

Time Zone: UTC+8

# CONFERENCE ABSTRACT

## ICSIP 2023

## 2023 8th International Conference on Signal and Image Processing

## 2023 年第 8 届信号与图像处理国际会议

July 8-10, 2023 | Wuxi, China

with workshop

ICISPP 2023

2023 4th International Conference on Information Security and Privacy Protection

ICHST 2023

2023 5th International Conference on Hardware Security and Trust

Co-sponsored by (主办方)



Hosted by (承办方)



Supported by (支持机构)



Venue: 无锡君来湖滨饭店 (JUNA HUBIN HOTEL)

Address: 中国无锡环湖路 1 号 (No.1 Huanhu Road, Wuxi City, China)

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Note

# GENERAL INFORMATION

## Onsite Conference Venue

### 无锡君来湖滨饭店 (JUNA HUBIN HOTEL)

<http://www.hubinhotel.com/>

地址: 中国无锡环湖路1号

Address: No.1 Huanhu Road, Wuxi City, China

Tel.: +86-510-85101888

Email: [ycqing1974@163.com](mailto:ycqing1974@163.com)

订房备注 “东南大学 ICSIP2023 国际会议”

Tel.: 18915359960

E-mail: [328359040@qq.com](mailto:328359040@qq.com)



## Onsite Registration

Go to the registration desk → Inform the staff of your paper ID → Sign-in → Claim your conference kit.

## Devices Provided by the Organizer

Laptops (with MS-Office & Adobe Reader) / Projectors & Screen / Laser Sticks

## Materials Provided by the Presenter

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

Official language: English.

## Duration of Each Presentation

Keynote Speech: 40min, including 5 min Q&A.

Invited Speech: 20min, including 3 min Q&A.

Oral Session: 15min, including 3 min Q&A.

## 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.

※ **UTC+8. Time in Beijing. Please be aware of time difference between this and your region/country.**

## Online Presentation Tips

 Zoom Download <a href="#">Zoom Background</a>	Room	Meeting ID	Link
	A	863 7936 0752	<a href="https://us02web.zoom.us/j/86379360752">https://us02web.zoom.us/j/86379360752</a>
	B	864 7931 5815	<a href="https://us02web.zoom.us/j/86479315815">https://us02web.zoom.us/j/86479315815</a>
	C	840 1504 7704	<a href="https://us02web.zoom.us/j/84015047704">https://us02web.zoom.us/j/84015047704</a>
	D	851 9715 8848	<a href="https://us02web.zoom.us/j/85197158848">https://us02web.zoom.us/j/85197158848</a>

### Note:

We recommend to install the Zoom platform on your computer before the conference starts. New users can enter in the Zoom meeting without registration. (Zoom 新用户可直接输入会议号参会, 无需注册账号。)

Participants who are going to do an online presentation are required to join the rehearsal in Zoom on Saturday, July 8. Duration: 3min apiece. Feel free to leave after you finish the test.



## WELCOME MESSAGE

We are pleased to welcome you to attend the 2023 8th International Conference on Signal and Image Processing (ICSIP 2023), along with 2023 4th International Conference on Information Security and Privacy Protection (ICISPP 2023) & 2023 5th International Conference on Hardware Security and Trust, which will be held in Wuxi, China (中国 无锡) during July 8-10, 2023.

Initiated in 2016, ICSIP is one of the leading international conferences for presenting novel and fundamental advances in the fields of signal and image processing, which was held successfully in Beijing 2016, Singapore 2017, Shenzhen 2018, Wuxi 2019, online 2020 (due to COVID-19), Nanjing (hybrid conference) 2021, Suzhou (hybrid conference) 2022. 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 related fields. We hope ICSIP would be able to achieve its objective in providing an effective forum for academician, researchers, and practitioners to advancing knowledge, research, and technology for humanity.

This year's Wuxi conference will consist of 17 oral sessions and 2 poster sessions, 4 keynote talks from *Prof. Nasser Kehtarnavaz* (University of Texas at Dallas, USA), *Prof. Shui Yu* (University of Technology Sydney, Australia), *Prof. (Kit) Kai-Kit Wong* (University College London, UK), *Prof. Zuqing Zhu* (University of Science and Technology of China, China). 3 invited talks are given by *Prof. Yong Jia* (Chengdu University of Technology, China), *Assoc. Prof. Jiahua Zhu* (National University of Defense Technology, China), *Dr Jian Wu* (National University of Defense Technology, China).

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 Intelligent image analysis and calculation, Target detection and image segmentation, Radar detection and signal analysis, Digital signal detection, estimation and analysis, Model design and network analysis in communication system, Modern Communication and Information Technology, Signal detection and estimation, Intelligent Image Analysis and Processing Methods, Modern image processing and application, Computer assisted imaging and image reconstruction technology, Signal acquisition and source analysis, Communication and Information System.

We would like to deeply express our heartfelt appreciation to all our delegates, keynote speakers, session chairs, international reviewers as well as all the committee members involved in the technical evaluation of conference papers and in the conference organization for your time, effort, and great contributions. Apart from that, we'd like to extend our thanks to all the authors and external reviewers for your contribution. It is your high competence, enthusiasm, valuable time and expertise that have enabled us to prepare the final program with high quality and make the conference a great success.

Finally, I wish to thank all attendees for participating in the conference and hope you have a fruitful and memorable experience at ICSIP 2023!

Finally, we wish you a very successful conference! Hope you will enjoy your stay to Wuxi!

With Warmest Regards,

Conference Organizing Committee

Wuxi, July 2023

ICSIP 2023, ICISPP 2023, ICHST 2023

# CONFERENCE COMMITTEE 2023

## Organizing Committees

### Conference Advisory Committees:

Prof. Yao Zhao, (IEEE Fellow) Beijing Jiaotong University, China

Prof. (Kit) Kai-Kit Wong, (IEEE Fellow) University College London, UK

### Conference General Chair:

Prof. Bing Li, Southeast University, China

### Conference Organizing Chair:

Prof. Liquan Chen, Southeast University, China

### Conference Organizing Co-Chair:

Prof. Tao Li, Southeast University, China

### Technical Program Committee Chairs:

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Prof. Zhaohui Wang, Hainan University, China

Prof. Weiwei Wang, Xidian University, China

Assoc. Prof. Weizhi Meng, Technical University of Denmark, Denmark

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James Marco, University of Warwick, UK

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### Regional Chair of Qingdao, China:

Prof. Di Fan, Shandong University of Science and Technology, China

### Regional Chair of Ji'nan, China:

Prof. Nuo Gao, Shandong Jianzhu University, China

### Regional Chair of Macao, China:

Assoc. Prof. Xiaochen Yuan, Macao Polytechnic University, China

### Regional Chair of Chengdu, China:

Assoc. Prof. Yong Jia, Chengdu University of Technology, China

### Regional Chair of Nantong, China:

Assoc. Prof. Haifei Zhang, Nantong Institute of Technology, China

### Regional Chair of Changsha, China:

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Prof. Wenxing Bao, North Minzu University, China  
Prof. Yongqiang Cheng, National University of Defense Technology, China  
Prof. Guannan Chen, Fujian Normal University, China  
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Prof. Fan Zhang, Beijing University of Chemical Technology, China  
Prof. Fei Yu, Science and Technology on Communication Security Laboratory, China  
Prof. Fredilyn Calanda, Technological Institute of the Philippines, Philippines  
Prof. Shaoguang Huang, China University of Geosciences, China  
Prof. Shiyu Xu, Sun Yat-sen University, China  
Prof. Yegui Xiao, Prefectural University of Hiroshima, Japan  
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Prof. Minghui Zhang, Nanchang University, China  
Prof. Bok-Min Goi, Universiti Tunku Abdul Rahman, Malaysia  
Prof. Bryan Riley, Clemson University, USA  
Prof. Shuanglong Liu, Hunan Normal University, China  
Prof. Haifeng Zhao, Center for Space Utilization, Chinese Academy of Sciences, China  
Prof. Yang Liu, College of Electronic Information Engineering, Inner Mongolia University, China  
Prof. Hua Qu, Xi'an Jiaotong University, China  
Prof. Peng Su, Qilu Normal University, China  
Prof. Qiwei Xie, Beijing University of Technology, China  
Prof. Yun Tie, Zhengzhou University, China  
Prof. Chong-Dao Lee, I-SHOU University, Taiwan, China  
Prof. Malik Zawwar Hussain, University of the Punjab, Pakistan  
Prof. Bassant Abdelhamid, Ain Shams University, Egypt  
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Assoc. Prof. Zhihua He, National University of Defense Technology, China  
Assoc. Prof. Tao Tang, National University of Defense Technology, China  
Assoc. Prof. Minglin You, Guizhou Normal University, China  
Assoc. Prof. Guangyan Wang, Tianjin University of Commerce, China  
Assoc. Prof. Yan Zhou, Northwest University, China  
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Assoc. Prof. Jianfeng Li, Nanjing University of Aeronautics and Astronautics, China  
Assoc. Prof. Jingjing Cai, Xidian University, China  
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Assoc. Prof. Zelong Wang, National University of Defense Technology, China  
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Assoc. Prof. Jungang Yang, National University of Defense Technology, China  
Assoc. Prof. Peixian Zhuang, University of Science and Technology Beijing, China  
Assoc. Prof. Weiyang Chen, Qufu Normal University, China  
Assoc. Prof. Keren Dai, Nanjing University of Science and Technology, China  
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Asst. Prof. Yanxin Ma, National University of Defense Technology, China  
Asst. Prof. Chung-Shun Feng, Chaoyang University of Technology, Taiwan, China  
Asst. Prof. Suphongsak Khetkeeree, Mahanakorn University of Technology, Thailand  
Asst. Prof. Jingyi Zheng, Auburn University, USA  
Asst. Prof. Thangarajah Akilan, Lakehead University, Canada  
Dr. Lei Qiu, Space Engineering University, China  
Dr. Cao Tianyu, Shanghai Jiao Tong University, China  
Dr. Jian Wu, National University of Defense Technology, China  
Dr. Shaode Yu, Communication University of China, China  
Dr. Wenpeng Zhang, National University of Defense Technology, China  
Dr. Olivier Rukundo, Medical University of Vienna, Austria  
Dr. Zhuang Xie, National University of Defense Technology, China  
Dr. Zhihui Li, National University of Defense Technology, China  
Dr. Amine Khaldi, Universite Kasdi Merbah Ouargla, Algeria  
Dr. Guopeng Li, National University of Defense Technology, China  
Dr. Longwen Wu, Harbin Institute of Technology, China  
Dr. Parfait Tebe, University of Electronic Science and Technology of China, China  
Dr. Zhongqiang Luo, Sichuan University of Science and Engineering, China

Dr. Wahyu Pamungkas, Institut Teknologi Telkom Purwokerto, Indonesia  
Dr. Deepti Tamrakar, Samrat Ashok Technogical Institute Vidisha MP, India  
Dr. Hua Fu, Southeast University, China  
Dr. Songting Li, National University of Defense Technology, China  
Dr. Saeed Mian Qaisar, Regional Research Director, France  
Dr. Shahzad Ashraf, Hohai University, China  
Dr. Jian Dong, Beijing Institute of Technology, China  
Dr. Jie Sun, Southeast University, China  
Dr. Biao Tian, Sun Yat-sen University, China  
Dr. Kewei Chen, Huazhong University of Science and Technology, China  
Dr. Linqiang Ge, Columbus State University, USA  
Dr. Fan Liang, Sam Houston State University, USA

# AGENDA OVERVIEW

July 8   Saturday (UTC+8)		
10:00-17:00	Onsite Registration	无锡君来湖滨饭店   一楼大厅 JUNA HUBIN HOTEL   Lobby (1F)
10:00-17:30	Online Pre-test Session	

## Zoom Test Timetable

Meeting Room A: 863 7936 0752											
10:00-11:00	DP125	DP133	DP144	DP162	DP163	DP192	DP194	DP201	DP078	DP128	
11:00-12:00	DP059	DP037	DP150	DP156	DP005	DP108	DP149	DP184	DP016	DP118	
13:30-14:30	DP008	DP057	DP095	DP100	DP104	DP190	DP208	DP213	DP058		
14:30-15:30	DP027	DP074	DP075	DP006	DP148	DP077	DP501	DP223	DP066	DP153	
15:30-16:30	DP109	DP116	DP130	DP135	DP170	DP177	DP159	DP180	DP181		
16:30-17:30	Alternative time for participants who are unavailable at allocated time. Other online participants, includes but not limited to keynote speaker, session chair, committee member, listeners.										
Meeting Room B: 864 7931 5815											
10:00-11:00	DP094	DP142	DP023	DP224	DP185	DP062	DP021	DP026	DP090	DP216	DP702
11:00-12:00	DP195	DP143	DP086	DP010	DP017	DP069	DP504	DP046	DP179	DP210	DP706
13:30-14:30	DP034	DP044	DP040	DP083	DP084	DP025	DP102	DP032	DP054	DP063	
14:30-15:30	DP036	DP030	DP061	DP091	DP124	DP134	DP176	DP186	DP221	DP227	
15:30-16:30	DP052	DP088	DP053	DP092	DP112	DP043	DP120	DP029	DP087	DP103	
16:30-17:30	DP056	DP089	DP097	DP035	DP183	DP202	DP205	DP160	DP011	DP710	

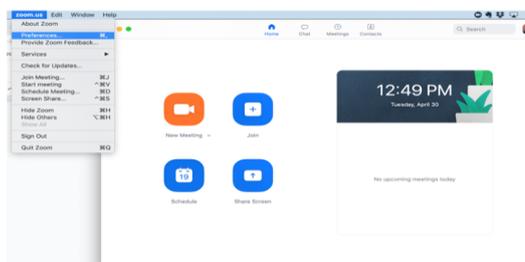
Participants who are going to make online presentation are required to join the rehearsal in Zoom on Saturday, July 8, 2023. Duration: 3min apiece. Feel free to leave after you finish the test.  
线上报告的参会人员需参加7月8号的Zoom测试以确保会议当天报告有序进行。每人大约需要2~3分钟，完成即可离线。

You are required to set your display name before joining the online meeting. 请在申请加入会议室前按照如下设置您的名称。  
Author/Presenter: Paper ID-Name < DP001\_Li Lei > Listener: Listener-Name < Listener\_Li Lei >

## Zoom Guidance

 You can join the meeting without sign-in process. Just put the meeting ID and join us.

 URL: <https://zoom.us/download>



 Each meeting has a unique 9, 10, or 11-digit number called a meeting ID that will be required to join a Zoom meeting.

 For any questions on the meeting day, you can text privately to "Assistant" for help.



Audio muted and video off (both indicated by a red slash).

Click to open the Participants box. This will allow you to "Raise Hand".

To share screen or contents.

Click to open the Chat box. This will allow you to chat with Hosts and Participants.

# AGENDA OVERVIEW

July 9 | Sunday (UTC+8)

Keynote Session (Onsite & Online)

<无锡君来湖滨饭店太湖厅 | 一楼>  
<Taihu Hall, JUNA HUBIN HOTEL | 1F>



ZOOM Room A: 863 7936 0752

Chairman: Prof. Liyi Li, Southeast University

**9:00-9:10** Opening Remarks

Prof. Zhen Zhu, Southeast University, China  
Prof. Liquan Chen (Conference Organizing Chair), Southeast University, China

**9:10-9:50**

**Keynote Speech I:** Digital Privacy: Status, Challenges, and Directions  
**Prof. Shui Yu** (Fellow of IEEE), *University of Technology Sydney, Australia*

**Keynote Speech II:** Machine Learning in and for Optical Data-Center Networks

**9:50-10:30** **Prof. Zuqing Zhu** (Fellow of IEEE), *University of Science and Technology of China, China*

**10:30-11:20**

Group Photo & Morning Coffee Break

**11:20-12:00**

**Keynote Speech III:** Mobile Edge AI: Machine Learning Solutions as Real-Time Smartphone Apps  
**Prof. Nasser Kehtarnavaz** (Fellow of IEEE, Fellow of SPIE, Fellow of AAIA), *University of Texas at Dallas, USA*

**12:00-13:30**

Lunch Time | < 杜鹃厅 Dujian Hall | 1F >

Time	Venue	Onsite Parallel Sessions
13:30-16:15	<太湖厅   一楼> <Taihu Hall   1F>	<b>Onsite Session 1:</b> Model Design and Network Analysis in Communication System <i>Chairperson: Dr. Liang Wang, Cranfield University, UK</i> DP045 DP141 DP155 DP214 DP709 DP711 DP099 DP009 DP191 DP154
	<梅梁厅   一楼> <Meiliang Hall   1F>	<b>Onsite Session 2:</b> Target Detection and Image Segmentation <i>Chairperson: Assoc. Prof. Xiqiang Zheng, Voorhees University, USA</i> DP015 DP020 DP068 DP096 DP080 DP206 DP121 DP207 DP115 DP169 DP218
	<蠡湖厅   一楼> <Lihu Hall   2F>	<b>Onsite Session 3:</b> Modern Communication and Information Technology <i>Chairperson: Prof. Shuanglong Liu, Hunan Normal University, China</i> DP004 DP064 DP019 DP049 DP067 DP050 DP164 DP076 DP701
	<会议中心 A 厅   二楼> <Conference Center A   2F>	<b>Poster Session 1:</b> Signal Detection and Estimation <i>Chairperson: Assoc. Prof. Qingru Lu, Southeast University, China</i> DP013 DP042 DP098 DP111 DP137 DP507 DP139 DP147 DP151 DP152 DP175 DP167 DP204 DP173 DP012 DP508 DP157
16:15-16:30	Afternoon Coffee Break	
16:30-19:30	<太湖厅   一楼> <Taihu Hall   1F>	<b>Onsite Session 4:</b> Digital Signal Detection, Estimation and Analysis <i>Chairperson: Assoc. Prof. Jiahua Zhu, National University of Defense Technology, China</i> Invited Talk-Assoc. Prof. Jiahua Zhu DP039 DP215 DP217 DP188 DP117 DP189 DP082 DP071 DP166
	<梅梁厅   一楼> <Meiliang Hall   1F>	<b>Onsite Session 5:</b> Intelligent Image Analysis and Calculation <i>Chairperson: Dr. Zhengbing Wang, Anhui University of Technology, China</i> DP127 DP140 DP136 DP113 DP506 DP001 DP024 DP041 DP070 DP081 DP138 DP072
	<蠡湖厅   一楼> <Lihu Hall   2F>	<b>Onsite Session 6:</b> Radar Detection and Signal Analysis <i>Chairperson: Prof. Yong Jia, Chengdu University of Technology, China</i> Invited Talk-Prof. Yong Jia DP079 DP060 DP129 DP038 DP165 DP048 DP065 DP047 DP161 DP055
	<会议中心 A 厅   二楼> <Conference Center A   2F>	<b>Poster Session 2:</b> Intelligent Image Analysis and Processing Methods <i>Chairperson: Prof. Jinguang Han, Southeast University, China</i> DP018 DP093 DP101 DP122 DP123 DP505 DP131 DP146 DP168 DP178 DP193 DP197 DP198 DP199 DP212 DP219 DP220 DP203
19:30-21:00	Dinner Time < 玫瑰园 Meigui Hall   1F >	

Time	ZOOM Meeting Room	Online Parallel Sessions
13:00-15:30	Meeting Room A ZOOM ID: 863 7936 0752	<b>Online Session 1:</b> Target Detection <i>Chairperson: Assoc. Prof. Tao Tang, National University of Defense Technology, China</i> DP125 DP133 DP144 DP162 DP163 DP192 DP194 DP201 DP078 DP128
	Meeting Room B ZOOM ID: 864 7931 5815	<b>Online Session 2:</b> Image Segmentation and Image Enhancement <i>Chairperson: Assoc. Prof. Dayong Wang, Chongqing University of Posts and Telecommunications, China</i> DP059 DP037 DP150 DP156 DP005 DP108 DP149 DP184 DP016 DP118
	Meeting Room C ZOOM ID: 840 1504 7704	<b>Online Session 3:</b> Image Identification <i>Chairperson: Dr. Suphongsak Khetkeeree, Mahanakorn University of Technology, Thailand</i> DP008 DP057 DP095 DP100 DP104 DP190 DP208 DP213 DP058
	Meeting Room D ZOOM ID: 851 9715 8848	<b>Online Session 4:</b> Computer Assisted Imaging and Image Reconstruction Technology <i>Chairperson: Prof. Weiwei Wang, Xidian University, China</i> DP027 DP074 DP075 DP006 DP148 DP077 DP501 DP223 DP066 DP153
15:30-15:40	Break Time	

15:40-16:20	Meeting Room A ZOOM ID: 863 7936 0752	<b>Keynote Speech IV:</b> Bruce Lee Inspired Fluid Antenna Systems for 6G <b>Prof. (Kit) Kai-Kit Wong</b> (Fellow of IEEE, Fellow of IET), <i>University College London, UK</i>
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16:20-19:05	Meeting Room A ZOOM ID: 863 7936 0752	<b>Online Session 5:</b> Modern Image Processing and Application <i>Chairperson: Dr. Shaode Yu, Communication University of China, China</i> DP109 DP116 DP130 DP135 DP170 DP177 DP159 DP180 DP181
	Meeting Room B ZOOM ID: 864 7931 5815	<b>Online Session 6:</b> Equipment Recognition and Abnormal Detection <i>Chairperson: Dr. Hua Fu, Southeast University, China</i> DP094 DP142 DP023 DP224 DP185 DP062 DP021 DP026 DP090 DP216
	Meeting Room C ZOOM ID: 840 1504 7704	<b>Online Session 7:</b> Signal Acquisition and Source Analysis <i>Chairperson: Prof. Yang Liu, College of Electronic Information Engineering, Inner Mongolia University, China</i> DP195 DP143 DP086 DP010 DP017 DP069 DP504 DP046 DP179 DP210
	Meeting Room D ZOOM ID: 851 9715 8848	<b>Online Session 8:</b> Information Detection and Certification <i>Chairperson: Assoc. Prof. Zhongyuan Qin, Southeast University, China</i> DP034 DP044 DP040 DP083 DP084 DP025 DP102 DP032 DP054 DP063 DP103

### July 10 | Monday (UTC+8)

Time	ZOOM Meeting Room	Online Parallel Sessions
9:00-11:50	Meeting Room A ZOOM ID: 863 7936 0752	<b>Online Session 9:</b> Advanced Electronics and Information System <i>Chairperson: Assoc. Prof. Lei Liu, North China Institute of Computing Technology, China</i> DP036 DP030 DP061 DP091 DP124 DP134 DP176 DP186 DP221 DP227 DP706
	Meeting Room B ZOOM ID: 864 7931 5815	<b>Online Session 10:</b> Digital Key System and Encryption Technology <i>Chairperson: Dr. Tianchong Gao, Southeast University, China</i> DP052 DP088 DP053 DP092 DP112 DP043 DP120 DP029 DP087 DP710
	Meeting Room C ZOOM ID: 840 1504 7704	<b>Online Session 11:</b> Communication and Information System <i>Chairperson: Dr Jian Wu, National University of Defense Technology, China</i> Invited Talk-Dr Jian Wu DP056 DP089 DP097 DP035 DP183 DP202 DP205 DP160 DP011 DP702

#### Note

- \*Zoom Meeting online conference room will be open 30 mins before scheduled time. Please enter your room 10-15 minutes early.
- \*All online attendees are required to join the pre-test on Saturday, July 8 Start from 10:00 (UTC+8).
- \*A paper not presented or presented by a non-author without prior written approval by the Conference TPC will be removed from the final conference proceedings.

## INTRODUCTION OF SPEAKER I (UTC+8)

09:10-09:50  
July 9 (Sunday), 2023

太湖厅 | 一楼 <Taihu Hall | 1F>  
ZOOM Room A: 863 7936 0752



### Prof. Shui Yu

Fellow of IEEE

*University of Technology Sydney, Australia*

**Shui Yu** is a professor of School of Computer Science, University of Technology Sydney, Australia. His research interest includes Cybersecurity, Network Science, Big Data, and Mathematical Modelling. He has published five monographs and edited two books, more than 500 technical papers at different venues, such as IEEE TDSC, TPDS, TC, TIFS, TMC, TKDE, TETC, ToN, and INFOCOM. His current h-index is 70. Professor Yu promoted the research field of networking for big data since 2013, and his research outputs have been widely adopted by industrial systems, such as Amazon cloud security. He is currently serving the editorial boards of IEEE Communications Surveys and Tutorials (Area Editor) and IEEE Internet of Things Journal (Editor). He served as a Distinguished Lecturer of IEEE Communications Society (2018-2021). He is a Distinguished Visitor of IEEE Computer Society, and an elected member of Board of Governors of IEEE VTS and IEEE ComSoc, respectively. He is a member of ACM and AAAS, and a Fellow of IEEE.

#### **Speech Title: Digital Privacy: Status, Challenges, and Directions**

**Abstract:** Digital privacy is an unprecedented problem for human society, and we are at the doorstep of the phenomenon. In this talk, we firstly report our understanding of the current status and spectrum of digital privacy. Secondly, we present the essential challenges in the field based on our understanding, also include some of our effort and targets. Finally, we share the promising directions in our minds, aiming to work together with interested colleagues and friends to explore the uncharted land of digital privacy.

## INTRODUCTION OF SPEAKER II (UTC+8)

09:50-10:30  
July 9 (Sunday), 2023

太湖厅 | 一楼 <Taihu Hall | 1F>  
ZOOM Room A: 863 7936 0752



### Prof. Zuqing Zhu

IEEE Fellow

*University of Science and Technology of China, China*

**Zuqing Zhu** received his Ph.D. degree from the Department of Electrical and Computer Engineering, University of California, Davis, in 2007. From 2007 to 2011, he worked in the Service Provider Technology Group of Cisco Systems, San Jose, California, as a Senior Engineer. In January 2011, he joined the University of Science and Technology of China, where he currently is a Full Professor and Associate Dean of the School of Information Science and Technology. He has published 360+ papers in peer-reviewed journals and conferences, which have received 9600+ Google Scholar citations with an h-index of 53. He is the Area Editor of Optical Communications and Networking of the IEEE Open Journal of the Communications Society, and is also an editorial board member of IEEE Transactions on Communications, IEEE Transactions on Network and Service Management, Optics Express, Optical Switching and Networking, and others. He is the Steering Committee Chair of the IEEE International Conference on High Performance Switching and Routing (HPSR), and the Chair of the Technical Committee on Optical Networking (ONTC) in the IEEE Communications Society (ComSoc). He has received the Best Paper Awards from ICC 2013, GLOBECOM 2013, ICNC 2014, ICC 2015, and ONDM 2018, and has been a Distinguished Lecturer of ComSoc (2018-2021). He is a Senior Member of Optica (formally OSA) and a Fellow of IEEE.

#### **Speech Title: Machine Learning in and for Optical Data-Center Networks**

**Abstract:** In the first part of this talk, we will first discuss the challenges on scalability, energy and manageability of data-center network (DCN) systems, and then explain why all-optical inter-connection can be a promising solution for future DCN systems. Next, we describe a novel all-optical inter-connection architecture based on arrayed waveguide grating router (AWGR) and wavelength-selective switches (WSS'), namely, Hyper-FleX-LION, explain its operation principle, and show experimental results of running distributed machine learning (DML) in a DCN in Hyper-FleX-LION. In the second part of this talk, we will explain how machine learning can be leveraged to realized knowledge-defined networking (KDN) and facilitate network automation in DCNs. Experimental results demonstrate that KDN can automatically reduce task completion time.

## INTRODUCTION OF SPEAKER III (UTC+8)

11:20-12:00  
July 9 (Sunday), 2023

太湖厅 | 一楼 <Taihu Hall | 1F>  
ZOOM Room A: 863 7936 0752



### Prof. Nasser Kehtarnavaz

Fellow of IEEE, Fellow of SPIE, Fellow of AAIA

*University of Texas at Dallas, USA*

**Nasser Kehtarnavaz** is an Erik Jonsson Distinguished Professor with the Department of Electrical and Computer Engineering and the Director of the Embedded Machine Learning Laboratory at The University of Texas at Dallas, Richardson, TX. His research areas include signal and image processing, machine learning, deep learning, and real-time implementation on embedded processors. He has authored or coauthored 11 books and over 400 publications in these areas. He is a Fellow of IEEE, a Fellow of SPIE, a Fellow of AAIA, a licensed Professional Engineer, and Editor-in-Chief of Journal of Real-Time Image Processing.

#### **Speech Title: Mobile Edge AI: Machine Learning Solutions as Real-Time Smartphone Apps**

**Abstract:** Edge computing solutions are expected to grow substantially during the next few years. This talk first covers the guidelines for turning deep learning models of intelligence into apps running in real-time on smartphones as edge devices. These guidelines are then applied to a real-time signal processing application and a real-time image processing application. The signal processing application involves machine learning-based personalization of the amplification function of hearing aids in an on-the-fly manner. The motivation behind this app is to use smartphones as edge devices to achieve better hearing over standard hearing aid prescriptions in the field or in real-world audio environments. The image processing application involves a deep learning solution to detect diabetic retinopathy in an on-the-fly manner as eye retina images are captured by smartphone cameras fitted with commercially available lenses. The motivation behind this app is to use smartphones as edge devices to conduct cost-effective and widely accessible first-pass eye exams in places with no access to fundus cameras.

## INTRODUCTION OF SPEAKER IV (UTC+8)

15:40-16:20  
July 9 (Sunday), 2023

  
Meeting Room A: 863 7936 0752



### Prof. (Kit) Kai-Kit Wong

IEEE Fellow, IET Fellow

*University College London, UK*

**(Kit) Kai-Kit Wong** received the BEng, the MPhil, and the PhD degrees, all in Electrical and Electronic Engineering, from the Hong Kong University of Science and Technology, Hong Kong, in 1996, 1998, and 2001, respectively. He is Chair Professor of Wireless Communications at the Department of Electronic and Electrical Engineering, University College London, UK. His current research centers around 5G and beyond mobile communications. He is a co-recipient of the 2020 Premium Award for Best Paper in IET Electronics Letters, the 2013 IEEE Signal Processing Letters Best Paper Award, the 2000 IEEE VTS Japan Chapter Award at the IEEE Vehicular Technology Conference in Japan in 2000, and a few other international best paper awards. He is Fellow of IEEE and IET. He is the Editor-in-Chief for IEEE Wireless Communications Letters since 2020, and also the Subject Editor-in-Chief for Wireless Communications of IET Electronics Letters since June 2020.

#### Speech Title: Bruce Lee Inspired Fluid Antenna Systems for 6G

**Abstract:** “Be formless ... shapeless, like water!”, which were the words used by Bruce Lee, as he was revealing the philosophy of Jeet Kune Do, the martial arts system Lee founded in 1967. Many parallels can be drawn in wireless communications technologies where engineers have been seeking greater flexibility in using the spectral and energy resources for improving network performance. In this talk, I will speak on a novel antenna technology, referred to as fluid antenna, that adopts a software-controlled, position-flexible antenna to operate on the best signal envelope within a given space. This talk presents some early results on fluid antenna systems, which shows great promises on improving wireless communication performance.

## INTRODUCTION OF INVITED SPEAKERS (UTC+8)

16:30-16:50  
July 9 (Sunday), 2023

蠡湖厅 | 一楼  
<Lihu Hall | 1F>



**Prof. Yong Jia**

*Chengdu University of Technology, China*

**Yong Jia** received the B.E. degree in electronic information engineering from Shandong Normal University, Jinan, China, in 2007, and the M.E. degree in information and communication engineering and the Ph.D degree in signal and information processing from University of Electronic Science and Technology of China, Chengdu, China, in 2010 and 2014, respectively. He is currently an Associate Professor with the School of Mechanical and Electrical Engineering, Chengdu University of Technology, Chengdu, China. From February 2013 to August 2013, he was a visiting scholar with the College of Engineering, Villanova University, PA, USA. His research interests include radar signal processing, image processing and artificial intelligence. He was a Reserve candidate for Academic and Technical Leader of Sichuan and a recipient of the first prize of Sichuan Science and Technology Progress Award.

**Speech Title: Hand-gesture Recognition Based on Parallelism CNN and Multi-domain Representation for mmWave Radar**

**Abstract:** In the field of hand-gesture recognition, the method of recognition by using single-class radar images has the problems of insufficient expression of features and poor accuracy. In order to solve these problems, a gesture recognition method based on radar multi-domain representation is proposed. Specifically, pulse compression and Capon beamforming algorithms are used to process radar signals to obtain two representations in different domains. The multi-channel parallel convolutional neural network is used to extract independent features from two types of radar images and optimize the features. Finally, feature fusion is performed to make the expression of features more sufficient. The experimental results show that the recognition rate of the method is at least improved by 3.2% compared with the method using single-class features. This method has comprehensive advantages in recognition accuracy and convergence speed.

16:30-16:50  
July 9 (Sunday), 2023

太湖厅 | 一楼  
<Taihu Hall | 1F>



**Assoc. Prof. Jiahua Zhu**

*National University of Defense Technology, China*

**Jiahua Zhu** received the B.S. degree in electronic engineering and Ph.D. degrees in information and communication engineering from the National University of Defense Technology, Changsha, China, in 2012 and 2018, respectively. He is currently an associate professor with the College of Meteorology and Oceanography, National University of Defense Technology. From November 2015 to November 2017, he was a visiting Ph.D. student with the School of Engineering, RMIT University, and the Department of Electrical and Electronic Engineering, University of Melbourne, Australia. His current research interests include waveform design and target detection for radar and sonar. He received the Best Paper Award in The 9th Research Symposium for Chinese PhD Students and Scholars in Australia, 2016, the Excellent Paper Award in 2021 IEEE/OES China Ocean

Acoustics Conference, and the outstanding Ph.D. degree thesis of the Chinese People's Liberation Army (PLA), 2020. He is a Regional Chair of Changsha, Session Chair and an Invited Speaker of IEEE International Conference on Signal and Image Processing (ICSIP).

**Speech Title: Underwater Piling Induced Noise Reduction based on Horizontal Linear Array**

**Abstract:** Underwater piling noise is usually induced by the cyclical movement of pile driver on the marine drilling platform or other devices. It appears to be an impulse signal with high magnitude in the Time-Bearing map, which may exert negative influence to the weak acoustic target detection. In this talk, an impulse normalization method based on the Time-Bearing map enhancement is reported for the underwater piling noise reduction. The study will be validated by practical data for its better performance. Technical future avenues would also be discussed for further researches.

9:00-9:20

July 10 (Monday), 2023



Meeting Room C: 840 1504 7704



**Dr Jian Wu**

*National University of Defense Technology, China*

**Jian Wu** received the B.S. degree in Information Engineering, M.E. degree in Photogrammetry and Remote Sensing, and Ph.D degree in Information and Communication Engineering from the National University of Defense Technology (NUDT), Changsha, China, in 2012, 2014 and 2019, respectively. He is currently a lecturer with the College of Electronic Science and Technology, NUDT. His current research interests include GNSS signal processing, interference suppression technology, and high precision GNSS signal generation. He received the Best Paper Award in the 11th China Satellite Navigation Conference, CSNC 2020.

**Speech Title: Blind Adaptive Beamforming for a Global Navigation Satellite System Array Receiver**

**Abstract:** The adaptive beamforming algorithm can realize interference suppression and navigation signal enhancement, and has been widely used. However, achieving high-precision real-time estimation of the direction of arrival (DOA) parameters of navigation signals in strong-interference scenarios with low complexity is still a challenge. In this paper, a blind adaptive beamforming algorithm for a Global Navigation Satellite System (GNSS) array receiver based on direction lock loop is proposed without using the prior information of the DOA parameter. The direction lock loop is used for DOA tracking and estimation after interference suppression, which uses the spatial correlation of the array beam pattern to construct a closed direction-tracking loop. The DOA estimation value is adjusted in real time based on the loop errors. A blind beamformer is constructed using the DOA estimation results to provide gain by forming a beam in the satellite direction. This method improves the accuracy and dynamic adaptability of DOA estimation while significantly reducing the computational complexity.

## ONSITE SESSION 1 (UTC+8)

July 9 (Sunday)  
13:30-16:00

<太湖厅 | 一楼>  
<Taihu Hall | 1F>

### Onsite Session 1: Model Design and Network Analysis in Communication System

Chairperson: Dr. Liang Wang, Cranfield University, UK

13:30-13:45	DP045	SLAM Using Cellular Multipath Component Delays and Angular Information with JPDA Approximation <i>Junshi Chen, Lund University, Sweden</i>
13:45-14:00	DP141	UL-CNN: An Unsupervised CNN Model for User Association in Wireless Networks <i>Meng Ma, Macao Polytechnic University, China</i>
14:00-14:15	DP155	Indoor Visible Light Positioning Method Based on Sparse Fingerprints Using Extended Min-Max and WKNN Algorithms <i>Xunuo Li, Chang'an University, China</i>
14:15-14:30	DP214	Sparse Linear Arrays of Vector Antennas for Fourth-Order Direction Finding <i>Siqing Zhang, Beijing Institute of Technology, China</i>
14:30-14:45	DP709	AFLNETGO: A Directed Fuzzer for Stateful Network Protocol Implementation <i>Xiaofeng Tang, National University of Defense Technology, Changsha, China</i>
14:45-15:00	DP711	A Novel Privacy-enhanced Fine-grained Access Control Scheme <i>Jiaju Liu, Xizang Minzu University, Shannxi, China</i>
15:00-15:15	DP099	Securing IoT Communication Using Physical Sensor Data - Graph Layer Security with Federated Multi-Agent Deep Reinforcement Learning <i>Liang Wang, Cranfield University, China</i>
15:15-15:30	DP009	RSA Algorithm for Time-Frequency Assignment in EONs Based on Signal Overlap <i>Weiqi Li, Beijing Jiaotong University, China</i>
15:30-15:45	DP191	Federated Learning Empowered V2V Wireless Resource Allocation in IRS-assisted Vehicular Networks <i>Liu Lirui, Nanjing University of Aeronautics and Astronautics, China</i>
15:45-16:00	DP154	Automated Tongue Image Segmentation in Tongue Diagnosis <i>Qian Zhang, Shandong University of Political Science and Law, China</i>

## ONSITE SESSION 2 (UTC+8)

July 9 (Sunday)  
13:30-16:15

<梅梁厅 | 一楼>  
<Meiliang Hall | 1F>

### Onsite Session 2: Target Detection and Image Segmentation

Chairperson: Assoc. Prof. Xiqiang Zheng, Voorhees University, USA

13:30-13:45	DP015	An Multiscale Global Contrast Measure for Small Infrared Target Detection <b>Ye Tang</b> , Beijing Aerospace Institute for Metrology and Measurement Technology, China
13:45-14:00	DP020	Multi-Branch Interaction Network for Low-light Image Enhancement <b>Youpeng Cai</b> , Tianjin University, China
14:00-14:15	DP068	Small Target Detection on Sea Surface Based on Feature-Weighted Support Vector Machine <b>Yaqing Chen</b> , Nanjing Research Institute of Electronics Technology, China
14:15-14:30	DP096	Video Anomaly Detection with Video Vision Transformer <b>Mingrui Liu</b> , Guilin University of Electronic Technology, China
14:30-14:45	DP080	Dual-Tamper Detection and Self-Recovery Using Second-order Wavelet Transform for 1080p Images <b>Qiyuan Zhang</b> , Macao Polytechnic University, China
14:45-15:00	DP206	Overlapping Bullet Hole Detection Based on Improved Watershed Algorithm <b>Pei Liu</b> , Changchun University of Science and Technology, China
15:00-15:15	DP121	Segmentation for Images of a Single Stem Cell Using Morphological Operations and Statistical Region Merging <b>Xiqiang Zheng</b> , Voorhees University, USA
15:15-15:30	DP207	Strip Weld Inspection Based on Improved VGG16 <b>Sisi Fu</b> , Changchun University of Science and Technology, China
15:30-15:45	DP115	A Self-adaptive Image Segmentation-based Dual Watermarking Technique for Medical Images <b>Bowen Meng</b> , Macao Polytechnic University, China
15:45-16:00	DP169	Fusion of Stereo Aerial Images and Official Surveying Data for Curbstones Segmentation and Vectorization <b>Jiaojiao Tian</b> , German Aerospace Center (DLR), Germany
16:00-16:15	DP218	EU-Net: Boundary Enhancement Based Medical Ultrasound Image Segmentation Network <b>Yuyan Wu</b> , Zhejiang Gongshang University, China

## ONSITE SESSION 3 (UTC+8)

July 9 (Sunday)  
13:30-15:45

<蠡湖厅 | 一楼>  
<Lihu Hall | 1F>

### Onsite Session 3: Modern Communication and Information Technology

Chairperson: Prof. Shuanglong Liu, Hunan Normal University, China

13:30-13:45	DP004	Improving Particle Filters with Adaptive Bayesian Resampling for Real-Time Filtering <b>Shuanglong Liu</b> , Hunan Normal University, China
13:45-14:00	DP064	A Novel Analysis Method for the Contents of Pharmaceutical Ingredients Using Near Infrared Spectroscopy <b>Huiwen Zhang</b> , Nanjing University of Aeronautics and Astronautics, China
14:00-14:15	DP019	Design of ESS-based Adaptive Particle Filter for Real-time Tracking <b>Shuanglong Liu</b> , Hunan Normal University, China
14:15-14:30	DP049	Thermophysical Parameter Estimation of lunar Regolith Simulant Using Robotic Thermal Probe and Data-driven Analytics <b>Minghui Tang</b> , Key Laboratory of Space Utilization, Technology and Engineering Center for Space Utilization, China
14:30-14:45	DP067	Imbalanced UWB LOS/NLOS Identification Based on Back Propagation Neural Network <b>Hui Li</b> , School of Information Engineering, Chang'an University, Xi'an, China
14:45-15:00	DP050	Automatic Detection of Lunar Rocks Using Single Shot Multibox Detector <b>Shuyun Liu</b> , University of Chinese Academy of Sciences
15:00-15:15	DP164	Steganalysis by Codeword Error Bits Run-length against Coding Channel Steganography <b>Yaqi Guo</b> , Southeast University, China
15:15-15:30	DP076	Polar-Coded Faster-than-Nyquist (FTN) Signaling with Adaptive Decision Feedback Equalization <b>Hui Xu</b> , Macao Polytechnic University, Macau, China
15:30-15:45	DP701	A Fine-grained Data Encryption Scheme Based on Shortest Vector Problem in the Cloud Computing Environment <b>Qinlu Yang</b> , Southeastern University, China

## ONSITE SESSION 4 (UTC+8)

July 9 (Sunday)  
16:30-19:05

<太湖厅 | 一楼>  
<Taihu Hall | 1F>

### Online Session 4: Digital Signal Detection, Estimation and Analysis

Chairperson: Assoc. Prof. Jiahua Zhu, National University of Defense Technology, China

16:30-16:50	<b>Invited Talk</b>	Underwater Piling Induced Noise Reduction Based on Horizontal Linear Array <i>Assoc. Prof. Jiahua Zhu, National University of Defense Technology, China</i>
16:50-17:05	DP039	Polarization-Space-Time Processing in Mainlobe Blanket Jamming via CP Decomposition <i>Bunian Pan, University of Electronic Science and Technology of China, China</i>
17:05-17:20	DP215	Enhanced Cascaded Iteration for Polarimetric Space-Time Adaptive Processing <i>Siqing Zhang, Beijing Institute of Technology, China</i>
17:20-17:35	DP217	Micro-motion Signal Enhancement via Convolutional Autoencoder Equipped with Multi-scale Feature Pyramid <i>Honglei Zhang, National University of Defense Technology, China</i>
17:35-17:50	DP188	DOA Estimation Algorithm Based on Array Chunking Weighting <i>Hongyu Lu, Jiangsu University of Science and Technology, China</i>
17:50-18:05	DP117	A New Robust Hybrid Active Noise Control System <i>Zijie Wang, Prefectural University of Hiroshima, Japan</i>
18:05-18:20	DP189	Vector Hydrophone based DOA Estimation Method for Shallow Sea Broadband Sound Sources <i>Hongyun Chen, Jiangsu University of Science and Technology, China</i>
18:20-18:35	DP082	The Fractional Fourier Transform on Graphs: Modulation and Convolution <i>Yu Zhang, School of Mathematics and Statistics Beijing Institute of Technology, China</i>
18:35-18:50	DP071	Classification of Abnormal Lung Sounds Using Deep Learning <i>Fan Wang, Macao Polytechnic University, China</i>
18:50-19:05	DP166	Principles for Optimal Window Size Selection for Infant and Adult EEG Connectivity Analysis <i>Lorena Santamaria, Baby-LINC lab, HSS, NTU, Singapore</i>

## ONSITE SESSION 5 (UTC+8)

July 9 (Sunday)  
16:30-19:30

<梅梁厅 | 一楼>  
<Meiliang Hall | 1F>

### Onsite Session 5: Intelligent Image Analysis and Calculation Chairperson: Dr. Zhengbing Wang, Anhui University of Technology, China

16:30-16:45	DP127	Joint Parameter Estimation of Mixed Blur for Image Restoration <b>Jialing Han</b> , National University of Defense Technology, China
16:45-17:00	DP140	Image Restoration Based on Blur Kernel Estimation Using Vibration Data <b>Weida Xing</b> , Tianjin University, China
17:00-17:15	DP136	Imaging and Refocusing of Moving Target in Polar Format Spotlight SAR Image <b>Yuhan Wang</b> , Nanjing University of Aeronautics and Astronautics, China
17:15-17:30	DP113	BUSI Classification Based on Singularity-exponent-domain Image Feature Transform and Deep Neural Network <b>Ziqin Xiong</b> , Shanghai Jiao Tong University, China
17:30-17:45	DP506	Research on Sonar Image Denoising Based on Optimized Spatial Pixel Ranking Algorithm <b>Bo Shi</b> , Department of Automation, Shanghai Jiao Tong University, China
17:45-18:00	DP001	A Robust Multi-source Image Matching Method for Power Equipment Based on Improved PIIFD <b>Zhengbing Wang</b> , Anhui University of Technology, China
18:00-18:15	DP024	Deep Densely-Connected Residual Learning for Multispectral Image Demosaicing <b>Simin Li</b> , Institute of Electronic Engineering China Academy of Engineering Physics, China
18:15-18:30	DP041	Fast Algorithm Based on Non-first Pre-coding Skip for AVS3 Intra Coding <b>Xueyan Cao</b> , College of Electronic and Information Engineering, Tongji University, China
18:30-18:45	DP070	A 1000Base-T Physical Layer Fingerprint Extraction and Identification System <b>Minxu Hua</b> , School of Cyberspace Security Southeast University, China
18:45-19:00	DP081	A Quantum Watermarking Scheme Using New Enhanced Quantum Image Representation <b>Zheng Xing</b> , Macao Polytechnic University, China
19:00-19:15	DP138	An External Denoising Framework for Magnetic Resonance Imaging: Leveraging Anatomical Similarities Across Subjects with Fast Searches <b>Jingli Wang</b> , Shenzhen Technology University, China
19:15-19:30	DP072	Zernike Moments-based Robust and Reversible Watermarking Scheme <b>Qiyuan Zhang</b> , Macao Polytechnic University, China

## ONSITE SESSION 6 (UTC+8)

July 9 (Sunday)  
16:30-19:20

<蠡湖厅 | 一楼>  
<Lihu Hall | 1F>

### Onsite Session 6: Radar Detection and Signal Analysis

Chairperson: Prof. Yong Jia, Chengdu University of Technology, China

16:30-16:50	<b>Invited Talk</b>	Hand-gesture Recognition Based on Parallelism CNN and Multi-domain Representation for mmWave Radar <i>Prof. Yong Jia, Chengdu University of Technology, China</i>
16:50-17:05	DP079	Multi-channel Sea Clutter Modeling and Suppression for Airborne-based Multistatic MIMO Radar <i>Xingtao Jiang, University of Electronic Science and Technology, China</i>
17:05-17:20	DP060	DP-Based Signal Integration Method for Highspeed Moving Target Detection with Bistatic MIMO Radar <i>Longji Gao, University of Electronic Science and Technology of China, China</i>
17:20-17:35	DP129	Radar Intra-Pulse Signal Modulation Classification Based on Omni-Dimensional Dynamic Convolution <i>Fengming Gan, Xidian University, China</i>
17:35-17:50	DP038	Joint Beam-Time Allocation of Phased Array Radar Based on Variable False Alarm Rate Detection <i>Maosen Liao, University of Electronic Science and Technology of China, China</i>
17:50-18:05	DP165	Attribute Scattering Center Based Algorithm for Target Feature Extraction in Synthetic Aperture Radar Images <i>Lujia Yi, Institute of Artificial Intelligence and Blockchain, Guangzhou University, China</i>
18:05-18:20	DP048	UAVs-Borne MIMO Radars Layout Optimization Based on Clustered Signal Integration <i>Mingxing Wang, University of Electronic Science and Technology of China, China</i>
18:20-18:35	DP065	Some New Results of Dynamic Infrared Radiation Characteristics of Midcourse Ballistic Targets <i>Yun Chang, Nanjing University of Aeronautics and Astronautics, China</i>
18:35-18:50	DP047	Task Sequence Filling for Multi-function Radar via BERT Model <i>Changxin Wu, University of Electronic Science and Technology of China, China</i>
18:50-19:05	DP161	Real-time Parameter Estimation for Hypersonic Target Based on Weighted Least Squares <i>Jianning Zhang, Xidian University, China</i>
19:05-19:20	DP055	LSTM-based Prediction of Multi-function Radar Work Mode <i>Xiangqin Hu, University of Electronic Science and Technology of China, China</i>

## POSTER SESSION 1 (UTC+8)

July 9 (Sunday)  
13:30-16:15

<会议中心 A 厅 | 二楼>  
<Conference Center A | 2F>

### Poster Session 1: Signal Detection and Estimation

Chairperson: Assoc. Prof. Qingru Lu, Southeast University, China

- |     |       |  |
|-----|-------|--|
| #1  | DP013 | Stop-go Effect Comparison between Ultra-high Resolution LEO SAR and GEO SAR<br><b>Faguang Chang</b> , National University of Defense Technology, China                             |
| #2  | DP042 | Robust Spatial Filtering Network for Separating Speech in the Direction of Interest<br><b>Dongxu Liu</b> , Tsinghua University, China  |
| #3  | DP098 | Respiratory Sound Classification Based on Swin Transformer<br><b>Weiwei Sun</b> , Nanchang University, China   |
| #4  | DP111 | Joint Design of Mismatched Filter and Phase Coded Waveform via Mainlobe Broadening<br><b>Xiaomin Qiang</b> , Beijing Institute of Technology, China                                |
| #5  | DP137 | Impact Analysis and Compensation Method of Frequency Synchronization Error in Distributed SAR<br><b>Xiaoying Sun</b> , National University of Defense Technology, China            |
| #6  | DP507 | Study on the Performance of Amorphous IGZO TFT Thin-Film Transistor with Ti/Au Stacking as the Source/Drain<br><b>Qingru Lu</b> , Southeast University, China                      |
| #7  | DP139 | Research on Blind Estimation Method of Carrier Frequency of Underwater Acoustic OFDM Communication Signal<br><b>Jin Wenjing</b> , National University of Defense Technology, China |
| #8  | DP147 | Task-based PolyLoss Improves Low-Resource Speech Recognition<br><b>Yaqi Chen</b> , Information Engineering University, China   |
| #9  | DP151 | Joint Modeling and Simulation of Tropospheric Scattering Communication Channel Based on OPNET and MATLAB<br><b>Runming Zou</b> , National University of Defense Technology, China  |
| #10 | DP152 | Fast Subnetwork Selection for Speech Enhancement in Wireless Acoustic Sensor Networks<br><b>De Hu</b> , Inner Mongolia University, China   |
| #11 | DP175 | GPR Missing Data Recovery via Deep Unfolding Network with Mask Guidance<br><b>Beizhen Bi</b> , National University of Defense Technology, China                                    |
| #12 | DP167 | An Augmented Perturbed Linear Mixing Model with Scaling Factors for Unmixing<br><b>Ning Wang</b> , North Minzu University, China   |

#13	DP204	A Novel Phase Error Estimation Algorithm Based on Extended Subspace Projection of Multi-plane Waves Reconstruction Model <b>Yang Huang</b> , National University of Defense Technology, China
#14	DP173	Design and Implementation of High-speed and Low-complexity Blind Equalization Algorithm <b>Shanyu Zhou</b> , Nanjing University of Science and Technology, China
#15	DP012	Image Segmentation Using Attribute Network <b>Wang Xiaoxia</b> , Xi'an University of Technology, China
#16	DP508	A Study of Student Action Recognition in Smart Classrooms Based on Improved SlowFast Swin Transformer <b>Yu Ren</b> , North Minzu University, China
#17	DP157	Digital Beamforming for Spaceborne Reflector and Feed Array Antenna SAR System <b>Weijie Wu</b> , Nanjing University of Aeronautics and Astronautics, China

## POSTER SESSION 2 (UTC+8)

July 9 (Sunday)  
16:30-19:30

<会议中心 A 厅 | 二楼>  
<Conference Center A | 2F>

### Poster Session 2: Intelligent Image Analysis and Processing Methods

Chairperson: Prof. Jinguang Han, Southeast University, China

- |     |       |   |
|-----|-------|---|
| #1  | DP018 | Parameterized Translational Motion Compensation for ISAR Imaging under low SNR<br><b>Tingting He</b> , Sun Yat-sen University, China  |
| #2  | DP093 | A Three-dimensional Forward-Looking Imaging Algorithm Based on 2D Iterative Adaptive Approach<br><b>WeiJie Sun</b> , Nanjing University of Aeronautics and Astronautics, China                                |
| #3  | DP101 | Specific Target Contour Extraction Method for Color Images Based on Prior Information-Assisted Dual-Threshold Binary Segmentation<br><b>Jie Zhu</b> , Nanjing University of Science and Technology, China     |
| #4  | DP122 | Inverse Synthetic Aperture Radar Image Quality Assessment Based on BP Neural Network<br><b>Jian Li</b> , School of Electronics and Communication Engineering Shenzhen Campus of Sun Yat-sen University, China |
| #5  | DP123 | Video SAR Moving Target Detection System Based on FPGA<br><b>Wenhao Tong</b> , National University of Defense Technology, China   |
| #6  | DP505 | Azimuth RCS Reconstruction Based on SPICE Algorithm<br><b>Yingjun Li</b> , National University of Defense Technology, China   |
| #7  | DP131 | Robust Image Classification with Grayscale Sequence: A VGG-ML Fusion Model for X-Ray Pneumonia Images<br><b>Xueji Fang</b> , Shanghai University, China   |
| #8  | DP146 | Interpolation of ISAR Images Based on Principal Component Analysis with Small Samples<br><b>Hanjie Wu</b> , National University of Defense Technology, China  |
| #9  | DP168 | A Lightweight Deep Neural Network-based Optical Image Detection Method for Underwater Submerged Rocket Wrecks<br><b>Gangqi Chen</b> , Northwestern Polytechnical University, China                            |
| #10 | DP178 | Research on Improved YOLOv5-based Small Component Recognition Method of Electrical Drawings<br><b>Yue Wang</b> , Tongji University, China   |
| #11 | DP193 | Effects of Drifting Ionospheric Irregularities for L-Band Geosynchronous SAR Imaging Simulation<br><b>Feixiang Tang</b> , National University of Defense Technology, China                                    |
| #12 | DP197 | Video SAR Target Detection and Tracking Method Based on Yolov5+Bytetrack<br><b>Boxu Wei</b> , National University of Defense Technology, China  |

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|-----|-------|--|
| #13 | DP198 | Enhanced Deeplab Network for Infrared Small Target Detection<br><b>Jiping Yao</b> , National University of Defense Technology, China   |
| #14 | DP199 | Clutter Detection in Automotive Radar Point Clouds Based on Deep Learning with Self-attention<br><b>Lulu Liu</b> , Xi'an Jiaotong-Liverpool University, China                              |
| #15 | DP212 | An Approach of Star Image Simulation in the Complex Background of Near Space<br><b>Shuhan Liu</b> , Beijing Institute of Control Engineering, China  |
| #16 | DP219 | RTUNet++: Assessment of Osteosarcoma MRI Image Segmentation Leveraging Hybrid CNN-Transformer Approach with Dense Skip Connection<br><b>Yifei Chen</b> , Hangzhou Dianzi University, China |
| #17 | DP220 | Normalization for Connectivity of Brain Regions in Schizophrenia Classification<br><b>Shunliang Li</b> , Yunnan Minzu University, China  |
| #18 | DP203 | A Bit-level Selective Image Encryption Algorithm Based on Chaos<br><b>Fangfang Zhang</b> , Liaoning Economy Vocational and Technical College, China  |

## ONLINE SESSION 1 (UTC+8)

July 9 (Sunday)  
13:00-15:30

  
Meeting Room A: 863 7936 0752

### Online Session 1: Target Detection

Chairperson: Assoc. Prof. Tao Tang, National University of Defense Technology, China

13:00-13:15	DP125	A Driver Fatigue Detection Method Based on Eye Aspect Ratio Compensated by Head Pose Estimation <b>Meng Zhang</b> , Politecnico di Milano, Italy
13:15-13:30	DP133	A Remote Sensing Image Object Detection Algorithm based on a Fusion of Classification and Regression Branches <b>Zejun Li</b> , Institute of Semiconductors, Chinese Academy of Sciences, China
13:30-13:45	DP144	Improved YOLOv4-based Object Detection Method for UAVs <b>Huang Ke</b> , Xiamen University of Technology, China
13:45-14:00	DP162	Research on Multi-scale Feature Fusion Method for Target Detection Based on IN-FPN <b>Tianfei Zhang</b> , Anhui Institute of Information Technology, China
14:00-14:15	DP163	Vehicle Target Detection in Complex Scene SAR Images Based on Co-saliency <b>Tao Tang</b> , National University of Defense Technology, China
14:15-14:30	DP192	Pedestrian Detection Model in Underground Coal Mine Based on Active and Semi-supervised Learning <b>Tianrong Rao</b> , CHN ENERGY Digital Inteltech Co. Ltd., China
14:30-14:45	DP194	Active Learning Based on Clustering Algorithms for the Detection of Grapes in Images <b>Hubert Cecotti</b> , California State University, Fresno, USA
14:45-15:00	DP201	Detection of Electrical Diagram Based on QueryDet <b>Shiyi Pang</b> , Urban Electric Power Supply Company, State Grid of Shanghai Electric Power Company, China
15:00-15:15	DP078	Sar Detection Based on Convnext and New Feature Pyramid <b>Fan-Ming Wei</b> , College of Computer and information engineering, Nanjing Tech University, China
15:15-15:30	DP128	Small Target Detection Algorithm for UAV Based on Improved YOLOv5 <b>Jian Zhang</b> , School of Electrical Engineering, Anhui Polytechnic University, China

## ONLINE SESSION 2 (UTC+8)

July 9 (Sunday)  
13:00-15:30

  
Meeting Room B: 864 7931 5815

### Online Session 2: Image Segmentation and Image Enhancement

Chairperson: Assoc. Prof. Dayong Wang, Chongqing University of Posts and Telecommunications, China

13:00-13:15	DP059	Multi-class Brain Tumor Segmentation Using Graph Attention Network <i>Dhrumil Patel, Lakehead University, Canada</i>
13:15-13:30	DP037	A Novel Method of Aggregate Particles Image Segmentation Based on Deep Learning <i>Di Yan, Chang'an University, China</i>
13:30-13:45	DP150	A Review of Traditional Algorithms and Deep Learning for Dental Segmentation <i>Yanan Jia, Tianjin University of Commerce, China</i>
13:45-14:00	DP156	CSFNet: Cross-scale Feature Interaction for Medical Image Segmentation <i>Yu Feng, East China Normal University, China</i>
14:00-14:15	DP005	Achieving Medical Image Classification of Alzheimer's Disease by the Implementation of Different Image Enhancement Methods Based on VGG <i>Kewei Chen, Huazhong University of Science and Technology, China</i>
14:15-14:30	DP108	Low-light Image Enhancement Using QRCP Decomposition in HSV Space <i>Mengjun Ye, Nanhong Jincheng College, Nanjing University of Aeronautics and Astronautics Nanjing, China</i>
14:30-14:45	DP149	Targeted Module Design in Low-light Image Enhancement <i>Junhao Chen, School of Electronic Science and Engineering, Southeast University, China</i>
14:45-15:00	DP184	Efficient Low-light Image Enhancement Using Radar-Camera Fusion Framework <i>Xinyu Liu, Sun Yat-sen University, China</i>
15:00-15:15	DP016	Mainlobe DRFM Jamming Suppression via Blind Source Separation Using Tensor Decomposition <i>Luxin Dong, School of Information and Communication Engineering, University of Electronic Science and Technology of China, China</i>
15:15-15:30	DP118	Classifying Neonatal Acute Bilirubin Encephalopathy Based on Spatial-Pathological Attention Module and Convolutional Neural Network <i>Haoyu Zhang, Hainan University, China</i>

## ONLINE SESSION 3 (UTC+8)

July 9 (Sunday)  
13:00-15:15

  
Meeting Room C: 840 1504 7704

### Online Session 3: Image Identification

Chairperson: Dr. Suphonsa Khetkeeree, Mahanakorn University of Technology, Thailand

13:00-13:15	DP008	Frequency Based Gait Gender Identification <b>Lavanya Srinivasan</b> , University of West London, UK
13:15-13:30	DP057	Channel Robust RF Fingerprint Identification Method with Narrow Band Differential Constellation Trace Figure <b>Xiangqi Meng</b> , Southeast University, China
13:30-13:45	DP095	Facial Expression Recognition Based on the Combination of Landmarks and Texture Features <b>Ke Wu</b> , Qilu University of Technology, China
13:45-14:00	DP100	Automatic Sketch Generation for Person Recognition <b>Lavanya Srinivasan</b> , University of West London, UK
14:00-14:15	DP104	A Dataset and System for Service Robot Action Interaction Based on Skeleton Action Recognition <b>Jiazheng Wang</b> , Tsinghua University, China
14:15-14:30	DP190	VGGish-BiLSTM-attention for COVID-19 Identification Using Cough Sound Analysis <b>Xiaoling Li</b> , Communication University of China, China
14:30-14:45	DP208	Domain Adaptive Recognition of Defects for Ground Penetrating Radar Images <b>Zhe Huang</b> , Chengdu University of Technology, China
14:45-15:00	DP213	Design and Implementation of Fitness Dance Scoring System Based on Human Posture Recognition <b>Xinyao Ruan</b> , Communication University of China, China
15:00-15:15	DP058	Average-Spectrum Fingerprint Extraction and Identification in Gigabit Ethernet <b>Jingping Ren</b> , Schools of Cyber Science and Engineering, Southeast University, China

## ONLINE SESSION 4 (UTC+8)

July 9 (Sunday)  
13:00-15:30

  
Meeting Room D: 851 9715 8848

### Online Session 4: Computer Assisted Imaging and Image Reconstruction Technology

Chairperson: Prof. Weiwei Wang, Xidian University, China

13:00-13:15	DP027	Scene Cartoonization Algorithm Based on Generative Adversarial Network <b>Ruiyong Jin</b> , Yanbian University, China
13:15-13:30	DP074	The 3D Reconstruction of Disordered Incremental Sparse Point Clouds for Ship Traveling Wave of CFD Numerical Simulation <b>Yongrui Su</b> , School of Naval Architecture and Ocean Engineering, Dalian Maritime University, China
13:30-13:45	DP075	A Hybrid Approach for Customized Skull-stripping MR Brain Images <b>Diego Lujan Villarreal</b> , ITESM, Mexico
13:45-14:00	DP006	A Novel 3D Image Processing Method Based on Spectral Layout <b>Yongyu Wang</b> , University of Southern California, USA
14:00-14:15	DP148	Research on Bottom Layer Exposure Strategy in Stereolithography 3D Printing <b>Zuochao Rong</b> , Shanghai Union Technology Corporation, China
14:15-14:30	DP077	Super-Resolution Tomographic SAR Imaging with Deep LISTA Network <b>Hong Li</b> , College of Computer and information engineering, Nanjing Tech University, China
14:30-14:45	DP501	Frequency Domain Pseudo-oblique Projection Generalized Sidelobe Canceller for Ultrasound Imaging <b>Qianwen Li</b> , Chongqing University, China
14:45-15:00	DP223	Simulation Research on Radar Imaging of Geostationary Orbital Object <b>Linlin Qiu</b> , Space Engineering University, China
15:00-15:15	DP066	A Correlation Spectrum-based Fingerprint Extraction Method for 1000BASE-T Devices <b>Yaning Liu</b> , Southeast University, China
15:15-15:30	DP153	The Calculation of Key Geometric Parameters of End Mill by Polar Pixel Matrix Method <b>Minglin You</b> , Guizhou Normal University, China

## ONLINE SESSION 5 (UTC+8)

July 9 (Sunday)  
16:20-18:35

  
Meeting Room A: 863 7936 0752

### Online Session 5: Modern Image Processing and Application

Chairperson: Dr. Shaode Yu, Communication University of China, China

16:20-16:35	DP109	Comparison of Machine Learning Methods for Image Classification of Companies in Vietnam <i>Khiem Tran, University of Information Technology, Vietnam</i>
16:35-16:50	DP116	Robust JPEG Image Steganography Using Wavelet Domain SVD and Adaptive QIM <i>Jing Liu, Xi'an University of Posts &amp; Telecommunications, China</i>
16:50-17:05	DP130	Image-Guided Point Cloud Shape Completion Based on CTA Mechanism <i>Baolin Hou, National University of Defense Technology, China</i>
17:05-17:20	DP135	A Deep Learning Approach to Single Image Dehazing Inspired by Euler Numerical Schemes <i>Yin Li, Nanjing University of Posts and Telecommunications, China</i>
17:20-17:35	DP170	Review of Quality Assessment Algorithms on the Realistic Blurred Image Database (BID2011) <i>Shaode Yu, Communication University of China, China</i>
17:35-17:50	DP177	Hyperspectral Image Classification Using Multi-Feature Fusion Residual Hypergraph Convolution Network <i>Tianxing Zhu, Tongji University, China</i>
17:50-18:05	DP159	A Two-stage Adaptive Algorithm for Tracking Multi-mode Maneuvering Targets <i>Kaixuan Cong, Harbin Engineering University, China; Southampton Ocean Engineering Joint Institute at HEU, UK</i>
18:05-18:20	DP180	Multiple-Person Tracking with Criss-Cross Attention and Deep Matching <i>Zhuoyang Liu, University of Macau, China</i>
18:20-18:35	DP181	CNXResNet: A Light-weight Backbone Based on PP-YOLOE for Drone-captured Scenarios <i>Zhishun Cai, Wuyi University, China</i>

## ONLINE SESSION 6 (UTC+8)

July 9 (Sunday)  
16:20-18:50

  
Meeting Room B: 864 7931 5815

### Online Session 6: Equipment Recognition and Abnormal Detection

Chairperson: Dr. Hua Fu, Southeast University, China

16:20-16:35	DP094	Corner Reflector Identification Based on Improved Temporal Convolutional Network and LSTM <i>Shuyan Guan, Beijing Institute of Technology, China</i>
16:35-16:50	DP142	RF Fingerprint Identification for 5G Mobile Device Based on Transient Features <i>Jian Yin, Southeast University, China</i>
16:50-17:05	DP023	Comparison of Receiver Front-end Differences for RF Fingerprint Based IoT Device Identification <i>Xiaoyu Zhang, Southeast University, China</i>
17:05-17:20	DP224	Anomaly Traffic Detection Model Based on Hybrid Network <i>Yuanyuan Ma, State Grid Smart Grid Research Institute Co.,Ltd., China</i>
17:20-17:35	DP185	Lattice-based Privacy Enhanced Identity Protocol for SDO Services <i>Zeyu Xu, Southeast University, China</i>
17:35-17:50	DP062	A 5G Slice Traffic Anomaly Detection Method Based on Convolution Neural Network <i>Lu Chen, State Grid Smart Grid Research Institute Co.,Ltd., China</i>
17:50-18:05	DP021	Speaker Gender Classification and Error Analysis Using Deep Learning and YOHO Corpus <i>Nourah M. Almarshady, King Saud University, Saudi Arabia</i>
18:05-18:20	DP026	SDN Path Recovery Scheme Using Bionic-based Self-healing Mechanism <i>Changlong Yan, School of Cyber Science and Engineering, Southeast University, Nanjing, China</i>
18:20-18:35	DP090	A Novel Attention-based LSTM Model for Non-Profiled Side-Channel Attacks <i>Kangran Pu, Beijing Institute of Technology, School of Integrated Circuits and Electronics, China</i>
18:35-18:50	DP216	Research on Path Recognition Algorithm for Autonomous Driving Model Vehicles <i>Qi Peichao, Tianjin University of Science and Technology, China</i>

## ONLINE SESSION 7 (UTC+8)

July 9 (Sunday)  
16:20-18:50

  
Meeting Room C: 840 1504 7704

### Online Session 7: Signal Acquisition and Source Analysis

Chairperson: Prof. Yang Liu, College of Electronic Information Engineering, Inner Mongolia University, China

- |             |       |   |
|-------------|-------|---|
| 16:20-16:35 | DP195 | An Adaptive Virtual Keyboard with Visual and Auditory Feedback Based the Detection of Steady-State Visual Evoked Potentials<br><b>Hubert Cecotti</b> , California State University, Fresno, USA               |
| 16:35-16:50 | DP143 | Schmitt Non-Gate Chaotic Circuits: Phase Diagram, Complex Walking, and Spring Testing<br><b>Jie Cheng</b> , Soochow University, China   |
| 16:50-17:05 | DP086 | Shared Waveform Design for Integrated Detection and Jamming Signal Based on Smart Noise Jamming of Convolution Modulation<br><b>Chunyang Li</b> , Nanjing Research Institute of Electronics Technology, China |
| 17:05-17:20 | DP010 | An Adaptive EEG Signal Filter Based on Discrete Wavelet Transform and Least Mean Square<br><b>Cheng Shi</b> , Beijing University of Technology, China   |
| 17:20-17:35 | DP017 | Low-Complexity DOA Estimation of Wideband Signals Based on Intelligent Optimization Algorithms in Massive MIMO Systems<br><b>Fang Wang</b> , Inner Mongolia University, China                                 |
| 17:35-17:50 | DP069 | Identity Authentication of Automotive Ethernet Based on Signal Separation<br><b>Xiangduan Song</b> , Southeast University, China  |
| 17:50-18:05 | DP504 | Gait Parameters Extraction Based on Torso Signal Using FMCW Radar<br><b>Linyu Wang</b> , Xi'an Jiaotong University, China   |
| 18:05-18:20 | DP046 | Topological Data Analysis for Scalp EEG Signal Processing<br><b>Yuexin Li</b> , Auburn Univeristy, USA  |
| 18:20-18:35 | DP179 | A Source Separation Approach for the Combined SBA Signals in the Joint Representation of OBA and SBA<br><b>Jiawei Peng</b> , Beijing Institute of Technology, China   |
| 18:35-18:50 | DP210 | An Improved Synchronous Acquisition Method of Beidou B1C Signal<br><b>Yan Bo</b> , Shenyang Ligong University, China  |

## ONLINE SESSION 8 (UTC+8)

July 9 (Sunday)  
16:20-19:05

  
Meeting Room D: 851 9715 8848

### Online Session 8: Information Detection and Certification

Chairperson: Assoc. Prof. Zhongyuan Qin, Southeast University, China

16:20-16:35	DP034	VulSAT: Source Code Vulnerability Detection Scheme Based on SAT Structure <b>Jintao Xue</b> , School of Cyber Science and Engineering, Southeast University, China
16:35-16:50	DP044	SCGRU: A Model for Ethereum Smart Contract Vulnerability Detection Combining CNN and BiGRU-Attention <b>Jiayu Liang</b> , Southeast University, China
16:50-17:05	DP040	CVulDetector: Cross-domain Vulnerability Detection Based on Transfer Learning <b>Guoqiang Zeng</b> , School of Cyber Science and Engineering, Southeast University, China
17:05-17:20	DP083	A Dynamic Trust Chain Measurement Method Based on Mixed Granularity of Call Sequence <b>Chen Zhang</b> , State Grid Jiangsu Electric Power Co., Ltd., China
17:20-17:35	DP084	SmartPhone-oriented Trust Evaluation Model Based on Cloud Theory <b>Shuo Chen</b> , School of Cyber Science and Engineering, Southeast University, China
17:35-17:50	DP025	AutoExploit: Automatic Exploit Generation with Security Mitigation <b>Chao Zhang</b> , Southeast University, China
17:50-18:05	DP102	Fine-grained Dynamic Fast Metrics for Industrial Control Terminal <b>YuTing Liu</b> , School of Cyber Science and Engineering Southeast University Nanjing, China
18:05-18:20	DP032	Lightweight Authentication for Resource-Constrained Devices in Smart Grid <b>Xiaona Deng</b> , Southeast University Wuxi, China
18:20-18:35	DP054	Spammy Names Detection in Pashto Language to Prevent Fake Accounts Creation on Social Media <b>Ijazul Haq</b> , Shanghai Jiao Tong University, Pakistan
18:35-18:50	DP063	Research on Endogenous Security Awareness Model in Information Systems <b>Wencheng Qiu</b> , Southeast University, China
18:50-19:05	DP103	Research on Extension Method of Container Virtual Trusted Certificate Chain for 5G MEC <b>Haoqing Xia</b> , School of Cyber Science and Engineering Southeast University, China

## ONLINE SESSION 9 (UTC+8)

July 10 (Monday)  
09:00-11:45

  
Meeting Room A: 863 7936 0752

### Online Session 9: Advanced Electronics and Information System

Chairperson: Assoc. Prof. Lei Liu, North China Institute of Computing Technology, China

09:00-09:15	DP036	VCE-Net: A New Type of Real-time Poly P Segmentation Network <i>Chao Li, Yanbian University China</i>
09:15-09:30	DP030	JDart-Hea: Hybrid Evolutionary Algorithm in Dynamic Symbolic Execution <i>Zihao Wu, School of Cyber Science and Engineering, Southeast University, China</i>
09:30-09:45	DP061	Intelligent Cleaning Control System of Photovoltaic Module Based on MQXLite <i>Xiaojing Jiang, Nantong Institute of Technology, China</i>
09:45-10:00	DP091	The Development of a Quick-look Radar Processor for Detecting Small Sea Vessels <i>Mogamat Yaaseen Martin, University of Cape Town, South Africa</i>
10:00-10:15	DP124	Novel Digital Lock-in Amplifier Algorithm Independent of Low-pass Filter with Low SNR Performance <i>Meng Zhang, Politecnico di Milano, Italy</i>
10:15-10:30	DP134	Cluster Construction and Information Security for the Portal System of Grade 3A Traditional Chinese Medicine Hospitals Under Tertiary Level Protection <i>Zhisheng Li, South China University of Technology, China</i>
10:30-10:45	DP176	The Influence of Intelligent Recommendation Quality Based on Perceived Value Mediation on Consumers' Mobile Shopping Intention: The Moderating Role of Customer Knowledge <i>Cailing Wang, Guangdong University of Technology, China</i>
10:45-11:00	DP186	Research on Method of User Preference Analysis Based on Entity Similarity and Semantic Assessment <i>Chengjie Mou, Trine University, USA</i>
11:00-11:15	DP221	Design of Microhabitat Monitoring System for Spodoptera Frugiperda Based on Internet of Things Architecture <i>Jumei Chang, College of Big Data and Intelligent Engineering, Southwest Forestry University, China</i>
11:15-11:30	DP227	Design of the Integrated Audio and Video Intelligent Operation and Maintenance Platform <i>Lei Liu, North China Institute of Computing Technology, China</i>
11:30-11:45	DP706	Enhanced Historical Data Orientation Enhances Code Coverage <i>Shihe Zhang, University of Electronic Science and Technology of China, China</i>

## ONLINE SESSION 10 (UTC+8)

July 10 (Monday)  
09:00-11:30

  
Meeting Room B: 864 7931 5815

### Online Session 10: Digital Key System and Encryption Technology

Chairperson: Dr. Tianchong Gao, Southeast University, China

09:00-09:15	DP052	ESP32-based Multi-User Secret Key Generation System <i>Dongyang Li, Southeast University, China</i>
09:15-09:30	DP088	A High-Performance Universal FPGA Implementation for PM and DPM Based on Differential Addition Chain <i>Jingqi Zhang, Beijing Institute of Technology, China</i>
09:30-09:45	DP053	A Highly Robust Secret Key Reconcile System Based on Cyclic Shift Buffer and HARQ Mechanism <i>Haojie Han, Southeast University, China</i>
09:45-10:00	DP092	Research on Key Generation Performance of Wireless Channel Based on LTE-V2X <i>Wenhao Yin, School of Cyber Science and Engineering, Southeast University, China</i>
10:00-10:15	DP112	A Doppler Reciprocity Based Key Generation Method for C-V2X System <i>Xianzu Xue, Southeast University, China</i>
10:15-10:30	DP043	Smart Contract Bytecode Similarity Detection Based on Self-supervised Learning <i>Hui Zuo, School of Cyber Science and Engineering, Southeast University Wuxi Campus, China</i>
10:30-10:45	DP120	Confidential Transmission Based on Statistical CSI using DFT Beamforming <i>Xiaoyu Zhang, Southeast University, China</i>
10:45-11:00	DP029	Automatic Patching of Smart Contract Vulnerabilities Based on Comprehensive Bytecode Rewriting <i>Yadong Shi, School of Cyber Science and Engineering, Southeast University, Nanjing 211189, China</i>
11:00-11:15	DP087	A Hybrid Approach to Vulnerability Assessment Combining Attack Graph and Hidden Markov <i>Yikang Wang, Southeast University, China</i>
11:15-11:30	DP710	Multi-Carrier Information Hiding Algorithm Based on Point Cloud Convex Hull Fusion <i>Shuai Ren, Chang'an University, China</i>

## ONLINE SESSION 11 (UTC+8)

July 10 (Monday)  
09:00-11:50

  
Meeting Room C: 840 1504 7704

### Online Session 11: Communication and Information System

Chairperson: Dr Jian Wu, National University of Defense Technology, China

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|-------------|---------------------|--|
| 09:00-09:20 | <b>Invited Talk</b> | Blind Adaptive Beamforming for a Global Navigation Satellite System Array Receiver<br><i>Jian Wu, National University of Defense Technology, China</i>   |
| 09:20-09:35 | DP056               | Geometric Calibration of Spaceborne Bistatic SARLT-1 for Generation of High-Accuracy DEM<br><i>Jingwen Mou, National Key Laboratory of Science and Technology on Microwave Imaging, Aerospace Information Research Institute, Chinese Academy of Sciences, China</i> |
| 09:35-09:50 | DP089               | An Optimized Non-Profiled Deep Learning-based Power Analysis with Self-supervised Autoencoders<br><i>Fancong Kong, School of Integrated Circuits and Electronics, Beijing Institute of Technology, China</i>   |
| 09:50-10:05 | DP097               | A Blind Anti-Jamming Algorithm for Array-Based GNSS Receivers Using the MMSE Criterion<br><i>Song Li, National University of Defense Technology, China</i>   |
| 10:05-10:20 | DP035               | Space-Earth Integration Network Slice Mapping Based on Multi-Level Attribute Representation Model<br><i>Siyang Wu, Xi'an Jiaotong University, China</i>  |
| 10:20-10:35 | DP183               | Pre-Allocated MAC Protocol Based on Underwater Acoustic Communication Network<br><i>Wei Sun, Southeast University, China</i>   |
| 10:35-10:50 | DP202               | Flexible Autoencoder for Orthogonal Chirp Division Multiplexing Communications<br><i>Min-sung Koh, Eastern Washington University, USA</i>  |
| 10:50-11:05 | DP205               | Design of Dual-Function Radar Communication System Based on Delayed Jump Mapping LFM<br><i>Rui Xu, University of Electronic Science and Technology of China, China</i>   |
| 11:05-11:20 | DP160               | Power Allocation Techniques for Non-Orthogonal Multiple Access Based MIMO Visible Light Communication Systems<br><i>Hesham Sadat Ibrahim, ENSTA-Bretagne, France</i>   |
| 11:20-11:35 | DP011               | Low Complexity OFDM-Guided DJSCC for Multipath Fading Channels Using Tensor Train Decomposition with Fine-Tuning<br><i>Man Xu, Faculty of Applied Sciences, Macao Polytechnic University, Macao S.A.R., China</i>  |
| 11:35-11:50 | DP702               | A Review of Privacy-Preserving Federated Learning, Deep Learning, and Machine Learning IIoT and IoT Solutions<br><i>Victor Obarafor, Canterbury Christ Church University, United Kingdom</i>   |

## LISTENER LIST

- #1 **Youpeng Cai**, Tianjin University, China
- #2 **Liu Mengxin**, Shenzhen Technology University, China
- #3 **Huan Zhang**, Xidian University, China
- #4 **Cong Cao**, Guangzhou University, China
- #5 **Gui Zhang**, Sun Yat-sen University, China
- #6 **Aoxin Cao**, Beijing Institute of Technology, China
- #7 **Jianyi Chen**, Beijing Institute of Technology, China
- #8 **Jinzhong Huan**, Beijing Institute of Technology, China
- #9 **Nan Wang**, Beijing Institute of Technology, China
- #10 **Yiqiao Xu**, Beijing Institute of Technology, China
- #11 **Fangjia Yan**, Beijing Institute of Technology, China
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- #14 **Wenchao Qian**, Jiangsu University, China
- #15 **Ying Zong**, Jiangsu University, China
- #16 **Ou Yang**, Chengdu University, China
- #17 **Pei Wu**, Inner Mongolia Agricultural University, China
- #18 **Yongan Zhang**, Inner Mongolia Agricultural University, China
- #19 **Yue Pang**, Inner Mongolia Agricultural University, China
- #20 **Tao Xie**, San Diego State University, USA
- #21 **Zhao Zigan**, Chinese Academy of Sciences, China
- #22 **Conghui Zhao**, Chinese Academy of Sciences, China
- #23 **Wan Xiaomin**, Chinese Academy of Sciences, China
- #24 **Mei Han**, 中关村实验室
- #25 **Ou Changgang**, Chinese Academy of Sciences, China



