Signal in Anechoic Chamber  
*Zhenyu Qiao, National University of Defense Technology, China*
  
  - 18 SP074 Design of High Data Rate Demodulator  
*Miao Xu, Nanjing University of Science and Technology, China*
  
  - 19 SP088 Implementation of Turbo Product Code Decoder with High Throughput  
*Tong Zhou, Nanjing University of Science and Technology, China*
-

## SPECIAL SESSION 1 <Part A>

### Special Session 1: Acoustic Measurement and Signal Processing of Aircraft and Their Equipment

特别专题 1-航空飞行器及其设备的声学测量和信号处理

Chairperson:

13:30-15:20

Sunday, September 22

3F 文渊阁 Wenyuan Pavilion

Room A: 870 8637 3775

Time	Paper ID	Speech Title & Presenter
13:30-13:50	Invited Talk	Acoustic Measurement and Machine Learning <b>Cyrille Breard</b> , Commercial Aircraft Corporation of China Ltd, China
13:50-14:10	Invited Talk	High-Performance Beamforming, A Sound Source Identification <b>Zhigang Chu</b> , Chongqing University, China
14:10-14:30	Invited Talk	Theory and Application of Aerodynamic Noise Identification <b>Xiaoquan Yang</b> , Shanghai University, China
14:30-14:40	SP059	Identification of multiple dipole sound sources: maximum likelihood, iterative beamforming, and source number estimation <i>Jianing Li, Beihang university, China</i>
14:40-14:50	SP911	Low-Speed Flutter Wind Tunnel Experiment Technology Based on Binocular Vision System <i>Bocheng Zhang, Hangzhou International Innovation Institute, Beihang University, China</i>
14:50-15:00	SP1002	Sparse Bayesian Learning Approach for Wide-band Acoustic Imaging <i>Junyan Zhang, North China Electric Power University, China</i>
15:00-15:10	SP1004	Experimental study of propeller noise reduction based on acoustic wave interference principle <i>Kai Wei, Aircraft Strength Research Institute of China, China</i>
15:10-15:20	SP1005	Experimental Method of Segmented Acoustic Liners Performance in Noise Reduction <i>Zhuohan Li, Aircraft Strength Research Institute of China, China</i>

## SPECIAL SESSION 1 <Part B>

### Special Session 1: Acoustic Measurement and Signal Processing of Aircraft and Their Equipment

特别专题 1-航空飞行器及其设备的声学测量和信号处理

Chairperson:

16:00-18:20

Sunday, September 22

3F 文渊阁 Wenyuan Pavilion

Room A: 870 8637 3775

Time	Paper ID	Speech Title & Presenter
16:00-16:20	Invited Talk	Aircraft online structural health monitoring via ambient noise <i>Xun Wang, Beihang University, China</i>
16:20-16:40	Invited Talk	Challenges and techniques of acoustic testing in closed wind tunnels <i>Yu Liang, Northwestern Polytechnical University, China</i>
16:40-17:00	Invited Talk	Solution of acoustic inverse problem based on the acoustic radiation modes <i>Zubin Liu, Zhejiang University of Technology, China</i>
17:00-17:10	SP1006	Research on Design Technology of Aeroengine Acoustic Modes Synthesizer <i>Dongwen Xue, Aircraft Strength Research Institute of China, China</i>
17:10-17:20	SP1007	Non-stationary sound field reconstruction within the Bayesian framework <i>Fengmin Zhang, Donghai Laboratory, China</i>
17:20-17:30	SP1008-A	Numerical study on flow and noise characteristics of rotating cylinder <i>Chenghao Yang, Hefei University of Technology, China</i>
17:30-17:40	SP1009	Fault Diagnosis of Pumps Based on Acoustic Images and An Improved Pre-trained CNN Model <i>Jiawei Wang, Anhui University, China</i>
17:40-17:50	SP1010	Sparse-sampled Near-field Acoustic Holography Based on 3D-CNN and Dense Block <i>Zhen Cao, Anhui University, China</i>
17:50-18:00	SP1011	High-resolution Acoustic Imaging and Noise Localisation Based on Non-Synchronous Measurements of Direct-Drive Blower Characteristic Frequencies <i>Guangyao Fang, Taiyuan University of Technology, China</i>
18:00-18:10	SP1012-A	Deep learning-based multiple speech source localization in indoor reverberant environments <i>TBA, Northwestern Polytechnical University, China</i>
18:10-18:20	SP1013	<i>TBA</i> <i>TBA</i>

## SPECIAL SESSION 2 <Part A>

### Special Session 2: Waveform Diverse Array and Its Applications (Array processing technology and its applications)

特别专题 2-波形分集阵列及其应用 (阵列处理技术及其应用)

Chairperson:

**13:30-15:40**

**Sunday, September 22**

1F 文澜阁 Wenan Pavilion

Room B: [813 7055 9816](tel:81370559816)

Time	Paper ID	Speech Title & Presenter
13:30-13:50	Invited Talk	Deep Reconstruction Network for Robust Adaptive Beamforming <b>Chengwei Zhou</b> , Zhejiang University, China
13:50-14:10	Invited Talk	Cognitive Sparse Beamforming: Regularized Antenna Switching and Optimum Design <b>Xiangrong Wang</b> , Beihang University, China
14:10-14:30	Invited Talk	One-bit radar imaging and its applications <b>Qiuchen Liu</b> , Shenzhen University, China
14:30-14:50	Invited Talk	The application of FDA radar in UAV swarm detection and localization <b>Lei Yu</b> , National University of Defense Technology, China
14:50-15:00	SP071	An Updateable Network Based on ReduNet for Radar Jamming Recognition <b>Yuhang Zhu</b> , Xidian University, China
15:00-15:10	SP077	One-bit Distributed Radar Target Detection with Range-Doppler Estimation <b>Shiqi Hu</b> , Shenzhen University, China
15:10-15:20	SP102	A Novel Subspace Segmentation Processing Method for Radar Hybrid Integration Detection <b>Fusen Yang</b> , Xidian University, China
15:20-15:30	SP107	Joint Optimization of Frequency Selection and Transmit Power for Radar Anti-jamming Using Reinforcement Learning <b>Jie Geng</b> , Xidian University, China
15:30-15:40	SP055	Decoupled Transmit Beampattern Synthesis for Frequency Diverse Array Radar with Nonlinear Frequency Offsets <b>Chen Qiushi</b> , Air Force Engineering University, China

## SPECIAL SESSION 2 <Part B>

### Special Session 2: Waveform Diverse Array and Its Applications (Array processing technology and its applications)

特别专题 2-波形分集阵列及其应用 (阵列处理技术及其应用)

Chairperson:

**09:00-11:30**

**Monday, September 23**

1F 文澜阁 Wenan Pavilion

Room B: [813 7055 9816](tel:81370559816)

Time	Paper ID	Speech Title & Presenter
09:00-09:10	SP118	Detection-Jamming Integrated Waveform Design Based on Multi-Dimensional Joint Constraints <i>Kaiwei Wang, Xidian University, China</i>
09:10-09:20	SP123	Influence of Azimuth Velocity of Moving Target on Parameter Estimation <i>Kun Liu, Xidian University, China</i>
09:20-09:30	SP125	Clutter sensing STAP method for vehicle-mounted rotating antenna radar <i>Youai Wu, Xidian University, China</i>
09:30-09:40	SP126	Intelligent radar anti-jamming strategy with high sample efficiency based on MBRL <i>Dong Yajie, Xidian University, China</i>
09:40-09:50	SP127	Radar Active Composite Jamming Recognition Method Based on STFT Feature Extraction <i>Zhuochen Chen, Xidian University, China</i>
09:50-10:00	SP130	An Efficient Target Localization Method in MPR Systems with Reduced Transmitter Dependency <i>Mingzhu Yan, Xidian University, China</i>
10:00-10:10	SP147	Bounded Rationality-Based Anti-Jamming Strategy Generation for Frequency Agile Radar <i>Chao Wang, Xidian University, China</i>
10:10-10:20	SP149	2-D DOA Estimation Under Mainlobe Jamming Based on Subarray Level Blind Source Separation <i>Jingtian Xu, Xidian University, China</i>
10:20-10:30	SP160	Earth-Based Radar Imaging Technology of the Moon Based on Minimum Entropy Autofocus Algorithm <i>Yuchen Ji, Xidian University, China</i>
10:30-10:40	SP907	A Method for Suppressing Ground Clutter of Marching Vehicle-borne Radar <i>Gang Fang, Shanghai Aerospace Electronic Technology Institute, China</i>
10:40-10:50	SP2001	Analysis of Sound Source Localization Effect Based on Different 18 Element 2D Microphone Arrays <i>Huang Linsen, Chongqing Technology and Business University, China</i>
10:50-11:00	SP2002	Lightweight Target Detection Network for Security Radar and FPGA Acceleration <i>Shaowu Chen, Shenzhen University, China</i>
11:00-11:10	SP2003	Passive Bistatic Denial with Waveform Diverse Array Radar <i>Qingyun Kan, Xidian University, China</i>
11:10-11:20	SP2004	A Unified One-bit Source Detection Method Leveraging Second-Order Statistics <i>Yuan Zhao, Shenzhen Institute of Artificial Intelligence and Robotics for Society, China</i>
11:20-11:30	SP2005	Residual-Based Learning Efficient Transformer Network for Maneuvering Target Tracking <i>Shihua Zhao, Xidian University, China</i>



## SPECIAL SESSION 3 <Part A>

### Special Session 3: Underwater Acoustics, Ocean Exploration, and Artificial Intelligence

特别专题 3-水下声学、海洋探索和人工智能

Chairperson:

**09:00-12:00**

**Monday, September 23**

3F 文津阁 Wenjin Pavilion

Room C: [847 5747 7223](tel:84757477223)

Time	Paper ID	Speech Title & Presenter
09:00-09:20	Invited Talk	Research on DEMON Spectrum Analysis of a Long Horizontal Array <b>Wei Guo</b> , National University of Defense Technology, China
09:20-09:40	Invited Talk	An order-reduced adiabatic mode model for three-dimensional underwater sound propagation: From theory to application <b>Tengjiao He</b> , Shanghai Jiao Tong University
09:40-10:00	Invited Talk	Integrated underwater acoustic detection and communication: from waveform design to signal processing <b>Wei Men</b> , Tsinghua University
10:00-10:10	SP037	Research on Robust Beamforming Algorithm Based on Diagonal Loading <b>Zhenjing Zhu</b> , Hangzhou Dianzi University, China
10:10-10:20	SP124	Bearings Fusion Using the Cross Entropy Method For Underwater Multitarget Tracking <b>Qiang Gao</b> , Jiangsu Automation Research Institute, China
10:20-10:30	SP152	Snapshot-deficient Off-grid Direction of Arrival Estimation for Underwater Scenarios via Dictionary Refining Elastic-Net Framework <b>Zhongyao Wang</b> , Qingdao Innovation and Development Center of Harbin Engineering University, China
10:30-10:40	SP3001	Multipath Propagation Characteristics of Line-spectrum Noise Radiated by Underwater Targets Under a Fluctuating Sea Surface <b>Xuedong Zhang</b> , Institute of Acoustics, Chinese Academy of Sciences, China
10:40-10:50	SP3002	Correlation Analysis of Underwater Vehicle Self-Noise Collected by Microphone and Hydrophone <b>Zhixin Zuo</b> , Ocean University of China, China
10:50-11:00	SP3003	Scholte Wave Excitation Method in Very-Shallow Sea <b>Qingshan Zeng</b> , National Key Laboratory of Science and Technology on Underwater Acoustic Antagonizing, China
11:00-11:10	SP3004	Research on the sound transmission characteristics of deep-sea surface sound channel under fluctuating sea surface <b>Ding Xinyu</b> , Hangzhou Applied Acoustics Research Institute, China
11:10-11:20	SP3005	Buoy Shore Station Receiving System <b>He Chen</b> , Hangzhou Ruili Marine Equipment Co., Ltd. & Hangzhou Applied Acoustics Research Institute, China
11:20-11:30	SP3006-A	Robust Underwater Acoustic Pulse DOA Estimation Using Attention and Convolutional Long Short-term Memory <b>Zhuheng Song</b> , Institute of Deep-sea Science and Engineering, Chinese Academy of Sciences, China
11:30-11:40	SP3007	An improved EMD denoising framework for underwater distributed acoustic sensing signals by exploring Permutation Entropy <b>Jiantong Chen</b> , School of Mechanical and Electrical Engineering, Guangdong University of Technology, China
11:40-11:50	SP3008	Grid-Encoded Neural Networks for Precise Interpolation of Oceanic Temperature and Salinity <b>Shirong Liu</b> , National University of Defense Technology, China
11:50-12:00	SP3009	Numerical Simulation of Broadband Ocean Ambient Noise in a Layered Medium <b>Ren Chao</b> , National Key Laboratory of Science and Technology on Sonar, Hangzhou Applied Acoustics Research Institute, China

## SPECIAL SESSION 3 <Part B>

### Special Session 3: Underwater Acoustics, Ocean Exploration, and Artificial Intelligence

特别专题 3-水下声学、海洋探索和人工智能

Chairperson:

**13:00-15:00**

**Monday, September 23**

3F 文津阁 Wenjin Pavilion

Room C: [847 5747 7223](tel:84757477223)

Time	Paper ID	Speech Title & Presenter
13:00-13:20	Invited Talk	<b>TBA</b>  <i>Xingbin Tu, Zhejiang University, China</i>
13:20-13:30	SP3010	Real-time Interpretation of Typical Artificial Targets using ARV Forward-looking Sonar  <i>Wanyuan Zhang, China Ship Scientific Research Center, China</i>
13:30-13:40	SP3011	Expectation maximization-based semi-blind channel estimation for underwater acoustic OFDM communications  <i>Hongyu Yin, Harbin Engineering University, China</i>
13:40-13:50	SP3012	Sensitivity analysis of deep-sea reliable sound paths based on proxy models to sound speed profiles  <i>Zhijie Xiong, Harbin Engineering University, China</i>
13:50-14:00	SP3013	A Feature Self-supervised Learning Method Driven by DEMON Spectral Model for Underwater Noise of Ships  <i>Jiayi Li, Hangzhou Applied Acoustics Research Institute, Hangzhou, China</i>
14:00-14:10	SP3015	Analysis of Acoustic Propagation Characteristics in the Okinawa Sea Region Beneath Fluctuating Sea Surfaces  <i>Jialong Chen, Shandong University of Science and Technology, China</i>
14:10-14:20	SP3016	Detection Technology for Dim and Small Targets Based on Forward-Looking Sonar Images  <i>Jingwen Ma, Harbin Engineering University, China</i>
14:20-14:30	SP3017	Impact of typhoon noise on the detection performance of multi-static sonobuoy array  <i>Liu Shuo, National university of defense technology, China</i>
14:30-14:40	SP3018	A robust method for extracting convergence zone features in a horizontally inhomogeneous deep-sea environment  <i>Taihong Li, CSSC Systems Engineering Research Institute, Beijing, China</i>
14:40-14:50	SP3019	Self-detection Method for Hyperbolic Interference Striations of Radiated Noise Passing Characteristics  <i>Yujing Sheng, Southeast University, China</i>
14:50-15:00	SP3020	Compressed sensing fusion algorithm based on immune algorithm  <i>Haolin Liao, National University of Defense Technology, China</i>

## SPECIAL SESSION 4 <Part A>

### Special Session 4: Target Detection, Estimation, Classification and Tracking

特别专题 4-目标检测、估计、识别和跟踪

Chairperson:

09:00-12:10

Monday, September 23

3F 文溯阁 Wensu Pavilion

Room D: [889 4569 2461](tel:88945692461)

Time	Paper ID	Speech Title & Presenter
09:00-09:20	Invited Talk	Analysis and utilization of under-ice acoustic propagation characteristics in the Arctic <i>Xiao Han, Harbin Engineering University, China</i>
09:20-09:40	Invited Talk	From Target Tracking to Targeting Track: Modeling and Implementation <i>Tiancheng Li, Northwestern Polytechnical University, China</i>
09:40-10:00	Invited Talk	AI Security: Adversarial Attacks & Defenses <i>Yongwei Wang, Zhejiang University, China</i>
10:00-10:10	SP023	Design and Implementation of Real-time Underwater Acoustic Multimedia Transmission Modem <i>Jie Xi, Zhejiang University, China</i>
10:10-10:20	SP026	Study of the Relaxor Ferroelectric Single Crystal Helmholtz Transducer <i>Shuchang Zhang, Northwestern Polytechnical University, China</i>
10:20-10:30	SP028	Research on Broadband Spherical Communication Transducer <i>Shuwen Shi, Northwestern Polytechnical University, China</i>
10:30-10:40	SP039	A Matched Mode Processing Method For The Depth Discrimination Of A Moving Source <i>Yuxin Deng, Northwestern Polytechnical University, China</i>
10:40-10:50	SP040	Using Distributed MIMO Sonar and Time Delay Matching to Localize Underwater Target in Shadow Zone of Deep Ocean <i>Shuai Qiang, Northwestern Polytechnical University, China</i>
10:50-11:00	SP042	Frequency-Domain Message-Passing Receiver for Joint Channel Estimation and Data Detection in Single-Carrier MIMO Underwater Systems <i>Yifan Wang, Zhejiang University, China</i>
11:00-11:10	SP049	A Depth Classification Method for Deep-sea Transient Sources Using YOLOv5 <i>Bin Geng, Northwestern Polytechnical University, China</i>
11:10-11:20	SP051	Underwater Multiple Targets Tracking Using Multi-Bernoulli Filter and Improved Data Association <i>Jiawei Gou, Northwestern Polytechnical University, China</i>
11:20-11:30	SP101	A PID-optimized Olen Campton Beamforming Method <i>Weisi Hua, Northwestern Polytechnical University, China</i>
11:30-11:40	SP120	Automatic extraction of bearing trajectory of underwater acoustic sources based on Bearing Time Recording <i>Jinwei Lv, Northwestern Polytechnical University, China</i>
11:40-11:50	SP144	Analysis of self-noise characteristics of fully-actuated autonomous underwater vehicle <i>Yajing Zhang, Northwestern polytechnical University, China</i>
11:50-12:00	SP145	A passive localization method with multipath time delays based on underwater glider platforms in the deep sea <i>Chentian Xv, Northwestern polytechnical University, China</i>
12:00-12:10	SP146	Research on the Self Noise Characteristics of Unmanned Sailboat at Sea <i>Menglong Liu, Northwestern polytechnical University, China</i>

## SPECIAL SESSION 4 <Part B>

### Special Session 4: Target Detection, Estimation, Classification and Tracking

特别专题 4-目标检测、估计、识别和跟踪

Chairperson:

**13:00-15:50**

**Monday, September 23**

3F 文溯阁 Wensu Pavilion

Room D: [889 4569 2461](tel:88945692461)

Time	Paper ID	Speech Title & Presenter
13:00-13:20	Invited Talk	High Confidence Underwater Small Target Recognition Based on Multi-View Sonar Imaging <i>Jun Wang, National University of Defense Technology, China</i>
13:20-13:40	Invited Talk	Passive Source DOA and Range Estimation with Horizontal Linear Array in Reliable Acoustic Paths Deep Ocean <i>Jianbo Zhou, Northwestern Polytechnical University, China</i>
13:40-14:00	Invited Talk	Research on High-fidelity Acquisition for the Radiated Noise Features of Underwater Targets <i>Chuanqi Zhu, Southeast University, China</i>
14:00-14:10	SP4001	Sparsity-promoting direction finding of superimposed signals using nonuniform arrays: a variational Bayesian treatment <i>Yasong Ji, Northwestern Polytechnical University, China</i>
14:10-14:20	SP4002	Research on feature extraction method for ship radiated noise based on DBO-VMD <i>Dandan Zhu, Northwestern Polytechnical University, China</i>
14:20-14:30	SP4003	Acoustic Signal Denoising of Cetacean Based on Treble Band-Split Convolution Network <i>He Wu, Harbin Engineering University, China</i>
14:30-14:40	SP4004	An Adaptive Extended Kalman Filter Based on Variational Bayesian and Sage-Husa Prediction Algorithms <i>Lian Ma, Harbin Engineering University, China</i>
14:40-14:50	SP4005	Source Localization from Horizontal Multipath Using a Horizontal Line Array in the Continental Shelf Environment <i>Hongbo Li, Northwestern Polytechnical University, China</i>
14:50-15:00	SP4006	Super-resolution Underwater Acoustic Imaging Based on Sparse Bayesian Learning <i>Peihui Liang, National University of Defense Technology, China</i>
15:00-15:10	SP4007	A Multi Target Tracking Algorithm based on Acoustic Feature Correlation <i>Yan Wang, Harbin Engineering University, China</i>
15:10-15:20	SP4008	Track Classification of UAVs Based on YOLOv5 for Civilian Surveillance Radars <i>Yuhao Hou, Xidian University, China</i>
15:20-15:30	SP4009	Altitude Measurement of Low-angle Target Using BeamSpace Based on Deep Neural Network <i>Jiankang Chen, Xidian University, China</i>
15:30-15:40	SP4010	A Closed-form Estimator for Target Position and Propagation Speed Using TOA Measurement <i>Yonghua Chen, South China University of Technology, China</i>
15:40-15:50	SP402	Ship-Radiated Noise Recognition Based on Swin-Transformer <i>Yingjian Liu, Northwestern Polytechnical University, China</i>

## SPECIAL SESSION 5

### Special Session 5: Sparse Representation and Deep Learning for Mechanical Fault Diagnosis

特别专题 5-基于稀疏表示和深度学习的机械故障诊断

Chairperson:

**13:30-15:15**

**Sunday, September 22**

3F 文津阁 Wenjin Pavilion

Room C: 847 5747 7223

Time	Paper ID	Speech Title & Presenter
13:30-14:00	Invited Talk	Fault signature extraction of rolling bearings under variable speed via time-frequency overlap group sparse representation  <i>Chunlin Zhang, Northwestern Polytechnical University, China</i>
14:00-14:15	SP5001	Total Variation Denoising with Fusing L1 Norm and Overlapping Group Sparsity and Its Application to Analyze Variable Speed Faulty Bearing Signals  <i>Chunlin Zhang, Northwestern Polytechnical University, China</i>
14:15-14:30	SP5002	Learnable Wavelet Packet Denoising Network for Aero-engine Fault Feature Detection  <i>Han Zhang, Chang'an University, China</i>
14:30-14:45	SP5003	Open set recognition of intelligent bearing fault diagnosis based on hybrid neural network and improved OPENMAX  <i>Zixu Zhao, Nankai University, China</i>
14:45-15:00	SP5004	Improved Wiener Filter Network for Interpretable Gear Fault Diagnosis  <i>Yuanyuan Xu, Chongqing University, China</i>
15:00-15:15	SP5001	Total Variation Denoising with Fusing L1 Norm and Overlapping Group Sparsity and Its Application to Analyze Variable Speed Faulty Bearing Signals  <i>Chunlin Zhang, Northwestern Polytechnical University, China</i>



## SPECIAL SESSION 6 <Part A>

### Special Session 6: RIS, IoT, AI Methods, and Applications in Reliable and Covert Communication, Signal Processing of Image Recognition, Health Diagnosis, etc.

特别专题 6-智能反射表面、物联网、人工智能技术在抗干扰通信、隐蔽通信、图像识别、以及健康诊断等领域的研究与应用

Chairperson:

**13:30-15:20**

**Sunday, September 22**

3F 文溯阁 Wensu Pavilion

Room D: 889 4569 2461

Time	Paper ID	Speech Title & Presenter
13:30-13:50	Invited Talk	Deep transfer Learning for Unknown Interference Recognition and Damage Diagnosis  <i>Haitao Xiao, Xi'an Jiaotong University, China</i>
13:50-14:10	Invited Talk	Enhancing Wireless Physical Layer Security Transmission via Reconfigurable Intelligent Surface (RIS)  <i>Limeng Dong, Northwestern Polytechnical University, China</i>
14:10-14:30	Invited Talk	The Theory and Application of Short Packet Communication for the Universal Internet of Things  <i>Di Zhang, Zhengzhou University, China</i>
14:30-14:40	SP095	Double-IRS Aided Secure Symbiotic Radio System with Inter-Surface Reflection  <i>Shuang Chen, Northwestern Polytechnical University, China</i>
14:40-14:50	SP167	Lightweight Deep Driver Distraction Recognition Network  <i>Jiaying Wu, North China University of Technology, China</i>
14:50-15:00	SP906	GastroNet FusionAI: Artificial Intelligence Diagnosis of Clinical Gastric Cancer Tumors  <i>Jialun Xu, Nanjing Audit University, China</i>
15:00-15:10	SP6002	CWA-YOLO: Rethinking the YOLOv8 architecture at the level of feature information and applying it to substation equipment detection  <i>Zhuyun LI, China Southern Power Grid Technology Co., Ltd., China / Waseda University, Japan</i>
15:10-15:20	SP6003	Anti-interference intelligent decision-making technology based on deep reinforcement learning  <i>Shuo Ma, Xi'an Jiaotong University, China</i>



## SPECIAL SESSION 6 <Part B>

**Special Session 6: RIS, IoT, AI Methods, and Applications in Reliable and Covert Communication, Signal Processing of Image Recognition, Health Diagnosis, etc.**

特别专题 6-智能反射表面、物联网、人工智能技术在抗干扰通信、隐蔽通信、图像识别、以及健康诊断等领域的应用

Chairperson:

**16:00-17:40**

**Sunday, September 22**

3F 文溯阁 Wensu Pavilion

Room D: 889 4569 2461

Time	Paper ID	Speech Title & Presenter
16:00-16:20	Invited Talk	The Theory and Application of Automatic Driving <i>Harutoshi Ogai, Waseda University, Japan</i>
16:20-16:40	Invited Talk	Optimal Dispatch of Renewable Power Systems: Forecasting, Modeling and Solution <i>Bo Wang, Nanjing University, China</i>
16:40-17:00	Invited Talk	PSOS: improved stacking integrated learning model for gastric cancer prediction by using personal physical examination dataset <i>Zhengyuan Xu, Nanjing Audit University, China</i>
17:00-17:10	SP6004	An Intelligent routing decision-making technique based on DQN for MANETs <i>Qinyao Li, Xi'an Jiaotong University, China</i>
17:10-17:20	SP6005	Improved Subsequent Processing of Lane Detection and Application in the Factory Automatic Handling System <i>Yichen Wang, Waseda University, Japan</i>
17:20-17:30	SP6006	Real-time Accurate Altimetry Based on Satellite Reflection Signals <i>Linkun Ma, Xi'an Jiaotong University, China</i>
17:30-17:40	SP6007	Applying DDQN for Advanced Model Tuning: An Evaluation of Optimization Methods and Results <i>TBA, Nanjing Audit University, China</i>

## SPECIAL SESSION 7

### Special Session 7: Advanced Digital Signal Analysis in Healthcare: Innovations and Interdisciplinary Applications

特别专题 7-数字信号分析在健康医疗中的应用: 创新方法与跨学科应用

Chairperson:

**16:00-17:30**

**Sunday, September 22**

**Room B: 813 7055 9816**

Time	Paper ID	Speech Title & Presenter
16:00-16:15	SP7001	Advancing Medical Image Registration with the Vision Foundation Model (VFM): A Modular Pre-trained Framework  <i>Haojie Wang, Wenzhou Medical University, China</i>
16:15-16:30	SP7002	An Automated Ptosis Screening and Postoperative Prediction System  <i>YiXiong Zhou, Shanghai Ninth People's Hospital, China</i>
16:30-16:45	SP7003	An Efficient Ophthalmic Disease QA System Integrated with Knowledge Graphs and Digital Humans  <i>Shihan Guo, China University of Mining and Technology, China</i>
16:45-17:00	SP7004	Prediction of Cup-to-Disc Ratio Progression Based on Longitudinal Datasets of Glaucoma Patients  <i>Xiaohan Liu, East China Normal University, China</i>
17:00-17:15	SP7005	Structural Design and Gait Analysis of a Novel Lower limb rehabilitation exoskeleton robot  <i>TBA, University of Shanghai, China</i>
17:15-17:30	SP7006	Consistent 3D Medical Image Inpainting via Implicit Representation and Multi-View Sampling  <i>TBA, Shanghai Jiao Tong University, China</i>



## SPECIAL SESSION 8

### Special Session 8: Integrated Sensing and Communications for Internet of Things

特别专题 8-物联网中的通感一体化技术

Chairperson:

**16:00-17:30**

**Sunday, September 22**

3F 文津阁 Wenjin Pavilion

Room C: 847 5747 7223

Time	Paper ID	Speech Title & Presenter
16:00-16:15	SP903	Task-Offload-Oriented Resource Optimization in MEC-Enabled System with Multiple BSs <i>Yanzan Sun, Shanghai University, China</i>
16:15-16:30	SP8001	Impact of Device Placement on Non-Contact Respiratory Monitoring Using Channel State Information <i>Yuan Gao, Shanghai University, China</i>
16:30-16:45	SP8002	Digital Twin Vehicular Edge Computing Network: Task Offloading and Resource Allocation <i>Qiong Wu, Jiangnan University, China</i>
16:45-17:00	SP8003	EALaneNet: Enhancing Lane Detection with Edge-Aware Unit and Curvature-Optimized Loss <i>Junjie Zhang, Xi'an Jiaotong-Liverpool University, China</i>
17:00-17:15	SP8004	Secrecy Energy Efficiency Maximization for RSMA-Based UAV Communication with Multiple Colluding Eavesdroppers <i>Zhichao Sheng, Shanghai University, China</i>
17:15-17:30	SP8005	Efficient Beamforming Design for Cell-Free Integrated Sensing and Communication Systems <i>Mudassir Masood, King Fahd University of Petroleum and Minerals (KFUPM), Saudi Arabia</i>

# ONLINE SESSION 1

## Online Session 1: Signal Acquisition, Interference Detection, and Speech Recognition

Chairperson:

**09:00-10:40**

Monday, September 23

[Room A: 870 8637 3775](#)

Time	Paper ID	Speech Title & Presenter
09:00-09:10	SP018	A GAN Based Codec with Vocal Tract Features for Low Rate Speech Coding <i>Xiaojiao Chen, Beijing Institute of Technology, China</i>
09:10-09:20	SP072	Exploring Receptance Weighted Key Value Model for Single-Channel Speech Enhancement <i>Yuanle Li, Chongqing University of Posts and Telecommunications, China</i>
09:20-09:30	SP106	Ensemble of Task-Specific Experts for Multi-Accent Speech Recognition <i>Junjie Huang, Zhejiang University, China</i>
09:30-09:40	SP119	EPDF: A Dual-Channel Individual Classification and Authentication Method Based on Feature Fusion of ECG and PPG Signals in Wearable Devices <i>Yunhao Fan, Xi'an University of Posts and Telecommunications, China</i>
09:40-09:50	SP105	Enhancing signal amplification for optical communication using nanowires cladding erbium-doped waveguide <i>Chun Jiang, Shanghai Jiao Tong University, China</i>
09:50-10:00	SP134	A Low-Field Magnetic Resonance Signal Transmission and Reception Processing Platform <i>Zesong Jiang, University of Science and Technology of China, China</i>
10:00-10:10	SP139	Back-Propagation-Free Adversarial Attacks with Zero-th Order Gradient Estimation <i>Hanfei Bu, SUNY Plattsburgh, USA</i>
10:10-10:20	SP012	A Method for Network Security Situation Assessment Based on Multi-source Feature Fusion in Big Data <i>Kai Liang, Luoyang Institute of Science and Technology, China</i>
10:20-10:30	SP164	FEFL: A Fair and Efficient Defense Against Poisoning Attacks via Discrete Update Space in Federated Learning <i>TBA, Beijing University of Technology, China</i>
10:30-10:40	SP150	Domain Generalized Gaze Estimation Network for Enhanced Cross-Environment Performance <i>Yuhang Hong, Guilin University of Electronic Technology, China</i>

## ONLINE SESSION 2

### Online Session 2: Intelligent Recognition and Detection Technology Based on Machine Vision

Chairperson:

**09:00-10:40**

Monday, September 23

[Room E: 889 2306 5196](#)

Time	Paper ID	Speech Title & Presenter
09:00-09:10	SP052	Visual servo control method for transmission line robot hanging line operation <i>Wenji Zhu, Electric Power Scientific Research Institute of Guangxi Power Grid Co. Nanning, China</i>
09:10-09:20	SP099	Phase-Only Pattern Synthesis Using Improved Bat Algorithm <i>Ran Yang, Sun Yet-sen University, China</i>
09:20-09:30	SP128	Research on Anti-tampering Technology of Procurement System Based on Blockchain <i>Fei Zhang, China National Offshore Oil Corporation, China</i>
09:30-09:40	SP156	MFDBANet: Multi Feature Dual Branch Attention Network for SAR Image Denoising <i>Qingguo Sun, Shandong Normal University, China</i>
09:40-09:50	SP165	Research on Imaging Algorithms under Two Three-dimensional Turntable Measurement Modes <i>Feixiang Guo, National University of Defense Technology, China</i>
09:50-10:00	SP170	Emotion recognition of EEG based on dual-input multi-network fusion features <i>Weitong Sun, Xi'an University of Posts and Telecommunications, China</i>
10:00-10:10	SP909	An interference method based on periodic sawtooth wave phase modulation <i>TBA, Shandong Technology and Business University, China</i>
10:10-10:20	SP136	Research on bearing fault diagnosis methods in high noise environments <i>Jiaran Sun, Taiyuan University of Science and Technology, China</i>
10:20-10:30	SP096	Adaptive neighborhoods Locality Preserving Projections <i>Jiayi Xu, Shenzhen University, China</i>
10:30-10:40	SP066	Design and experimental analysis of a novel Dynamic positioning system for Offshore optical cable test vessel <i>Shan Hu, Naval University of Engineering, China</i>



