WCSP 2025

The Seventeenth International Conference on Wireless Communications and Signal Processing

Oct. 23-25, 2025 Chongqing, China

CONFERENCE PROGRAM

Welcome Message

On behalf of the executive committee, it is our great pleasure to invite you to participate in the 2025 International Conference on Wireless Communications and Signal Processing (WCSP 2025), which will be held in Chongqing, China, during Oct. 23-25, 2025.

WCSP is an annual International Conference on Wireless Communications and Signal Processing (WCSP). The aim of the conference is to provide an international forum that brings together researchers from academia and practitioners from industry to exchange advances in recent research work on all aspects of wireless communications and signal processing. With the support of all participants, the past sixteen events of the conference have been very successful. We are now organizing WCSP 2025, the seventeenth edition of the conference. You are cordially welcome to participate in and contribute to the conference in your valuable role.

Nestled in southwest China, Chongqing mesmerizes with its dramatic landscapes and vibrant energy. Known as the "Mountain City," it sprawls across rugged terrain where the Yangtze and Jialing Rivers converge, creating a layered skyline of skyscrapers clinging to hillsides. Its unique topography births architectural marvels like Hongya Cave, a stilted complex glowing at night, and transit systems weaving through buildings. A culinary paradise, Chongqing is the birthplace of fiery hotpot, tempting foodies with bold, numbing spices in bustling night markets. Beyond modernity, ancient traces linger in Ciqikou's porcelain-town charm and Buddhist grottoes in Dazu. The city pulses with youthful vigor in artsy districts like Eling and Tankuang, while neon-lit river cruises showcase its "Little Hong Kong" allure. A gateway to the Three Gorges, Chongqing seamlessly blends tradition and innovation, offering an unforgettable urban adventure where nature, history, and urban dynamism collide.

Thank you. Look forward to welcoming you in Chongqing in October 2025!

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Artificial Intelligence-Native Radio Access Networks (AI-RAN)) Symposium

Symposium Co-Chairs:

Wenchao Xia, Nanjing University of Posts and Telecommunications, China

Chenyuan Feng, University of Exeter, UK

Howard H. Yang, Zhejiang University, China

Chenxi Liu, Beijing University of Posts and Telecommunications, China

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Convergence of Sensing, Communication, and Computing Symposium

Symposium Co-Chairs:

Cunhua Pan, Southeast University, China

Jinkun Zhu, National University of Defense Technology, China

Francesco Guidi, National Research Council of Italy, Italy

Zhengyu Zhu, Zhengzhou University, China

Yuanwei Liu, The University of Hong Kong, Hong Kong, China

AI for Communications and Networking Symposium

Symposium Co-Chairs:

Hong Wang, Nanjing University of Posts and Telecommunications, China

Yaru Fu, Hong Kong Metropolitan University, China

Zheng Shi, Jinan University, China

Theodoros Tsiftsis, University of Thessaly, Greece

Shaodan Ma, University of Macau, China

Internet of Things Symposium

Symposium Co-Chairs:

Haotong Cao, Nanjing University of Posts and Telecommunications, China

Tingwei Wu, Chongqing University of Posts and Telecommunications, China

Changle Li, Xidian University, China

Jun Du, Tsinghua University, China

Shahid Mumtaz, Nottingham Trent University, UK

Multimedia Processing and Communication Symposium

Symposium Co-Chairs:

Lei Lei, Nanjing University of Aeronautics and Astronautics, China

Xin Wei, Nanjing University of Posts and Telecommunications, China

Dapeng Wu, Chongqing University of Posts and Telecommunications, China

Renchao Xie, Beijing University of Posts and Telecommunications, China

Wireless Networking, Services, and Security Symposium

Symposium Co-Chairs:

Xiaoming He, Nanjing University of Posts and Telecommunications, China

Yueyue Dai, Huazhong University of Science and Technology, China

Xiaoyan Wang, Ibaraki University, Japan

Ruichen Zhang, Nanyang Technological University, Singapore

Sabita Maharjan, University of Oslo, Norway

Signal Processing for Communications Symposium

Symposium Co-Chairs:

Chunguo Li, Southeast University, China

Weijie Tan, Guizhou University, China

Nallanathan Arumugam, Queen Mary University of London, UK

Meng Hua, Imperial College London, UK

Tianming Ma, Shanghai University of Engineering Science, China

Edge Intelligence for Space-Air-Ground Integrated Networks Symposium

Symposium Co-Chairs:

Yongyi Ran, Chongqing University of Posts and Telecommunications, China

Kai Liu, Chongqing University, China

Kezhi Wang, Brunel University, UK

Tom H Luan, Xi'an Jiaotong University, China

Haibo Zhou, Nanjing Universiy, China

Low Altitude Economy Communication and Networking Symposium

Symposium Co-Chairs:

Yihang Huang, Chongqing University of Posts and Telecommunications, China

Jingjing Wang, Beihang University, China

Yin Xu, Shanghai Jiao Tong University, China

Kun Guo, East China Normal University, China

De Mi, Birmingham City University, UK

Wireless Optical Communication Symposium

Symposium Co-Chairs:

Yejun Liu, Chongqing University of Posts and Telecommunications, China

Xiong Deng, Southwest Jiaotong University, China

Chen Chen, Chongqing University, China

Wei Jin, Bangor University, UK

Li Zhou, National University of Defense Technology, China

Semantic Communication and Network Intelligence Symposium

Symposium Co-chairs:

Wei Wu, Nanjing University of Posts and Telecommunications, China

Fuhui Zhou, Nanjing University of Aeronautics and Astronautics, China

Zhijin Qin, Tsinghua University, China

Zhaohui Yang, Zhejiang University, China

Derrick Wing Kwan Ng, University of New South Wales, Australia

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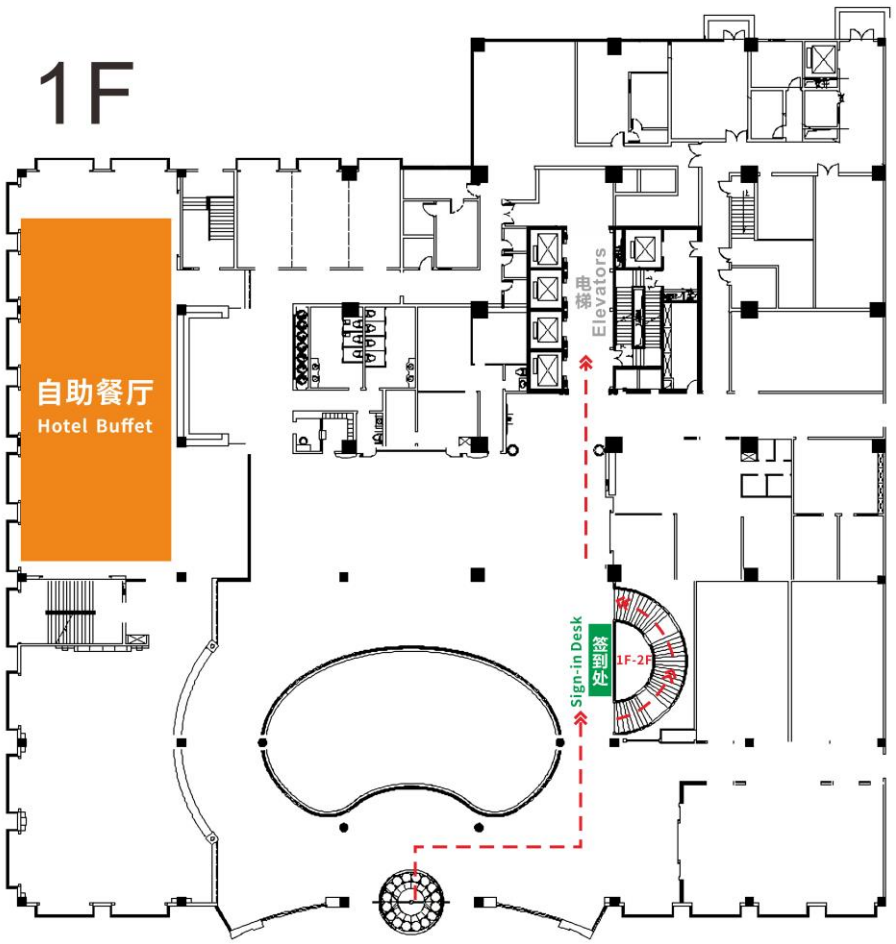
Conference Venue

CHONGQING KINGWORLD HOTEL（重庆君豪大饭店）

Address: NO.9 Jin Yuan Road, Jiangbei District, Chongqing, China（重庆市江北区金源路 9 号）

Meeting Rooms	Floor	October 23	October 24	October 25
Hotel Buffet (自助餐厅)	1F	√	√	√
Grand Banquet Hall (大宴会厅)	2F	√	√	
Hao Yi Hall (豪怡厅)	2F	√	√	√
Hao Xin Hall (豪信厅)	2F	√	√	√
Hao Jing Hall (豪景厅)	2F	√	√	
Hao Jun Hall (豪君厅)	2F	√	√	
VIP.Meeting Room (首见厅)	2F	√		√
Jun Can Hall (君灿厅)	3F	√	√	




2F
豪君
Hao Jun Hall
货梯
电梯
Elevators
女卫
男卫
大宴会厅
Grand Banquet Hall
首见
VIP.Meeting Room
豪信
Hao Xin Hall
海报展区
Poster Area
豪华
Hao Hua Hall
中庭
豪景
Hao Jing Hall
豪怡
Hao Yi Hall
国会


3F
君贵
君灿
Jun Can Hall
电梯
Elevators
君昌
君辉
君冉
君澦
君嘉
君冠
君捷

Conference Guideline

Oral Presentation

- The duration of oral presentation slot is 15 minutes. Please target your talk for a duration of about 12 minutes for the presentation plus about 3 minutes for questions from the audience.
- Your punctual arrival and active involvement in each session will be highly appreciated.
- Get your presentation PPT or PDF files prepared and backed up.
- Laptops, projector & screen, laser sticks will be provided by the conference organizer.

Poster Presentation

It's expected that at least one author stands by the poster for (most of the time of) the duration of the poster session. This is essential both to present your work to anyone interest in it and to make sure that your presence is verified by committee.

Security

Please ensure that you take your belongings with you at all times when leaving a room. Do not leave bags or laptops unattended.

Name Badge

For security purposes, delegates, speakers, exhibitors and staff are required to wear their name badge to all sessions and social functions. Entrance into sessions is restricted to registered delegates only. If you misplace your name badge, please replace at the registration counter.

Agenda Overview

Sign-in & Conference Materials Collection @ Hotel Lobby 1F	10:00-18:00, October 22, 2025 09:00-18:00, October 23-25, 2025

October 23, 2025 | Thursday

09:00-09:15	**Opening Ceremony**	Grand Banquet Hall
Keynote Speech Host: **Zhaolong Ning**, Chongqing University of Posts and Telecommunications		
09:15-10:00	**Marco Di Renzo** CNRS Research Director, CentraleSupélec, France Professor of Telecommunications Engineering, King's College London, UK **Speech Title:** Stacked Intelligent Metasurfaces: Communication, Computing and Sensing in the Wave Domain	
10:00-10:30	Break	Foyer
10:30-11:15	**Reinaldo A. Valenzuela** Member National Academy of Engineering; Director, Communication Theory Department, Bell Laboratories **Speech Title:** 6G Wireless: Challenges and Opportunities	Grand Banquet Hall
11:15-12:00	**Wen Tong** CTO, Wireless Network, Huawei Technologies Co., Ltd. President, Huawei Canada R&D **Speech Title:** On the Capacity-Scaling-Law for Mobile Communications	
12:00-14:00	Lunch	Hotel Buffet
14:00-15:30	**Oral Session 1** Edge Intelligence for Space-Air-Ground Integrated Networks Symposium-I	Hao Yi Hall
	Oral Session 2 Artificial Intelligence-Native Radio Access Networks (AI-RAN) Symposium-I	Hao Xin Hall
	Oral Session 3 AI for Communications and Networking Symposium-I	Hao Jing Hall
	Oral Session 4 Convergence of Sensing, Communication, and Computing Symposium-I	Jun Can Hall
	Oral Session 5 Wireless Networking, Services, and Security Symposium-I	VIP.Meeting Room
14:00-15:00	**Poster Session I**	Foyer
15:30-16:00	Break	
16:00-17:30	**Oral Session 6** Low Altitude Economy Communication and Networking Symposium-I	Hao Yi Hall
	Oral Session 7 Multimedia Processing and Communication Symposium	Hao Xin Hall

16:00-17:30	**Oral Session 8** Internet of Things Symposium-I	Hao Jing Hall
	Oral Session 9 Semantic Communication and Network Intelligence Symposium-I	Jun Can Hall
	Oral Session 10 Signal Processing for Communications Symposium-I	VIP.Meeting Room
16:00-17:00	**Poster Session II**	Foyer
14:00-18:00	**Workshop on Emerging 6G Technologies in Communications and Signal Processing**	Hao Jun Hall
17:30	**Welcome Reception**	Hotel Buffet

October 24, 2025 | Friday

	Keynote Speech	
09:30-10:15	**Jiangzhou Wang** International Member of the Chinese Academy of Engineering Fellow of the Royal Academy of Engineering, UK **Speech Title:** Large AI Model for Wireless Communications	Grand Banquet Hall 1
10:15-10:45	Break	Foyer
10:45-11:30	**Abbas Jamalipour** Professor of Ubiquitous Mobile Networking, The University of Sydney Editor-in-Chief, IEEE Transactions on Vehicular Technology Past President, IEEE Vehicular Technology Society **Speech Title:** 6G-Enhanced Space-Air-Ground Networks Using Generative AI	Grand Banquet Hall 1
12:00-14:00	Lunch	Hotel Buffet
14:00-15:30	**Oral Session 11** AI for Communications and Networking Symposium-II	Hao Yi Hall
	Oral Session 12 Artificial Intelligence-Native Radio Access Networks (AI-RAN) Symposium-II	Hao Xin Hall
	Oral Session 13 Wireless Networking, Services, and Security Symposium-II	Hao Jing Hall
	Oral Session 14 Convergence of Sensing, Communication, and Computing Symposium-II	Jun Can Hall
14:00-15:00	**Poster Session III**	Foyer
15:30-16:00	Break	
16:00-17:30	**Oral Session 15** Internet of Things Symposium-II	Hao Yi Hall
	Oral Session 16 Low Altitude Economy Communication and Networking Symposium-II	Hao Xin Hall
	Oral Session 17 Signal Processing for Communications Symposium-II	Hao Jing Hall
	Oral Session 18 Semantic Communication and Network Intelligence Symposium-II	Jun Can Hall

16:00-17:00	**Poster Session IV**	Foyer
14:00-18:00	**Invited Talk Session**	Hao Jun Hall
18:00	**Banquet**	Grand Banquet Hall
October 25, 2025 | Saturday		
09:00-10:15	**Oral Session 19** Wireless Networking, Services, and Security Symposium-III	Hao Yi Hall
	Oral Session 20 Internet of Things Symposium-III	Hao Xin Hall
	Oral Session 21 Signal Processing for Communications Symposium-III	VIP.Meeting Room
09:00-10:00	**Poster Session V**	Foyer
10:15-10:45	Break	
10:45-12:00	**Oral Session 22** Wireless Networking, Services, and Security Symposium-IV	Hao Yi Hall
	Oral Session 23 Internet of Things Symposium-IV	Hao Xin Hall
	Oral Session 24 Signal Processing for Communications Symposium-IV	VIP.Meeting Room
11:00-12:00	**Poster Session VI**	Foyer
12:00-14:00	Lunch	Hotel Buffet
14:00-15:30	**Oral Session 25** Wireless Networking, Services, and Security Symposium-V	Hao Yi Hall
	Oral Session 26 Wireless Optical Communication Symposium	Hao Xin Hall
	Oral Session 27 AI for Communications and Networking Symposium-III	VIP.Meeting Room
14:00-15:00	**Poster Session VII**	Foyer
15:30-16:00	Break	
16:00-17:30	**Oral Session 28** Convergence of Sensing, Communication, and Computing Symposium-III	Hao Yi Hall
	Oral Session 29 Edge Intelligence for Space-Air-Ground Integrated Networks Symposium-II	Hao Xin Hall
	Oral Session 30 Signal Processing for Communications Symposium-V	VIP.Meeting Room
16:00-17:00	**Poster Session VIII**	Foyer

Keynote Speech

Time	09:15-10:00, October 23, 2025
Venue	Grand Banquet Hall

Marco Di Renzo

CNRS Research Director, CentraleSupélec, France
Professor of Telecommunications Engineering, King's College London, UK

Bio.: Marco Di Renzo received the Laurea (cum laude) and Ph.D. degrees in electrical engineering from the University of L'Aquila, Italy, in 2003 and 2007, respectively, and the Habilitation à Diriger des Recherches (Doctor of Science) degree from University Paris-Sud (currently Paris-Saclay University), France, in 2013. Currently, he is a CNRS Research Director (Professor) and the Head of the Intelligent Physical Communications group with the Laboratory of Signals and Systems (L2S) at CNRS \& CentraleSupélec, Paris-Saclay University, Paris, France, as well as a Chair Professor in Telecommunications Engineering with the Centre for Telecommunications Research -- Department of Engineering, King's College London, London, United Kingdom. He was a France-Nokia Chair of Excellence in ICT at the University of Oulu (Finland), a Tan Chin Tuan Exchange Fellow in Engineering at Nanyang Technological University (Singapore), a Fulbright Fellow at The City University of New York (USA), a Nokia Foundation Visiting Professor at Aalto University (Finland), and a Royal Academy of Engineering Distinguished Visiting Fellow at Queen's University Belfast (U.K.). He is a Fellow of the IEEE, IET, EURASIP, and AAIA; an Academician of AIIA; an Ordinary Member of the European Academy of Sciences and Arts, an Ordinary Member of the Academia Europaea; an Ambassador of the European Association on Antennas and Propagation; and a Highly Cited Researcher. His recent research awards include the Michel Monpetit Prize conferred by the French Academy of Sciences, the IEEE Communications Society Heinrich Hertz Award, and the IEEE Communications Society Marconi Prize Paper Award in Wireless Communications. He served as the Editor-in-Chief of IEEE Communications Letters from 2019 to 2023. His current main roles within the IEEE Communications Society include serving as a Voting Member of the Fellow Evaluation Standing Committee, as the Chair of the Publications Misconduct Ad Hoc Committee, and as the Director of Journals. Also, he is on the Editorial Board of the Proceedings of the IEEE.

Speech Title: Stacked Intelligent Metasurfaces: Communication, Computing and Sensing in the Wave Domain

Abstract: Next-generation wireless networks are expected to utilize the limited radio frequency resources more efficiently with the aid of intelligent transceivers. In this talk, we propose a recent transceiver architecture that relies on stacked intelligent metasurfaces (SIM). An SIM is constructed by stacking an array of programmable metasurface layers, where each layer consists of a massive number of simple meta-atoms that individually manipulate the electromagnetic waves. We provide an overview of SIM-aided MIMO transceivers, including their novelty, hardware architecture, and potential benefits over state-of-the-art solutions for communication, computing, and sensing applications.

Keynote Speech

Time	10:30-11:15, October 23, 2025
Venue	Grand Banquet Hall

Reinaldo A. Valenzuela

Member National Academy of Engineering
Director, Communication Theory Department, Bell Laboratories

Bio.: Reinaldo A. Valenzuela: Member National Academy of Engineering, Fellow IEEE. IEEE Eric E. Sumner Award. Bell Labs Fellow. WWRF Fellow, 2014 IEEE CTTC Technical Achievement Award, 2015 IEEE VTS Avant Garde Award. B.Sc. U. of Chile, Ph.D. Imperial College. Director, Communication Theory Department, Distinguished Member of Technical Staff, Bell Laboratories. Engaged in propagation measurements and models, MIMO/space time systems achieving high capacities using transmit and receive antenna arrays, HetNets, small cells and next generation air interface techniques and architectures. He has published 247 papers and 44 patents. He has over 35,800 Google Scholar citations and is a 'Highly Cited Author' In Thomson ISI and a Fulbright Senior Specialist.

Speech Title: 6G Wireless: Challenges and Opportunities

Abstract: 6G brings great opportunities for new, engaging, sustainable and value generating mobile networks applications and services. These will be enabled by sustained technology evolution. Starting with “Extreme Connectivity” delivering improved coverage, capacity and coverage at reduced cost per bit. Followed by “AI-Native” designs propelling automation and AI for, and on, the Radio Access Network. Leading to “Beyond Connectivity” fostering value generating and transformative applications taking advantage of new capabilities such as localization and sensing, programmability and an API frame network. I will discuss in further detail essential elements and technology enablers for this near, medium and long term 6G vision as well as 6G challenges and opportunities.

Keynote Speech

Time	09:00-09:45, October 24, 2025
Venue	Grand Banquet Hall 1

Jiangzhou Wang

International Member of the Chinese Academy of Engineering
Fellow of the Royal Academy of Engineering, UK

Bio.: Jiangzhou Wang is a Professor at Southeast University and an Emeritus Professor at the University of Kent. He has published more than 600 papers and five books. His research interest is in mobile communications. He was a recipient of the 2024 IEEE Communications Society Fred W. Ellersick Prize and the 2022 IEEE Communications Society Leonard G. Abraham Prize. He is the General Chair of the 2026 IEEE Global Communications Conference (GLOBECOM2026), Macau. He was the Technical Program Chair of the 2019 IEEE International Conference on Communications (ICC2019), Shanghai, Executive Chair of the IEEE ICC2015, London, and Technical Program Chair of the IEEE WCNC2013. Professor Wang is an International Member of the Chinese Academy of Engineering (CAE), a Fellow of the Royal Academy of Engineering (RAEng), U.K., and Fellow of the IEEE/IET.

Speech Title: Large AI Model for Wireless Communications

Abstract: Intelligent communications has been considered as a promising direction for the next generation wireless communications. However, legacy AI or small AI are facing some difficulties for the application to wireless communications. In this talk, the background and learning of the large AI model will be introduced. The recent research results of the large AI model will be presented for wireless communications applications, including multi-mode semantic communications and UAV-enabled data collection.

Keynote Speech

Time	09:45-10:30, October 24, 2025
Venue	Grand Banquet Hall 1

Abbas Jamalipour

Professor of Ubiquitous Mobile Networking, The University of Sydney
Editor-in-Chief, IEEE Transactions on Vehicular Technology
Past President, IEEE Vehicular Technology Society

Bio.: Abbas Jamalipour is the Chair Professor of Ubiquitous Mobile Networking at The University of Sydney and the Editor-in-Chief, IEEE Transactions on Vehicular Technology. He holds a PhD in Electrical Engineering from Nagoya University, Japan; and is a Fellow of the IEEE, IEICE, Engineers Australia, AIIA, and a Visiting Fellow of the Royal Academy of Engineering. He has authored nine technical books, eleven book chapters, over 650 technical papers, and five patents, all in the field of wireless communications. Dr. Jamalipour was the President (2020-21), Executive Vice-President (2018-19), and has been an elected voting member of the Board of Governors of the IEEE Vehicular Technology Society since 2014. Previously, he served as the Editor-in-Chief IEEE Wireless Communications, Vice President-Conferences, and a member of Board of Governors of the IEEE Communications Society. He is on the editorial board of the IEEE Access, member of the Advisory Board of IEEE Internet of Things Journal, and an editor for several other journals. He is the recipient of several prestigious awards such as the IEEE ComSoc Harold Sobol Award, the IEEE ComSoc Best Tutorial Paper Award, as well as over fifteen Best Paper Awards.

Speech Title: 6G-Enhanced Space-Air-Ground Networks Using Generative AI

Abstract: Space-Air-Ground Integrated Networks (SAGIN) will be a game changer in providing ubiquitous connectivity to all types of digital devices in almost every corner of the world and will be empowered by the new technologies of the 6G wireless communications. Generative Artificial Intelligence (GenAI), on the other hand, will be a potential candidate in assisting the future wireless networks to achieve their goals in a more efficient way. Generative AI is a distinguished subdomain of AI, emphasizing conceptualization and generation of content. Emerges from the aspiration to enable machines to fabricate innovative and unprecedented data that faithfully mirrors the inherent patterns, structures, and nuances encapsulated in the training datasets. Unlike traditional discriminative AI models that focus primarily on analyzing and processing existing data, Generative AI holds significant advantages, including contents generation, flexibility and adaptability, with enhanced simulation and optimization capabilities. This talk outlines the potential of GenAI technology in enhancing the emerging 6G SAGIN scenarios.

Keynote Speech

Time	11:00-11:45, October 24, 2025
Venue	Grand Banquet Hall 1

Wen Tong

CTO, Wireless Network, Huawei Technologies Co., Ltd.
President, Huawei Canada R&D

Bio.: Dr. Wen Tong is the CTO, Huawei Wireless, he is the chief scientist for Huawei 5G/6G. He is a Huawei Fellow and an IEEE Fellow. Prior to joining Huawei in 2009, Dr. Tong was the Nortel Fellow and head of the Network Technology Labs at Nortel. He joined the Wireless Technology Labs at Bell Northern Research in 1995 in Canada. For the past three decades, he had pioneered fundamental technologies from 1G to 6G wireless and WiFi. His current research focus is AI-Wireless. He is a Fellow of Canadian Academy of Engineering, and a Fellow Royal Society of Canada.

Speech Title: On the Capacity-Scaling-Law for Mobile Communications

Abstract: Over the past 4 decades, the spectral efficiency for mobile broadband communication services has increased more than four order of magnitude, in this talk, we present the general capacity scaling law and technology roadmap for the future increase of wireless network capacity. This is important in the emerging AI era. Where wireless connectivity will be fabric for the AI Agent communications.

Workshop

Workshop on Emerging 6G Technologies in Communications and Signal Processing

Session Chair	**Dapeng Wu, Chongqing University of Posts and Telecommunications**
Time	14:00-18:00, October 23, 2025
Venue	Hao Jun Hall

Workshop Speaker

Chongwen Huang

Zhejiang University

Bio.: Huang Chongwen is the Dean of the Department of Information and Communication Engineering at Zhejiang University, a Hundred Talents Program Researcher, a doctoral supervisor, a National Overseas Outstanding Young Scholar, a Zhejiang Province Outstanding Young Scholar, and an IEEE Communications Society Asia-Pacific Distinguished Scholar. His research focuses on key physical layer technologies for next-generation communications, with a particular emphasis on theoretical methods for electromagnetic control in communications, intelligent telepathy, and 6G wireless AI. He has received numerous prestigious awards, including the IEEE Marconi Paper Award, the IEEE Communications Society Leonard Abraham Award, the IEEE Communications Society Fred W. Ellersick Paper Award, the Second Prize of the Ministry of Education Natural Science Award, the National Blooming Cup Gold Award, and the Huawei Technology Cooperation Achievement Transformation Award. He has published over 100 papers in SCI journals, with over 17,000 citations, including five ESI Hot Papers and 12 ESI Highly Cited Papers. He has been selected as a Clarivate Global Highly Cited Researcher, a ScholarGPS Top 0.05% Global Researcher, and an Elsevier Highly Cited Researcher in China. He is responsible for numerous major national projects, including key projects of the National Natural Science Foundation of China, the National Key R&D Program, and the National Mobile Communications Major Project.

Speech Title: A Preliminary Study on the Electromagnetic Information Theory and Performance of Very Large-Scale 3D Arrays

Abstract: The question of whether the fundamental theoretical limits of existing 5G Massive MIMO can be broken has long plagued academia and industry, and remains a key theoretical challenge hindering breakthroughs in 6G communication technology. Starting with holographic 3D HMIMO antenna technology, this report focuses on the design philosophy of a novel 3D HMIMO antenna, as well as key technologies such as hybrid beamforming design and 3D codebook design based on ultra-large-scale MIMO 3D stereo antennas. The fundamental principles and mathematical foundations of the proposed technology are detailed. Finally, combining random Green's function theory with an electromagnetic analysis method, combined with 3D stereo antenna design, preliminary results on the fundamental performance limits of ultra-large-scale 3D stereo antennas are presented, along with a design approach that breaks through the performance limits of existing 2D antennas.

Workshop Speaker

Tiesong Zhao

Fuzhou University

Bio.: Tiesong Zhao (Senior Member, IEEE) received a Bachelor's degree in Electrical Information Engineering from the University of Science and Technology of China in 2006 and a Ph.D degree in Computer Science from the City University of Hong Kong in 2012. He was a Research Associate with the Department of Computer Science at the City University of Hong Kong (2011–2012), a Postdoctoral Fellow with the Department of Electrical and Computer Engineering at the University of Waterloo (2012–2013), and a Research Scientist with the Ubiquitous Multimedia Laboratory at The State University of New York at Buffalo (2014–2015). He is currently a Minjiang Distinguished Professor with the College of Physics and Information Engineering at Fuzhou University, Fuzhou, China, and the Director of the Fujian Key Lab for Intelligent Processing and Wireless Transmission of Media Information. His research interests include visual-haptics analytics, coding, quality assessment, transmission, display, and their applications in embodied AI. He has been serving as an Associate Editor for IEEE Transactions on Image Processing (2024–present), an Associate Editor for ACM Transactions on Multimedia Computing, Communications, and Applications (2025–present), a Senior Area Editor for IEEE Signal Processing Letters (2025–present), and an Editor/Executive Editor for CSIG Communications (2022–present). He has previously served as Associate Editors and Area Chairs for conferences and journals including IEEE SMC, IET Electronics Letters, ACM Multimedia, ACM Multimedia Asia, etc. He has also served as the Technical Program Chair for IEEE MLMC 2025 and the Publicity and Demo Chair for IEEE HAVE 2018.

Speech Title: Research on Machine Haptics: Compression and Interaction

Abstract: Multimedia information, as machine-generated data that humans can intuitively perceive, has long played a crucial role in consumer internet, human-computer interaction, and virtual reality. To achieve immersive and interactive media environments, incorporating multi-sensorial elements such as visual, auditory, and haptic feedback enhances user experience. This talk will discuss several critical issues in haptic signal processing within multi-sensorial media environments, including effective haptic compression, sematic compression and joint semantic-information representation. It also focuses on visual and haptic interaction in embodied intelligence application scenarios by exploring multimodal object recognition and its robustness design under perception and transmission noises. Finally, it will summarize developmental trends and future key research directions in this field.

Workshop Speaker

Zhaolong Ning

Chongqing University of Posts and Telecommunications

Bio.: Dr. Ning received the MS and PhD degrees from Northeastern University, China. From 2013 to 2014, he was a research assist at the Kyushu University, Japan. From 2014 to 2020, he was an assistant and associate professor at the Dalian University of Technology, China. From 2019 to 2021, he was a Hong Kong Scholar at The University of Hong Kong. Currently, he is a full professor with the Chongqing University of Posts and Telecommunications, China. He has published more than 150 scientific papers in international journals and conferences, such as TMC, JSAC, Mobicom, and so on. Two journal papers win the best paper award of IEEE TVT and IEEE Systems Journals, and 6 conference papers win the best paper award. His research interests include Internet of things, vehicular edge computing, and artificial intelligence. He is a Highly Cited Researcher (Clarivate) and a Chinese Highly Cited Researcher (Elsevier) since 2020. He is the associate editor or lead guest editor of more than 10 journals. He is an IET Fellow, an EAI Fellow, and a Senior Member of IEEE.

Speech Title: Task Scheduling and Trajectory Optimization for UAV-Assisted Wireless Powered Edge Networks

Abstract: Although edge computing can improve the computing power of terminal devices, but its limited battery capacity has become a new network bottleneck. Wireless energy transfer and UAV communication technologies have attracted widespread attention, because they can effectively alleviate equipment energy shortages and improve information transmission efficiency. This talk is based on the UAV-assisted wireless charging edge network, focusing on UAV-assisted IoT device task offloading and UAV-assisted IoT device data update. First, in order to study the task uploading and charging time scheduling issues in the UAV-assisted wireless charging edge network, we formulate a joint optimization of equipment scheduling, charging time scheduling, UAV-scheduling and system energy efficiency maximizition problem for UAV trajectory. Second, in order to study the data collection and energy transmission scheduling problems in the UAV-assisted wireless charging edge network, we formulate a joint optimization problem of associated scheduling variables, UAV trajectory, transmission scheduling variables and energy transmission scheduling based on the constraints of UAV service coverage, and decomposes it into two coupled cooperative game sub-problems. Theoretical analysis and experimental results show that our solutions have advantages in terms of information age and convergence speed.

Workshop Speaker

Li Chen

Sun Yat-sen University

Bio.: Li Chen was awarded his PhD by Newcastle University in U.K. in 2008 and is now a Professor of the School of Electronics and Information Engineering, Sun Yat-sen University (SYSU) in China. From Aug. 2017 to Feb. 2020, he was the Deputy Dean of the School of Electronics and Communication Engineering of SYSU. He specializes in channel coding, in particular, algebraic coding theory and techniques. From Jul. 2015 to Jun. 2016, he took sabbatical visiting both Ulm University in Germany and University of Notre Dame in U.S. He has also visited the Institute of Network Coding, the Chinese University of Hong Kong for several occasions. He founded and chairs the IEEE Information Theory Society (ITSoc) Guangzhou Chapter, which was awarded Chapter-of-the-Year by ITSoc in 2021. He was a member of the IEEE ITSoc Board of Governors and chairing the Conference Committee (2022-2024). He was awarded the Information Theory Young Researcher Award by the Chinese Institute Electronics Information Theory Society in 2014. He is an Associate Editor (AE) of the IEEE Transactions on Information Theory, and was an AE of the IEEE Transactions on Communications (2018 – 2023). He has been organizing several international conferences and workshops, including the 2018 IEEE Information Theory Workshop (ITW) in Guangzhou and the 2022 IEEE East Asian School of Information Theory (EASIT) in Shenzhen, for which he was the General Co-chair. He was also the TPC Co-chair of the 2022 IEEE / CIC International Conference on Communications in China (ICCC) in Foshan. He is the General Co-chair of the IEEE International Symposium on Information Theory (ISIT) 2026 in Guangzhou. He likes music and literature.

Speech Title: Algebra Remains a Cradle for Improving Codes

Abstract: The success of modern codes demonstrates the importance of probabilistic decoding which is a tunnel of utilizing soft information for data recovery. It can overshadow the role of conventional algebra such as minimum distance of a code. However, probabilistic decoding is effective when codeword length is large. Short-to-medium length (SML) codes may play an important role for scenarios that demand both high reliability and low latency or even power consumption. For SML codes, algebraic codes and structures are important for gaining error-correction competency. This talk will show grouping algebraic component codes through an algebraic structure enables interplay between their decoding, compensating their naturally small minimum distances. Two cases in recent coding practice will be shown, U-UV codes and GII codes. U-UV codes couple component codes in Plotkin structure. Empowered by soft decoding, they can be useful for 6G networks. GII codes visualize linear combinations of component codes in a nesting codebook paradigm in tackling richer error patterns. They can be useful for scenarios with scarce soft information, such as optical and chip communications.

Invited Talk Session

Session Chair	**Guan Gui, Nanjing University of Posts and Telecommunications**
Time	14:00-18:00, October 24, 2025
Venue	Hao Jun Hall

Invited Speaker

Guangjie Han

IEEE Fellow
Hohai University

Bio.: Guangjie Han is a professor, currently serving as the Dean of the School of Information Science and Engineering at Hohai University. He is an IEEE Fellow, IET/IEE Fellow, and AAIA Fellow. His main research interests include smart oceans, industrial IoT, artificial intelligence, networks, and security. In recent years, he has published more than 350 high-level SCI journal papers, including over 130 papers in the IEEE/ACM Trans. series, in international journals such as IEEE JSAC, IEEE TMC, IEEE TPDS, and IEEE TCC. His publications have been cited over 21600 times on Google Scholar, with an H-index of 79. He has authored three monographs and translated one book. He has led more than 30 provincial and ministerial-level research projects, including national key R&D programs and national natural science foundation key projects. He has been granted 130 national invention patents and 6 PCT international authorized patents. He has received numerous awards, including the second prize of the China Business Federation Science and Technology Award, the third prize of the Jiangsu Provincial Science and Technology Award, the second prize of the Liaoning Provincial Science and Technology Progress Award, and the Best Paper Award of the IEEE Systems Journal in 2020. For seven consecutive years (2019-2025), he has been listed as one of the top 2% of scientists globally, as well as for the Chinese Highly Cited Researchers list for five consecutive years (2020-2024). Currently, he serves as an associate editor for more than ten international journals, including IEEE TII, IEEE TCCN, IEEE TVT and IEEE Systems. He has been awarded the "333 High-level Talents in Jiangsu Province" (second level), the "Outstanding Contribution Young and Middle-aged Experts in Jiangsu Province," the "Minjiang Scholar Lecture Professor," and the "May 1st Labor Medal" of Changzhou City.

Speech Title: Multi-Dimensional Dynamic Trust Management Mechanism in Underwater Acoustic Sensor Networks

Abstract: The underwater acoustic sensor network (UASN) is a pivotal component in realizing the concept of a "smart ocean." However, its potential remains underutilized in complex aquatic environments. The primary challenge lies in the absence of effective methods to ensure UASN security and reliable data transmission. This report presents our team's research on the trust management mechanisms for UASNs. Our main research areas include: 1) an intrusion detection algorithm based on energy prediction model; 2) a multi-dimensional trust calculation algorithm grounded in fuzzy theory; 3) a trust evaluation algorithm utilizing cloud theory; and 4) a trust prediction algorithm driven by machine learning. These research outcomes hold significant theoretical and practical implications for advancing the security technologies and applications of UASNs.

Invited Speaker

Xin Luo

IEEE Fellow
Southwest University

Bio.: Xin Luo (Fellow, IEEE) received the B.S. degree in computer science from the University of Electronic Science and Technology of China, Chengdu, China, in 2005, and the Ph.D. degree in computer science from the Beihang University, Beijing, China, in 2011. He is currently a Distinguished Professor of Data Science and Computational Intelligence, and serving as the Dean of the College of Computer and Information Science, and School of Software, Southwest University, Chongqing, China. He has authored or coauthored over 400 papers (including over 180 IEEE Transactions/Journal papers) in the areas of Artificial Intelligence and Data Science, receiving 19,000+ Google Scholar citations with the H-Index of 82. Dr. Luo was the recipient of the Outstanding Associate Editor Award from IEEE Access in 2018, IEEE/CAA Journal of Automatica Sinica in 2020, and from IEEE Transactions on Neural Networks and Learning Systems in 2022-2024. He is currently serving as an Associate Editor for IEEE Transactions on Neural Networks and Learning Systems, and IEEE/CAA Journal of Automatica Sinica. His Google Scholar page is given at the link:
https://scholar.google.com/citations?user=hyGIDs4AAAAJ&hl=zh-CN.

Speech Title: Latent Factorization of Nonstandard Tensors

Abstract: Complex and temporal interactions among numerous nodes are frequently encountered in large-scale big data-related applications such as the recommender systems, social network service systems,
and cryptocurrency network transaction systems. Such interactions data can be quantized into a step-N (N≥3) tensor whose most entries are unknown, i.e., a nonstandard tensor. Despite its highly incompleteness, such a nonstandard tensor contains rich information regarding various desired patterns like the unknown interactions or undetected communities. To discover such patterns, this talk presents the latent factorization of tensors (LFT) models. An LFT model addresses the known data of the target nonstandard tensor in a data density-oriented way and establish highly efficient optimization algorithms for extracting desired latent features from it, thus implementing its representation learning accurately and efficiently. An LFT model has the great potential for industrial usage owing to its high efficiency in both computation and storage.

Invited Speaker

Jiajia Liu

IEEE Fellow
Northwestern Polytechnical University

Bio.: Jiajia Liu is a full professor (Vice Dean) with the School of Cybersecurity, Northwestern Polytechnical University. He is the director of Shaanxi Provincial Engineering Laboratory of Cyber Security since 2021, and the director of Xi'an Unmanned System Security and Intelligent Communications ISTC Center since 2020. He was a full Professor at the School of Cyber Engineering, Xidian University, from 2013 to 2018. His research interests cover a wide range of areas including mobile and edge computing, intelligent and connected vehicles, and space-air-ground integrated networks. He published more than 300 peer-reviewed papers including prestigious IEEE journals and conferences. He received IEEE ComSoc Best YP (Young Professional) Award in Academia in 2020, IEEE VTS Early Career Award in 2019, and the Best Paper Awards from international conferences including IEEE flagship events, such as IEEE ICC in 2023, IEEE GLOBECOM in 2019, 2022 and 2024. He is a Distinguished Lecturer of IEEE Communications Society, and a Distinguished Speaker of IEEE Vehicular Technology Society. He is a Fellow of IEEE.

Speech Title: Cloud-Native 6G: A Multi-Domain Perspective

Abstract: 6G networks are envisioned to provide ubiquitous connectivity, pervasive intelligence, and sustainable operation. Realizing this vision requires not only advanced transmission techniques but also architectural innovations capable of handling unprecedented heterogeneity and dynamics. The cloud-native paradigm, emphasizing modularity, elasticity, and automation, offers a solid foundation to reimagine the design and operation of future networks. In view of this, this talk introduces a multi-domain perspective on cloud-native 6G. Besides outlining the architecture and fundamental characteristics, we present some recent efforts towards microservice resource orchestration, network slicing supervision, as well as tradeoff balancing between service provisioning and security.

Invited Speaker

Liang Xiao

IEEE Fellow
Xiamen University

Bio.: Liang Xiao is IEEE Fellow and a Professor in the Department of Informatics and Communication Engineering, Xiamen University. She has served in several editorial roles, including an associate editor of IEEE Transactions on Information Forensics & Security, IEEE Transactions on Communication, IEEE Transactions on Wireless Communication and IEEE Transactions on Dependable and Secure Computing, and Guest Editor of IEEE Journal on Selected Topics in Signal Processing. Her research interests include wireless security, privacy protection, and wireless communications. She published three books and three book chapters. She won 2024 IEEE ComSoc Asia-Pacific Outstanding Paper Award, as well as the best paper award for 2017 IEEE ICC, 2018 IEEE ICCS and 2016 IEEE INFOCOM Bigsecurity WS. She was 2022-2023 IEEE ComSoc Distinguished Lecturer.

Speech Title: V2X-enabled Collaborative Perception for Connected Autonomous Vehicle Against Data Fabrication Attacks

Abstract: In vehicle-to-everything communications (V2X)-enabled collaborative perception, connected autonomous vehicles (CAVs) share sensing data such as point clouds and images to enhance perception accuracy and range, which has performance degradation against data fabrication attacks. In this report, we discuss reinforcement learning-based collaborative perception scheme that chooses collaborative CAVs to enhance the utility as the weighted sum of perception accuracy, speed, and the minimum latency requirement. The spatial consistency check is presented to reduce perception errors such as the false positive rate of object locations. The upper performance bound of perception accuracy and speed is provided based on the Nash equilibrium of the game between CAVs and the attacker, revealing the impact of perturbation intensity, data size and point cloud resolution on the perception performance.

Invited Speaker

Yong Zeng

IEEE Fellow
Southeast University and Purple Mountain Laboratory

Bio.: Yong Zeng, IEEE Fellow, Young Chief Professor of Southeast University and Purple Mountain Laboratory, Nanjing, China. He received the Bachelor of Engineering (First-Class Honours) and Ph.D. degrees from Nanyang Technological University (NTU), Singapore. From 2013 to 2018, he was a Research Fellow and Senior Research Fellow at the National University of Singapore (NUS). From 2018 to 2019, he was a Lecturer at the University of Sydney, Australia.

Prof. Zeng was listed as Clarivate Analytics Highly Cited Researcher for 6 consecutive years (2019-2024), AI2000 Most Influential Scholars in the field of Internet of Things for 4 consecutive years (2021-2024), Stanford "Top 2% of Scientists in the World - Lifetime Influence". Prof. Zeng is the recipient of Australia Research Council (ARC) Discovery Early Career Researcher Award (DECRA), IEEE Communications Society Asia-Pacific Outstanding Young Researcher Award, and won 10 international and domestic best paper awards including IEEE Marconi Award (2020 and 2024), Heinrich Hertz Award (2017 and 2020), etc. Prof. Zeng proposed the concept of channel knowledge map (CKM), and his works have been cited by more than 33,000 times. He serves on the editorial board of SCI journals such as IEEE Transactions on Communications, IEEE Transactions on Mobile Computing, and IEEE Communications Letters, and leading guest editor of journals including IEEE ComMag, Wireless ComMag, China Communications, and Science China Information Sciences. Prof. Zeng was elevated to IEEE Fellow “for contributions to unmanned aerial vehicle communications and wireless power transfer”.

Speech Title: Generative AI based Channel Knowledge Map for Environment-Aware ISAC

Abstract: Existing wireless communication and sensing systems are mainly based on the traditional “environment-unaware” paradigm, which fails to fully exploit the prior information of the local wireless environment, resulting in inefficient environment sensing and channel acquisition. This makes it difficult to meet the future needs with the developing trends such as larger channel dimensions, higher node densities, and more cost-effective hardware. On the other hand, the recently proposed concept of channel knowledge map (CKM) aims to build channel knowledge foundations that learn the intrinsic characteristics of the local wireless environment by fusing massive historical data of all terminals in the area, thereby enables the direct acquisition of environmental priors in advance based on (virtual) terminal location information. This enables the paradigm shift from the traditional environment-unaware to the future environment-aware communication and sensing, offering new ideas for efficient environment sensing and channel acquisition. This talk will introduce the latest research progress in the construction and application of CKM. By discussing the basic principles of CKM, typical cases of communication and sensing based on CKM, the theories and methods of CKM construction based on generative AI, as well as preliminary experimental verification, we will try to answer the five fundamental questions about CKM (2W+3H): What is CKM, why needs CKM, how to build and utilize CKM, and how to build prototypes?

Oral Sessions

Session 1: Edge Intelligence for Space-Air-Ground Integrated Networks Symposium-I

Session Chair	Yaoxin Duan, Chongqing University of Posts and Telecommunications		
Time	14:00-15:30, October 23, 2025	Venue	Hao Yi Hall

14:00-14:15 | Paper ID: 1571186436

Title: Task Offloading in UAV-Enabled MEC Against Smart Jammers Relying on Evolutionary Game Theory

Author(s): Jingjing Wang, Xinyu Wang, Jianrui Chen and Xin Zhang (Beihang University, China); Xiangwang Hou (Tsinghua University, Beijing, China); Jiacheng Wang (Nanyang Technological University, Singapore); Geng Sun (Jilin University, China); Chunxiao Jiang (Tsinghua University, Beijing, China)

14:15-14:30 | Paper ID: 1571173342

Title: Dynamic Resource Allocation for Beam Hopping Satellite Communications: a Novel Deep Reinforcement Learning Based Method

Author(s): Lingfeng Zhang (Beihang University, China); Qin Du and Pengfei Yi (China Mobile Research Institute, China); Zipeng Yang, Haobin Mao and Zhenyu Xiao (Beihang University, China)

14:30-14:45 | Paper ID: 1571190890

Title: Collaborative LLM Inference over LEO Satellite Networks: Model Splitting and Pipeline Parallelism

Author(s): Songge Zhang (Peking University, China); Wen Wu (Peng Cheng Laboratory, China); Shaohua Wu (Harbin Institute of Technology, China); Weijie Yuan (Southern University of Science and Technology, China); Lingyang Song (Peking University, China); Xuemin Sherman Shen (University of Waterloo, Canada)

14:45-15:00 | Paper ID: 1571191903

Title: Adaptive Resource Provisioning in Satellite Networks via VAE-Assisted Contextual Bandit Learning

Author(s): Mingcheng He, Yingying Pei, Shisheng Hu, Zhixuan Tang, Weihua Zhuang and Xuemin Sherman Shen (University of Waterloo, Canada)

15:00-15:15 | Paper ID: 1571180422

Title: Accelerating Model-Heterogeneous Wireless Federated Learning via Adaptive Client Sampling

Author(s): Boyu Li (Beijing University of Posts and Telecommunications, China); Jiaxiang Geng (Duke Kunshan University & Beijing University of Posts and Telecommunications, China); Xinchen Lyu, Xiaoqi Qin, Qimei Cui and Yanzhao Hou (Beijing University of Posts and Telecommunications, China)

15:15-15:30 | Paper ID: 1571174128

Title: Prompt Decision Transformer-enabled Resource Allocation for Integrate Terrestrial-Satellite Networks

Author(s): Leran Ying, Changxu Ni and Ting Ma (Nanjing University of Science and Technology, China); Yiyang Ni (Jiangsu Second Normal University, China); Jun Li (Southeast University, China)

Oral Sessions

Session 2: Artificial Intelligence-Native Radio Access Networks (AI-RAN) Symposium-I

Session Chair	Qin Wang, Nanjing University of Posts and Telecommunications		
Time	14:00-15:30, October 23, 2025	Venue	Hao Xin Hall

14:00-14:15 | Paper ID: 1571181102

Title: A WiPD-DL Network for In-Vehicle Secure Channel Detection

Author(s): Zhen Chen (Jinan University, China); Hancheng Guo (South China University of Technology, China); Jing Wen (Guangdong Climate Center, China); Xiu Yin Zhang (South China University of Technology, China)

14:15-14:30 | Paper ID: 1571190519

Title: QoE-Aware Service Provision for Mobile AR Rendering: An Agent-Driven Approach

Author(s): Conghao Zhou, Lulu Sun and Xiucheng Wang (Xidian University, China); Peng Yang (Huazhong University of Science and Technology, China); Feng Lyu (Central South University, China); Sihan Lu (State Power Investment Corporation Limited, China); Xuemin Sherman Shen (University of Waterloo, Canada)

14:30-14:45 | Paper ID: 1571190918

Title: SPSTS-Pos: AI-Driven Indoor Positioning with Strongest-Path Space-Time Structural Features in O-RAN System

Author(s): Anpei Li and Luhan Wang (Beijing University of Posts and Telecommunications, China); Na Li (Baicells Technologies Co. Ltd., China); Minchi Ruan (Beijing University of Posts and Telecommunications, China); Xiaonan Wang (Independent Researcher, China); Zhaoming Lu (BUPT, China); Raymond Knopp (Institut Eurecom, France)

14:45-15:00 | Paper ID: 1571189144

Title: PuriFi: CSI Purify Using Augmented Lagrange Multiplier Method for Human Activity Recognition

Author(s): Zhepeng Liu, An Chen, Wenchao Xia, Qin Wang, Haitao Zhao and Hongbo Zhu (Nanjing University of Posts and Telecommunications, China)

15:00-15:15 | Paper ID: 1571190134

Title: Role-Differentiated Coordination for UAV Swarms Under Jamming and Wind Dynamics

Author(s): Zhifeng Hou, Jin Chen and Guoxin Li (Army Engineering University of PLA, China); Yuzhen Huang (Academy of Military Sciences of PLA, China); Haichao Wang and Runfeng Chen (Army Engineering University of PLA, China)

15:15-15:30 | Paper ID: 1571190716

Title: Task Offloading and Resource Allocation for AoI and Delay Optimization in UAV-Enabled MEC Networks

Author(s): Haocheng Wang, Chenxi Liu, Xiaoling Hu and Mugen Peng (Beijing University of Posts and Telecommunications, China)

Oral Sessions

Session 3: AI for Communications and Networking Symposium-I

Session Chair	Haotong Cao, Nanjing University of Posts and Telecommunications		
Time	14:00-15:30, October 23, 2025	Venue	Hao Jing Hall

14:00-14:15 | Paper ID: 1571190783

Title: Securing AGIN Beyond Static RIS: Harnessing UAV 3D Rotational Agility via Lagrange-DRL Optimization

Author(s): Zhi Lin (National University of Defense Technology, China); Haijun Zhang (University of Science and Technology Beijing, China); Zimo Feng (National University of Defense Technology, China); Chenjing Tian (Army Engineering University of PLA, China); Ruiqian Ma and Kang An (National University of Defense Technology, China); Yuanzhi He (32008 Troops of PLA, China)

14:15-14:30 | Paper ID: 1571174631

Title: Heterogeneous Multi-Agent Collaboration in UAV-Assisted Mobile Crowdsensing Networks

Author(s): Xianyang Deng (Nanjing University of Posts and Telecommunications, China); Wenshuai Liu (Jiangnan University, China); Yaru Fu (Hong Kong Metropolitan University, China); Qi Zhu (Nanjing University of Posts and Telecommunications, China)

14:30-14:45 | Paper ID: 1571185654

Title: A Fluid Antenna Enabled Physical Layer Key Generation for Next-G Wireless Networks

Author(s): Jiacheng Guo and Ning Gao (Southeast University, China); Yiping Zuo (Nanjing University of Posts and Telecommunications, China); Hao Xu and Shi Jin (Southeast University, China); Kai Kit Wong (University College London, United Kingdom (Great Britain))

14:45-15:00 | Paper ID: 1571177998

Title: Reinforcement Learning-Empowered Methods in Virtual Network Embedding: A Survey

Author(s): Yingqi Jiao and Haotong Cao (Nanjing University of Posts and Telecommunication, China)

15:00-15:15 | Paper ID: 1571183975

Title: Deep Unfolding Assisted Joint Downlink and Uplink Waveform Design for ISAC

Author(s): Xuefei Wang, Jifa Zhang and Nan Zhao (Dalian University of Technology, China)

15:15-15:30 | Paper ID: 1571186626

Title: Decentralized Multi-Agent Deep Reinforcement Learning Based Rate Selection of NOMA Assisted XP-HARQ

Author(s): Jintao Wang, Da Wu and Zheng Shi (Jinan University, China); Yaru Fu (Hong Kong Metropolitan University, China); Guanghua Yang (Jinan University, China); Shaodan Ma (University of Macau, China)

Oral Sessions

Session 4: Convergence of Sensing, Communication, and Computing Symposium-I

Session Chair	Haiyang Zhang, Nanjing University of Posts and Telecommunications		
Time	14:00-15:30, October 23, 2025	Venue	Jun Can Hall

14:00-14:15 | Paper ID: 1571180408

Title: Sparsity-Aware Beamforming Design for near-Field Integrated Imaging and Communications Systems

Author(s): Xuewei Wang and Haiyang Zhang (Nanjing University of Posts and Telecommunications, China); Qianyu Yang (East China Jiaotong University, China); Baoyun Wang (Nanjing University of Posts and Telecommunications, China)

14:15-14:30 | Paper ID: 1571192852

Title: Power Minimization for Secure RIS-Assisted Integrated Sensing and Communication Systems

Author(s): Dinghang Zhang (Nanjing University of Posts and Telecommunications, China); Jiming Yao (China Electric Power Research Institute, China); Weijun Zheng (State Grid Jiaxing Power Supply Company, China); Yunfei Guo (China Electric Power Research Institute, China); Jinlin Yang (Kyland Technology Company Limited, China); Lei Wang (Nanjing University of Posts and Telecommunications, China)

14:30-14:45 | Paper ID: 1571179765

Title: A Novel Text-Image Alignment Framework for XrayGPT to Enhance Chest Radiography Report Generation

Author(s): Xudong Zheng (Nanjing University of Posts and Telecommunications, China & College of Telecommunications and Information Engineering, China); Qihan Zhang and Haiyang Zhang (Nanjing University of Posts and Telecommunications, China); Baoyun Wang (Nanjing University of Posts and Telecommunications, China)

14:45-15:00 | Paper ID: 1571186097

Title: Quarterly Search-Based Full-Dimensional Beam Training for Extremely Large-Scale Arrays

Author(s): Shuo Jin and Wei Huang (Hefei University of Technology, China); Baofeng Ji (Henan University of Science and Technology, China); Yi Wang (Zhengzhou University of Aeronautics, China); Caihong Kai (Hefei University of Technology, China)

15:00-15:15 | Paper ID: 1571173326

Title: A WiFi-Based Human Occupation Detection Algorithm in Interference Environment

Author(s): Shiyin Zhu, Xinmin Liu and Lei Kong (New H3C Technologies Co. Limited, China); Jian Yang (University of Science and Technology of China, China); Zhaoyang Zhang (Zhejiang University, China); Zhiyuan Zhu (New H4C Technologies Co. Limited, China)

15:15-15:30 | Paper ID: 1571173772

Title: Analysis of Signal Overshadowing Security Performance for LTE/5G Communication Systems

Author(s): Shan Wang (National University of Defense Technology, China & University of Montreal, Canada); JingYu Tang, PeiHao Song, Quan Peng, Shi Hu and Jingni Chen (National University of Defense Technology, China)

Oral Sessions

Session 5: Wireless Networking, Services, and Security Symposium-I

Session Chair	**Wenxue Sun, Nanjing University of Posts and Telecommunications**		
Time	14:00-15:30, October 23, 2025	**Venue**	VIP.Meeting Room

14:00-14:15 | Paper ID: 1571167815

Title: Joint UAV Trajectory and Task Scheduling for Wireless Edge Networks: A Hybrid-Action Multi-Agent Reinforcement Learning Approach

Author(s): Wenxue Sun, Haitao Zhao, Miao Liu, Dapeng Li, Guang Liang Pan and Hongbo Zhu (Nanjing University of Posts and Telecommunications, China)

14:15-14:30 | Paper ID: 1571176955

Title: Adaptive Communication Control for Efficient Hierarchical Federated Learning in Heterogeneous Edge Networks

Author(s): Lang Fan, Xiaoning Zhang, Mingjun Duan and Jiayi Jiang (University of Electronic Science and Technology of China, China)

14:30-14:45 | Paper ID: 1571185879

Title: A Hierarchical Privacy-Preserving Scheme with Federated Learning for Medical Applications

Author(s): Fan Jiang, Li Zhang, Lei Liu and Yongzhi Zhai (Xi'an University of Posts and Telecommunications, China)

14:45-15:00 | Paper ID: 1571185303

Title: A Multi-UAV-Enabled CCICI Joint Optimization Framework for Digital Twin Channel Modeling

Author(s): Taiming Zhang, Hai-tao Zhao, Guijin Tang, Miao Liu, Jie Yang, Guang Liang Pan and Hongbo Zhu (Nanjing University of Posts and Telecommunications, China)

15:00-15:15 | Paper ID: 1571185965

Title: Efficient Micro-Segmentation Generation for Wireless Network Zero-Trust Security: A Graph Diffusion-Based Approach

Author(s): Yinqiu Liu, Guangyuan Liu and Tianwen Zhu (Nanyang Technological University, Singapore); Jingjing Wang (Beihang University, China); Qiuming Zhu (Nanjing University of Aeronautics and Astronautics, China & XYZ Company, China); Hongyang Du (The University of Hong Kong, Hong Kong); Dusit Niyato (Nanyang Technological University, Singapore)

15:15-15:30 | Paper ID: 1571174672

Title: Coverage Analysis of Heterogeneous Networks Combining Sub-6 GHz and U6G Bands

Author(s): Mingzhe Chen, Jiachen Tian, Yu Han and Shi Jin (Southeast University, China)

Oral Sessions

Session 6: Low Altitude Economy Communication and Networking Symposium-I

Session Chair	Yihang Huang, Chongqing University of Posts and Telecommunications		
Time	16:00-17:30, October 23, 2025	Venue	Hao Yi Hall

16:00-16:15 | Paper ID: 1571174552

Title: Swin Transformer Based Massive MIMO Channel Feedback and Hybrid Beamforming

Author(s): Ninghao Jia, Boqian Lin, Minghui Wu and Ziqi Han (Beijing Institute of Technology, China); De Mi (Birmingham City University, United Kingdom (Great Britain)); Zhen Gao (Beijing Institute of Technology, China)

16:15-16:30 | Paper ID: 1571178580

Title: Joint Task Offloading and Trajectory Optimization for UAV-assisted MEC: A Boundary-Supported Actor-Critic Deep Reinforcement Learning Approach

Author(s): Chan Lei, Jiao Zhang, HaiTao, Haitao Zhao and Li Zhou (National University of Defense Technology, China)

16:30-16:45 | Paper ID: 1571185177

Title: Bayesian-Driven Graph Reasoning for Active Radio Map Construction

Author(s): Wenlihan Lu and Shijian Gao (The Hong Kong University of Science and Technology (Guangzhou), China); Miaowen Wen (South China University of Technology, China); Yuxuan Liang and Liuqing Yang (Hong Kong University of Science and Technology (Guangzhou), China); Chan-Byoung Chae (Yonsei University, Korea (South)); H. Vincent Poor (Princeton University, USA)

16:45-17:00 | Paper ID: 1571190818

Title: Generative Multi-Objective Optimization for Space-Low-Altitude Cognitive Radio Networks

Author(s): Jiahui Li and Geng Sun (Jilin University, China); Jiacheng Wang (Nanyang Technological University, Singapore); Weijie Yuan (Southern University of Science and Technology, China); Ruichen Zhang (Nanyang Technological University, Singapore); Xiangwang Hou (Tsinghua University, China); Nan Ma (Beijing University of Posts and Telecommunications, China)

17:00-17:15 | Paper ID: 1571190594

Title: Reconfigurable Intelligent Surface-Assisted Multiuser Tracking and Signal Detection in ISAC

Author(s): Weifeng Zhu, Junyuan Gao, Shuowen Zhang and Liang Liu (The Hong Kong Polytechnic University, Hong Kong)

17:15-17:30 | Paper ID: 1571191050

Title: OTFS-Based Precoding for Interference Mitigation in LEO-GEO Coexisting Satellite Systems

Author(s): Lei Cao, Changhao Liu, Wenpeng Jing, Zhaoming Lu and Yingying Liu (Beijing University of Posts and Telecommunications, China)

Oral Sessions

Session 7: Multimedia Processing and Communication Symposium

Session Chair	Kan He, Nanjing University of Posts and Telecommunications		
Time	16:00-17:30, October 23, 2025	Venue	Hao Xin Hall

16:00-16:15 | Paper ID: 1571185237

Title: Toward Robust and Accurate Automatic Modulation Recognition in Low SNR Conditions via Multimodal Deep Fusion

Author(s): Lan Guo, Dan Wu, Xinrong Guan, Weiwei Yang, Xiaoqin Yang and Bin Li (Army Engineering University of PLA, China)

16:15-16:30 | Paper ID: 1571186317

Title: Large Language Model for Heterogeneous Resource Allocation in Multi Modal Communications

Author(s): Kan He (Nanjing University of Posts and Telecommunications, China); Zheng Yu (People's Liberation Army, China); Yaqian Cao and Lindong Zhao (Nanjing University of Posts and Telecommunications, China)

16:30-16:45 | Paper ID: 1571185697

Title: A Research on Over-Exposed Image Restoration Based on the Dichromatic Reflectioin Model and U-Net

Author(s): Yingqi Li, Yang Chen, Zhi Ji, Wendong Yang, Xue Ni and Jiayu Liang (Army Engineering University of PLA, China)

16:45-17:00 | Paper ID: 1571190747

Title: Multimodal Foreground Detection for GUI Video via Motion and Component Integration

Author(s): Wenhui Hu, Jingtao Lv, Xiaowei Qin and Xiaodong Xu (University of Science and Technology of China, China)

17:00-17:15 | Paper ID: 1571185373

Title: Implementation of Lunar Surface Video Transmission System with RaptorQ Codes over the USRP Platform

Author(s): Yuanjian Lin, Shushi Gu, Yaonan Wu and Yixin Ke (Harbin Institute of Technology, China); Zhikai Zhang (Pengcheng Laboratory, China); Qinyu Zhang (Shenzhen Graduate School, Harbin Institute of Technology, China)

17:15-17:30 | Paper ID: 1571186324

Title: Device Selection for Large-Scale Multimedia Crowdsensing: A Graph Neural Approach

Author(s): Mingzhe Chen and Lindong Zhao (Nanjing University of Posts and Telecommunications, China)

Oral Sessions

Session 8: Internet of Things Symposium-I

Session Chair	Bintao Hu, Xi'an Jiaotong-Liverpool University		
Time	16:00-17:30, October 23, 2025	Venue	Hao Jing Hall

16:00-16:15 | Paper ID: 1571174125

Title: ISAC Powered Hybrid Path Planning for AGVs in Industrial IoT Systems

Author(s): Ling Lyu, Xinglin Li and Yanpeng Dai (Dalian Maritime University, China); Nan Cheng (Xidian University, China); Cailian Chen and Xinping Guan (Shanghai Jiao Tong University, China)

16:15-16:30 | Paper ID: 1571183754

Title: Dual RISs-Assisted Secure Communication Against Simultaneous Jamming and Eavesdropping Attacks for IoT Networks

Author(s): Suxian Sun (Nanjing University of Information Science and Technology, China); Yifu Sun, Kang An and Zhi Lin (National University of Defense Technology, China); Chen Zhao (School of Electronic and Information Engineering, China); Ruoqi Sun (NanJing University of Information Science and Technology, China)

16:30-16:45 | Paper ID: 1571173663

Title: Power Minimization for Multi-Waveguide-Driven NOMA-Assisted Uplink Pinching Antenna Systems

Author(s): Yaru Fu and Fuchao He (Hong Kong Metropolitan University, Hong Kong); Hong Wang (Nanjing University of Posts and Telecommunications, China); Zheng Shi (Jinan University, China)

16:45-17:00 | Paper ID: 1571183735

Title: Multi-RISs Aided IoT Anti-Jamming Communications With Switching Selection

Author(s): Yucong Cao and Yifu Sun (National University of Defense Technology, Nanjing, China); Zhi Lin (National University of Defense Technology, Hefei, China); Yonggang Zhu, Kang An and Yuhong Ma (National University of Defense Technology, Nanjing, China); Kai Bin (Nanjing University of Information Science and Technology, Nanjing, China)

17:00-17:15 | Paper ID: 1571184377

Title: Misalignment Tolerance Strategies in Wireless Power Transfer: A Systematic Review

Author(s): Weijun Hong, Jingchen Wang, Eng Gee Lim and Mark Leach (Xi'an Jiaotong-Liverpool University, China); Zhao Wang (Xi'an Jiaotong Liverpool University & University of Liverpool, China); Kaizhe Xu and Rui Pei (Xi'an Jiaotong-Liverpool University, China); Zhenzhen Jiang and Wenzhang Zhang (Xi'an Jiaotong-Liverpool University, China & University of Liverpool, United Kingdom (Great Britain)); Yi Huang (University of Liverpool, United Kingdom (Great Britain))

17:15-17:30 | Paper ID: 1571186711

Title: RSMA-Based Coexistence of near-Field and Far-Field Communications with Dynamic Metasurface Antennas

Author(s): Yan Shen (Nanjing University of Posts and Telecommunications, Nanjing, China); Haibo Dai (Southeast University, Nanjing, China); Chunguo Li (Nanjing University of Posts and Telecommunications, Nanjing, China); Haiyang Zhang, Xing Zhang and Baoyun Wang (Nanjing University of Posts and Telecommunications, China)

Oral Sessions

Session 9: Semantic Communication and Network Intelligence Symposium-I

Session Chair	Wei Wu, Nanjing University of Posts and Telecommunications		
Time	16:00-17:30, October 23, 2025	Venue	Jun Can Hall

16:00-16:15 | Paper ID: 1571190382

Title: Efficient Video Semantic Transmission Needs Generative Latent Priors

Author(s): Sixian Wang (Shanghai Jiao Tong University, China); Jincheng Dai (Beijing University of Posts and Telecommunications, China); Haotong Cao (The Hong Kong Polytechnic University, Hong Kong); Guo Lu (Shanghai Jiao Tong University, China); Kai Niu and Wenjun Xu (Beijing University of Posts and Telecommunications, China); Wenjun Zhang (Shanghai Jiao Tong University, China); Ping Zhang (WTI-BUPT, China)

16:15-16:30 | Paper ID: 1571179199

Title: A Four-Element High-Gain Antenna for Low Earth Orbit Satellite Applications

Author(s): Benxuan Tang, Chen Ye and Laiding Zhao (Nanjing University of Posts and Telecommunication, China)

16:30-16:45 | Paper ID: 1571190659

Title: Class-Wise Dual-Head Deviation Networks for Open-Set Specific Emitter Identification

Author(s): Bowen Zhang, Rui Ding, Ming Xu, ChengDa She and Qihui Wu (Nanjing University of Aeronautics and Astronautics, China)

16:45-17:00 | Paper ID: 1571190652

Title: Global-to-local Motion Estimation-based Neural Compression for Drone-view Videos

Author(s): Xi Deng, Jiahuan Ji and Yuben Qu (Nanjing University of Aeronautics and Astronautics, China); Nan Pu (Hefei University of Technology, China); Chao Dong, Qihui Wu and Kai-Kuang Ma (Nanjing University of Aeronautics and Astronautics, China)

17:00-17:15 | Paper ID: 1571174850

Title: LLM4XCE: Large Language Models for Extremely Large-Scale Massive MIMO Channel Estimation

Author(s): Renbin Li, Shuangshuang Li and Peihao Dong (Nanjing University of Aeronautics and Astronautics, China)

17:15-17:30 | Paper ID: 1571180851

Title: A Knowledge Graph Enhanced Method for Semantic Noise Resistance

Author(s): Tianle Yao and Wei Wu (Nanjing University of Posts and Telecommunications, China); Fuhui Zhou (Nanjing University of Aeronautics and Astronautics, China); Feng Tian and Bao-Yun Wang (Nanjing University of Posts and Telecommunications, China); Qihui Wu (PLA Unicersity of Science and Technology, China)

Oral Sessions

Session 10: Signal Processing for Communications Symposium-I

Session Chair	Qin Wang, Nanjing University of Posts and Telecommunications		
Time	16:00-17:30, October 23, 2025	Venue	VIP.Meeting Room

16:00-16:15 | Paper ID: 1571185159

Title: Bistatic mmWave Radar Tracking via Probabilistic Data Association and Information Fusion

Author(s): Gengzhen Su (Tsinghua Shenzhen International Graduate School, China); Hao Ma (Tsinghua University, China); Tingting Zhang (Harbin Institute of Technology, Shenzhen, China); Zhenyu Liu (Tsinghua Shenzhen International Graduate School, China)

16:15-16:30 | Paper ID: 1571185704

Title: Antenna Pattern Embedded Joint Trajectory and Power Allocation in Secure UAV Communication

Author(s): Zeyu Wang, Hai-tao Zhao, Bensheng Yang, Xu Bo and Hongbo Zhu (Nanjing University of Posts and Telecommunications, China)

16:30-16:45 | Paper ID: 1571174493

Title: Codebook Design and Hybrid Beamforming for Modular Array Based Near-Field Multi-User Communication

Author(s): Xinhao Liu, Wei Liu, Jinkun Zhu and Huizhu Han (National University of Defense Technology, China)

16:45-17:00 | Paper ID: 1571192035

Title: EMDMNet: A Single-Channel Blind Source Separation Network Suitable for Complex Electromagnetic Environments

Author(s): Ziyan Yan, Danyang Wang, Nan Cheng, Zan Li, Yuteng Liu and Long Cao (Xidian University, China)

17:00-17:15 | Paper ID: 1571183742

Title: Reliability and Security Analysis for Wireless-Powered ARIS Communications

Author(s): Siyu Xu (National University of Defense Technology, China); Kunrui Cao (National University of Defense Technology & Air Force Engineering University, China); Lu Lv (Xidian University, China); Yutao Zhou and Fucheng Zhao (National University of Defense Technology, China); Xingwang Li (Henan Polytechnic University, China)

17:15-17:30 | Paper ID: 1571174336

Title: An Automatic Modulation Classification Algorithm Based on Adaptive Visibility Graph and GNN Incorporating GRU

Author(s): Lingzhao Zhang, Haitao Zhao, Qin Wang, You Wu, Haibo Dai and Hongbo Zhu (Nanjing University of Posts and Telecommunications, China)

Oral Sessions

Session 11: AI for Communications and Networking Symposium-II

Session Chair	Jintao Wang, Jinan University		
Time	14:00-15:30, October 24, 2025	Venue	Hao Yi Hall

14:00-14:15 | Paper ID: 1571186750

Title: Joint Mode Selection and Resource Allocation for D2D Communication Systems with Graph Neural Networks

Author(s): Jun Xiong, Jingjing Tan, Xiaoran Liu, Haitao Zhao and Jibo Wei (National University of Defense Technology, China)

14:15-14:30 | Paper ID: 1571189142

Title: Optimization of RIS-Aided Wireless Communication Systems Using Proximal Policy Optimization Algorithm

Author(s): Bowen Zheng, Hong Wang and Peiyu Wang (Nanjing University of Posts and Telecommunications, China)

14:30-14:45 | Paper ID: 1571190755

Title: DeepTelecom: A Digital-Twin Deep Learning Dataset for Channel and MIMO Applications

Author(s): Bohao Wang, Zehua Jiang, Zhenyu Yang, Chongwen Huang and Yongliang Shen (Zhejiang University, China); Siming Jiang (Guangdong Tobacco Maoming Co., Ltd., China); Chen Zhu, Zhaohui Yang, Richeng Jin and Zhaoyang Zhang (Zhejiang University, China); Sami Muhaidat (Kahlifa University, United Arab Emirates); Merouane Debbah (Khalifa University of Science and Technology, UAE)

14:45-15:00 | Paper ID: 1571190886

Title: Optimal Defense Strategy Against Cyber Attacks for Autonomous Driving Systems: A Data-Driven Approach

Author(s): Haie Dou, Chuye Sun, Zhijie Xia, Lei Wang and Baoyu Zheng (Nanjing University of Posts and Telecommunications, China)

15:00-15:15 | Paper ID: 1571173511

Title: Energy Efficiency Maximization in STAR-RIS-Assisted NOMA-ISAC Cognitive Radio Networks

Author(s): Yukun Fan, Jia Zhu, Yulong Zou, Yulei Lou, Longshen Chen, Hao Hui and Jialiang Wu (Nanjing University of Posts and Telecommunications, China); Xiaoyu Wang (China Telecom Corporation Limited Jiangsu Wireless Network Optimization Center, China)

15:15-15:30 | Paper ID: 1571183307

Title: Self-Attention Augmented BiLSTM for Ghost Target Suppression in Automotive Radar Systems

Author(s): Taichi Murakami, Xiaoyan Wang and Yudai Suzuki (University of Ibaraki, Japan)

Oral Sessions

Session 12: Artificial Intelligence-Native Radio Access Networks(AI-RAN)Symposium-II

Session Chair	Wenchao Xia, Nanjing University of Posts and Telecommunications		
Time	14:00-15:30, October 24, 2025	Venue	Hao Xin Hall

14:00-14:15 | Paper ID: 1571190736

Title: Robust UAV Trajectory Design with Diffusion Model-Enhanced Reinforcement Learning

Author(s): Ruichong Jiang, Chenxi Liu, Xiaoling Hu and Mugen Peng (Beijing University of Posts and Telecommunications, China)

14:15-14:30 | Paper ID: 1571190757

Title: Dependency-Aware Deployment and Retrieval of Intelligent Microservices in AI-RAN

Author(s): Leyao Wang (East China Normal University, China); Zihan Chen (Singapore University of Technology and Design, Singapore); Kun Guo (East China Normal University, China)

14:30-14:45 | Paper ID: 1571192610

Title: Hierarchical Quadrature Amplitude Modulation for Split Learning in Edge Intelligent Systems

Author(s): Guanwei Ding, Bing Shi and Changyang She (Harbin Institute of Technology (Shenzhen), China); Fu-Chun Zheng (Harbin Institute of Technology, Shenzhen, China & University of York, United Kingdom (Great Britain))

14:45-15:00 | Paper ID: 1571173413

Title: A Tensor-Based Deep Unfolding Unsupervised Network for Multi-Target Parameter Estimation in Integrated Sensing and Communications System

Author(s): Jiale He, Ning Jiang, Zishuo Xu and Shi Yan (Beijing University of Posts and Telecommunications, China)

15:00-15:15 | Paper ID: 1571184475

Title: Joint Design of Model Offloading and Selection Based on Digital Twin Networks for AI-Based Beam Prediction

Author(s): Runze Li, Jiajun Li, Ji Yan, Chao Jia and Zhongyuan Zhao (Beijing University of Posts and Telecommunications, China)

15:15-15:30 | Paper ID: 1571186471

Title: Sub-7GHz-Aided Adaptive MCS Selection for Millimeter-Wave Beamforming

Author(s): Wei Jiang and Yi Zhong (Huazhong University of Science and Technology, China)

Oral Sessions

Session 13: Wireless Networking, Services, and Security Symposium-II

Session Chair	Haonan Chen, Nanjing University of Aeronautics and Astronautics		
Time	14:00-15:30, October 24, 2025	Venue	Hao Jing Hall

14:00-14:15 | Paper ID: 1571177305

Title: Hybrid Beamforming Design for Active IRS Enhanced Secure Directional Modulation Networks

Author(s): Xiaolu Chen and Shu Li (State Grid Shanghai Municipal Electric Power Company Information Company, China); Rongen Dong and Lingling Liu (Hainan University, China); Jingyu Cong (Sun Yat-Sen University, China)

14:15-14:30 | Paper ID: 1571174020

Title: Energy-Constrained UAV Trajectory Optimization via Deep Reinforcement Learning in Post-Disaster Edge Networks

Author(s): Zhenghang Sha, Haitao Zhao, Dechao Qian, Qin Wang, Xinren Wang, Guangliang Pan, Jinyu Liu and Hongbo Zhu (Nanjing University of Posts and Telecommunications, China)

14:30-14:45 | Paper ID: 1571174201

Title: Joint Optimization of Model Splitting and Resource Allocation for UAV-Assisted WLAM

Author(s): Jie Ruan, Hai-tao Zhao, Xiangyu Feng, Miao Liu, Guang Liang Pan and Hongbo Zhu (Nanjing University of Posts and Telecommunications, China)

14:45-15:00 | Paper ID: 1571186067

Title: Cross-Datacenter RDMA Load Balancing with Dual Control Loop and Probabilistic Rerouting

Author(s): Suqing Yang, Ning Wang, Guanping Liang and Biao Han (National University of Defense Technology, China)

15:00-15:15 | Paper ID: 1571187254

Title: Coverage Enhancement in Cellular-Connected UAV Networks via Intelligent Reflective Surface

Author(s): Zhangfeng Ma and Chengwei Fu (Shaoyang University, China); Zhengyang Gu (Georgia Institute of Technology, USA); Zhuxian Lian (Jiangsu University of Science and Technology, China); Huimin Hu (Xi'an University of Posts, China); Yifei Peng (Shaoyang University, China); Qiuming Zhu (Nanjing University of Aeronautics and Astronautics, China & XYZ Company, China)

15:15-15:30 | Paper ID: 1571190391

Title: A Multi-Modal Semantic Fusion for UAV Detection Under Intense Illumination Background

Author(s): Haonan Chen and Yuben Qu (Nanjing University of Aeronautics and Astronautics, China); Guangliang Pan (Nanjing University of Posts and Telecommunications, China); Guangyu Wu and Minxue Fang (Peking University, China); Jiahuan Ji (NanJing University of Aeronautics and Astronautics, China); Qihui Wu (Nanjing University of Aeronautics and Astronautics, China)

Oral Sessions

Session 14: Convergence of Sensing, Communication, and Computing Symposium-II

Session Chair	Qihan Zhang, Nanjing University of Posts and Telecommunications		
Time	14:00-15:30, October 24, 2025	Venue	Jun Can Hall

14:00-14:15 | Paper ID: 1571180146

Title: Dynamic Channel Attention with Hierarchical Feature Integration for LLM-Enhanced Time-Series Forecasting

Author(s): Shengbang Li, Qihan Zhang, Haiyang Zhang and Baoyun Wang (Nanjing University of Posts and Telecommunications, China)

14:15-14:30 | Paper ID: 1571180553

Title: Long-Distance ISAC Design for OFDM Systems with Insufficient CP

Author(s): Jun Tang, Cunhua Pan and Hong Ren (Southeast University, China)

14:30-14:45 | Paper ID: 1571190091

Title: Low-Cost 2D LiDAR-Driven LSTM Beam Prediction for V2I mmWave Communications

Author(s): Changpeng Zhou, Tingting Zhang, Can Wang and Youyun Xu (Nanjing University of Posts and Telecommunications, China)

14:45-15:00 | Paper ID: 1571190502

Title: Massive MIMO-OFDM Statistical CSI Acquisition with Physical Channel Charting

Author(s): Jinke Tang, Xiqi Gao and Li You (Southeast University, China); Xiang-Gen Xia (University of Delaware, USA); Cheng-Xiang Wang (Southeast University, China & Purple Mountain Laboratories, China)

15:00-15:15 | Paper ID: 1571181506

Title: Secure Beamforming Design for Integrated Imaging and Communications Systems

Author(s): Liyao Wang and Haiyang Zhang (Nanjing University of Posts and Telecommunications, China); Qianyu Yang (East China Jiaotong University, China); Xuewei Wang and Baoyun Wang (Nanjing University of Posts & Telecommunications, China)

15:15-15:30 | Paper ID: 1571189571

Title: Improving Outage Performance of Multi-Relay-Assisted Integrated Sensing and Communications

Author(s): Die Hu, Yulong Zou, Meiqin Pan, Shuying Lin and Libao Yang (Nanjing University of Posts and Telecommunications, China)

Oral Sessions

Session 15: Internet of Things Symposium-II

Session Chair	Ke Lu, Nanjing Vocational Institute of Mechatronic Technology		
Time	16:00-17:30, October 24, 2025	Venue	Hao Yi Hall

16:00-16:15 | Paper ID: 1571190274

Title: Outage Probability of Type-I HARQ-Aided Movable Antenna Systems

Author(s): Zhirun Ye and Yi Zhang (Jinan University, China); Fuchao He (Hong Kong Metropolitan University, Hong Kong); Zheng Shi, Xu Wang and Jintao Wang (Jinan University, China); Hong Wang (Nanjing University of Posts and Telecommunications, China)

16:15-16:30 | Paper ID: 1571172579

Title: Federated Learning-Based Resource Allocation Optimisation in Smart Farm Edge Intelligent Networks

Author(s): Medhav Kumar Goonjur and Bintao Hu (Xi'an Jiaotong-Liverpool University, China & University of Liverpool, United Kingdom (Great Britain)); Matilda Isaac (Xi'an Jiaotong-Liverpool University, China); Wenzhang Zhang (Xi'an Jiaotong-Liverpool University, China & University of Liverpool, United Kingdom (Great Britain)); Hengyan Liu (Xi'an Jiaotong-Liverpool University, China); Chang Liu (Guangdong University of Technology, China); Miguel López-Benítez (University of Liverpool, United Kingdom (Great Britain))

16:30-16:45 | Paper ID: 1571172862

Title: Peak Age of Information for Asynchronous Frame Slotted ALOHA in Random Access Networks

Author(s): Changhao Song; Mangang Xie; Baozhen An and Gang Lu (Northwest Normal University, China); Meng Zhou (Henan Normal University, China)

16:45-17:00 | Paper ID: 1571172963

Title: Energy-Efficient Clustering of mMTC Network with Intra-Cluster Resource Reuse

Author(s): Ranran Lv, Kai Sun and Wei Huang (Inner Mongolia University, China)

17:00-17:15 | Paper ID: 1571174257

Title: Federated Learning-Driven Computation Offloading in Space-Air-Ground Integrated Networks

Author(s): Heng Zhang, Ting Ma and Guangji Chen (Nanjing University of Science and Technology, China); Yiyang Ni (Jiangsu Second Normal University, China); Tingting Liu (Nanjing University of Posts and Telecommunications, China); Haibo Zhou (Nanjing University, China); Jun Li (Southeast University, China)

17:15-17:30 | Paper ID: 1571185694

Title: RIS-Assisted Integrated Sensing and Communication with Lightweight Unsupervised Learning

Author(s): Yifei Xie, Hongjun Wang, Zimo Feng, Mengzhao Guo, Junning Zhang, Ruiqian Ma, Kang An and Zhi Lin (National University of Defense Technology, China)

Oral Sessions

Session 16: Low Altitude Economy Communication and Networking Symposium-II

Session Chair	Ling Yi, Chongqing University of Posts and Telecommunications		
Time	16:00-17:30, October 24, 2025	Venue	Hao Xin Hall

16:00-16:15 | Paper ID: 1571174023

Title: Fluid Antenna-Integrated UAV Networks: New Opportunities for Interference Mitigation

Author(s): Runke Fan (Shanghai Advanced Research Institute, Chinese Academy of Sc, China & University of Chinese Academy of Sciences, China); Jie Zhu (Shanhai Advanced Research Institute, Chinese Academy of Sciences, China); Xianfu Chen (Shenzhen CyberAray Network Technology Company Ltd., China & Shanghai Advanced Research Institute, Chinese Academy of Sciences, China); Pei Peng (Nanjing University of Posts and Telecommunications, China); Qingqing Wu (Shanghai Jiao Tong University, China); Tianheng Xu (Shanghai Advanced Research Institute, Chinese Academy of Sciences, China); Ming Jiang (Sun Yat-sen University, China)

16:15-16:30 | Paper ID: 1571185444

Title: Capacity and Connectivity Analysis for Ultra Low-Altitude UAV Ad Hoc Networks

Author(s): Xin Xie (Beihang University, China); Jinpeng Xu (The Hong Kong Polytechnic University, Hong Kong); Rui Han, Jiaxing Wang and Lin Bai (Beihang University, China)

16:30-16:45 | Paper ID: 1571186444

Title: Edge-Aware Graphormer for Downlink Covert Communication Optimization in Aerial Cell-Free Networks

Author(s): Yanjun Chen, Yanpeng Dai and Ling Lyu (Dalian Maritime University, China)

16:45-17:00 | Paper ID: 1571186466

Title: Expanded Golay Complementary Sequences-Based Grant-Free Random Access Preamble Design for Satellite-Assisted Low-Altitude IoT Networks

Author(s): Chenchen Pei, Li Zhen, Yurong Guo and Shuchang Li (Xi'an University of Posts and Telecommunications, China); Zheng Chu (University of Nottingham, Ningbo, China); Pei Xiao (University of Surrey, United Kingdom (Great Britain))

17:00-17:15 | Paper ID: 1571188024

Title: Low-Latency Terrestrial Interference Detection for Satellite-to-UAV Communications in Space-Air-Ground Integrated Networks

Author(s): Runnan Liu (China Academy of Information and Communications Technology, China); Weifeng Zhu (The Hong Kong Polytechnic University, Hong Kong); Shu Sun and Wenjun Zhang (Shanghai Jiao Tong University, China)

17:15-17:30 | Paper ID: 1571190761

Title: Optimizing UAV Trajectory, Velocity and Resource Allocation for Energy Efficient Federated Learning

Author(s): Jiaqi Yang (Ningbo University, China); Yuyi Mao (Macau University of Science and Technology, Macao); Zhenyu Fu and Juan Liu (Ningbo University, China)

Oral Sessions

Session 17: Signal Processing for Communications Symposium-II

Session Chair	Zhenyu Liu, Tsinghua University		
Time	16:00-17:30, October 24, 2025	Venue	Hao Jing Hall

16:00-16:15 | Paper ID: 1571184740

Title: Secrecy-Driven Robust Beamforming Under Age of Information Constraints for Satellite-Terrestrial Integrated Networks

Author(s): Mingyi Ji, Hai-tao Zhao, Huaicong Kong, Xu Bo and Haibo Dai (Nanjing University of Posts and Telecommunications, China); Xianbin Wang (University of Western Ontario, Canada)

16:15-16:30 | Paper ID: 1571185932

Title: Channel Prediction Based on Spatially Dependent Diffusion Models

Author(s): Zhangyao Song, Xiang Zhang, Li Zhuang, Tao Guo, Xiaoyu Zhao and Yinfei Xu (Southeast University, China)

16:30-16:45 | Paper ID: 1571186709

Title: Class-Aided Joint Probabilistic Data Association for Radar Multi-Target Tracking

Author(s): Rong Zhou (Tsinghua University, China); Zhenyu Liu (Tsinghua Shenzhen International Graduate School, China)

16:45-17:00 | Paper ID: 1571188399

Title: Precoder Design for XL-MIMO Systems: An Information Geometry Approach

Author(s): Naijia Zheng, An-An Lu and Xiqi Gao (Southeast University, China)

17:00-17:15 | Paper ID: 1571190713

Title: Tri-Polarization in Dual-Polarized Distributed MIMO: Performance Analysis and Insights

Author(s): Yuan Xu and Chongwen Huang (Zhejiang University, China); Li Wei (Nanyang Technological University, Singapore); Zhaohui Yang (Zhejiang University, China); Yijian Chen (ZTE Corporation, China); Zhaoyang Zhang (Zhejiang University, China); Chau Yuen (Nanyang Technological University, Singapore); Sami Muhaidat (Kahlifa University, United Arab Emirates); Mérouane Debbah (Khalifa University of Science and Technology, UAE)

17:15-17:30 | Paper ID: 1571168675

Title: Adversarial Robustness Enhancement for Radio Frequency Fingerprint Identification via Introspection Adversarial Robust Distillation

Author(s): Zhisheng Yao (Nanjing University of Posts and Telecommunications, China); Yue Yin (Keio University, Japan); Tiantian Tang, Hao Huang and Guan Gui (Nanjing University of Posts and Telecommunications, China)

Oral Sessions

Session 18: Semantic Communication and Network Intelligence Symposium-II

Session Chair	Fuhui Zhou, Nanjing University of Aeronautics and Astronautics		
Time	16:00-17:30, October 24, 2025	Venue	Jun Can Hall

16:00-16:15 | Paper ID: 1571181738

Title: Codebook-Based Semantic Communication with LLM Question-Answering for UAV Rescue

Author(s): Xingyun Zhuang and Wei Wu (Nanjing University of Posts and Telecommunications, China); Fuhui Zhou (Nanjing University of Aeronautics and Astronautics, China); Han Hu (Nanjing University of Posts and Telecommunications, China); Qihui Wu (PLA Unicersity of Science and Technology, China)

16:15-16:30 | Paper ID: 1571183350

Title: Semantic Communications with Robustness-Guided Adversarial Purification

Author(s): Xuening Zheng, Han Hu and Wei Wu (Nanjing University of Posts and Telecommunications, China); Fuhui Zhou (Nanjing University of Aeronautics and Astronautics, China); Yongan Guo (Nanjing University of Posts and Telecommunications, China)

16:30-16:45 | Paper ID: 1571190521

Title: An Embodied Intelligent Trajectory and Spectrum Allocation Scheme for UAV-Enabled Spectrum Sharing Networks

Author(s): Xiaopeng Huang, Chunyu Liu, Zhijie Zeng, Rui Ding, Fuhui Zhou and Qihui Wu (Nanjing University of Aeronautics and Astronautics, China)

16:45-17:00 | Paper ID: 1571190533

Title: UAV-Based Spectrum Map Construction Using a Knowledge-Guided Network Under Sparse Sampling

Author(s): Hongtao Liang, Yiyao Wan, Haonan Zhou, Jiahuan Ji and Qihui Wu (Nanjing University of Aeronautics and Astronautics, China)

17:00-17:15 | Paper ID: 1571192040

Title: Non-Stationary 2D DOA Estimation for Extremely Large-Scale Antenna Arrays

Author(s): Jin Qiu and Xiaohuan Wu (Nanjing University of Posts and Telecommunications, China)

17:15-17:30 | Paper ID: 1571172246

Title: MambaJSCC-MIMO: State Space Model Empowered Joint Source-Channel Coding over MIMO Channels

Author(s): Shengkang Chen, Tong Wu, Zhiyong Chen and Meixia Tao (Shanghai Jiao Tong University, China)

Oral Sessions

Session 19: Wireless Networking, Services, and Security Symposium-III

Session Chair	Junchao Song, Nanjing University of Aeronautics and Astronautics		
Time	09:00-10:15, October 25, 2025	Venue	Hao Yi Hall

09:00-09:15 | Paper ID: 1571190469

Title: MMWViNet: A Cross-Modal Attention Enhanced MMW-Vision Fusion Framework for Precise UAV Positioning

Author(s): Junchao Song, Haonan Zhou and Hongtao Liang (NanJing University of Aeronautics and Astronautics, China); Guangliang Pan (Nanjing University of Posts and Telecommunications, China); Fuhui Zhou and Qihui Wu (Nanjing University of Aeronautics and Astronautics, China)

09:15-09:30 | Paper ID: 1571192026

Title: Joint Coverage and Energy Efficiency Optimization in Low-Altitude Intelligent Networks

Author(s): Hao Hu (University of Electronic Science and Technology of China, China); Xiaojie Wang (Chongqing University of Posts and Telecommunications, China); Yan Zhang (University of Electronic Science and Technology of China, China)

09:30-09:45 | Paper ID: 1571185696

Title: IoT-Sentinel: A Lightweight and Accurate Neural Method for IoT Intrusion Detection

Author(s): Zirui Wang, Xuanrui Xiong and Mengting He (Chongqing University of Posts and Telecommunications, China); Mingfeng Wu (Hunan University, China); Li Zhou (National University of Defense Technology, China); Amr Tolba (King Saudi University, Saudi Arabia)

09:45-10:00 | Paper ID: 1571185781

Title: A Multi-Timescale anti-Jamming Framework for Clustered UAV Networks

Author(s): Shengzhi Shi, Haijun Wang, Jiao Zhang, Jun Xiong, Li Zhou and Haitao Zhao (National University of Defense Technology, China)

10:00-10:15 | Paper ID: 1571185955

Title: Achieving Air-to-Ground Covert Communication with Aggregated Environmental Interference

Author(s): Hongchi Chen and Na Deng (Dalian University of Technology, China); Haichao Wei (Dalian Maritime University, China); Nan Zhao (Dalian University of Technology, China)

Oral Sessions

Session 20: Internet of Things Symposium-III

Session Chair	Chen Dai, Nanjing University of Posts and Telecommunications		
Time	09:00-10:15, October 25, 2025	Venue	Hao Xin Hall

09:00-09:15 | Paper ID: 1571183790

Title: RL-Based Resource Allocation for IRS-Assisted Edge Computing Networks with Cognitive Radio

Author(s): Chaozhang Yu (State Grid Fujian Electric Power Co., Ltd., China); Lingfeng Zhu, Hongzhi Bian, Jianxun Zhang, Yufan Yan, Yue Yu and Linyu Lin (Construction Branch of State Grid Fujian Electric Power Co., Ltd., China); Guoxing Zhao (Jiangsu Toyou Research Institute of Information Intelligence & Technology, China)

09:15-09:30 | Paper ID: 1571183845

Title: Secure Hierarchical Blockchain-Assisted Federated Reinforcement Learning for Personalized Autonomous Driving

Author(s): Jinze He, Xiaoge Huang and Sa Xiao (Chongqing University of Posts and Telecommunications, China); Wei Luo (Chongqing Digital Transportation Industry Group Co., Ltd., China); Qianbin Chen (Chongqing University of Posts and Telecommunications, China)

09:30-09:45 | Paper ID: 1571185698

Title: URpGAN-Based Stable Channel Estimation for One-Bit Massive MIMO in Wireless AI

Author(s): Jiacheng Shen, Mengzhao Guo, Yuhong Ma, Zimo Feng, Ruiqian Ma, Junning Zhang, Kang An and Zhi Lin (National University of Defense Technology, China)

09:45-10:00 | Paper ID: 1571186331

Title: Physics-Guided Large Language Model for Tool Condition Monitoring in IIoT

Author(s): Anhang Chen (Shandong University, China); Sanmu Li (Dalian Maritime University, China); Yuexin Zhang and Haixia Zhang (Shandong University, China)

10:00-10:15 | Paper ID: 1571186906

Title: Quality-Aware Online Optimization for Reliability Guaranteed Microservice Deployment for Edge Computing Enabled Industrial IoT

Author(s): You Shi (Nanjing Tech University, China); Yuye Yang and Ruoyang Chen (Nanjing University of Aeronautics and Astronautics, China); Chen Dai (Nanjing University of Posts and Telecommunications, China)

Oral Sessions

Session 21: Signal Processing for Communications Symposium-III

Session Chair	Xiaohuan Wu, Nanjing University of Posts and Telecommunications		
Time	09:00-10:15, October 25, 2025	Venue	VIP.Meeting Room

09:00-09:15 | Paper ID: 1571173713

Title: Finite Blocklength Analysis for Short Packet MIMO Systems With Optimal ML Receiver

Author(s): Rui Zhang (Southeast University, China & National Mobile Communications Research Laboratory, China); Hong Shen and Zhicheng Li (Southeast University, China); Wei Xu, Pengcheng Zhu and Chunming Zhao (National Mobile Communications Research Laboratory, Southeast University & The Purple Mountain Laboratories)

09:15-09:30 | Paper ID: 1571174841

Title: Joint TDOA-FDOA-based Passive Sensing for LEO Satellites

Author(s): Mingjie Fu, Hangguan Shan and Yue Zhang (Zhejiang University, China); Ning Wang (Pinghu Space Perception Laboratory Technology Company Limited, China); Zhiguo Shi (Zhejiang University, China)

09:30-09:45 | Paper ID: 1571178779

Title: Towards Time-Frequency Gradient Consistency Guided Adversarial Attacks in Radio Frequency Fingerprinting Identification

Author(s): Hengda Su, Zhisheng Yao and Di Wei (Nanjing University of Posts and Telecommunications, China); Xixi Zhang (Hohai University, China); Qi Xuan (Zhejiang University of Technology, China); Guan Gui (Nanjing University of Posts and Telecommunications, China)

09:45-10:00 | Paper ID: 1571179368

Title: Hankel-Toeplitz Optimization for Channel Estimation in Hybrid RIS

Author(s): Mingzhi Li and Xiaohuan Wu (Nanjing University of Posts and Telecommunications, China)

10:00-10:15 | Paper ID: 1571184008

Title: MDS-Based Cooperative Positioning Method Using UWB Sensors

Author(s): Yueshen Li, Yuxin Huang and Xiaobo Gu (Guangdong University of Technology, China)

Oral Sessions

Session 22: Wireless Networking, Services, and Security Symposium-IV

Session Chair	Bo Xu, Nanjing University of Posts and Telecommunications		
Time	10:45-12:00, October 25, 2025	Venue	Hao Yi Hall

10:45-11:00 | Paper ID: 1571185840

Title: Grammar-Based Fuzzing for Vulnerability Discovery in 5G NGAP Control Plane Protocols

Author(s): Yanqiu Zhang and Ling Yi (Chongqing University of Posts and Telecommunications, China); Mingfeng Wu (Hunan University, China); Shouze Tang and Tiehao Wang (Chongqing University of Posts and Telecommunications, China); Li Zhou (National University of Defense Technology, China)

11:00-11:15 | Paper ID: 1571188079

Title: Performance Analysis of Distributed RIS-Aided THz Communication Systems Under Misalignment Fading

Author(s): Longze Li (Nanjing University of Posts and Telecommunications, China); Yongxu Zhu (Southeast University, China); Yiyang Ni (Jiangsu Second Normal University, China); Qi Zhu (Nanjing University of Posts and Telecommunications, China)

11:15-11:30 | Paper ID: 1571190187

Title: A Game-Theoretic Multi-Agent Reinforcement Learning Approach for Secure UAV-Assisted QKD in Vehicular Networks

Author(s): Qingfan Cui and Qichao Xu (Shanghai University, China); Zhou Su (Xi'an Jiaotong University, China); Dongfeng Fang (California Polytechnic State University, USA); Hui Zeng (Shanghai University, China)

11:30-11:45 | Paper ID: 1571173338

Title: A Task-Driven Traffic Model for Wireless Ad Hoc Networks

Author(s): Xiao Yi, Haitao Zhao, Qi Tang,Zhe Wang, Li Zhou and Jibo Wei (National University of Defense Technology, China)

11:45-12:00 | Paper ID: 1571179816

Title: Robust Full-Space PLS Transmission for STAR-RIS-Aided Wireless Networks

Author(s): Han Xiao, Xiaoyan Hu, Pengze Zhao; Ang Li and Wenjie Wang (Xi'an Jiaotong University, China); Kun Yang (Nanjing University, China)

Oral Sessions

Session 23: Internet of Things Symposium-IV

Session Chair	Bintao Hu, Xi'an Jiaotong-Liverpool University		
Time	10:45-12:00, October 25, 2025	Venue	Hao Xin Hall

10:45-11:00 | Paper ID: 1571192175

Title: A Tree-Based Algorithm for Detecting Inner-Edges, Topological Holes, and Layered Structures in WSNs

Author(s): Ze Zhang, Qian Dong and Limin Yu (Xi'an Jiaotong-Liverpool University, China); Zhao Wang (Xi'an Jiaotong Liverpool University & University of Liverpool, China); Bintao Hu (Xi'an Jiaotong-Liverpool University, China & University of Liverpool, United Kingdom (Great Britain)); Gordon Owusu Boateng (Xi'an Jiaotong-Liverpool University, China)

11:00-11:15 | Paper ID: 1571190854

Title: Research on Collaborative Security Control and Communication Resource Allocation Methods Based on Stackelberg Game Theory

Author(s): Haie Dou, Guotao He, Zhijie Xia, Jingwu Cui and Lei Wang (Nanjing University of Posts and Telecommunications, China)

11:15-11:30 | Paper ID: 1571185889

Title: Implementation of a HARQ-Assisted Hybrid SCMA-OMA System Using USRP

Author(s): Zhonghao Li, Jintao Wang, Zheng Shi and Xu Wang (Jinan University, China); Hong Wang (Nanjing University of Posts and Telecommunications, China); Yaru Fu (Hong Kong Metropolitan University, China); Haichuan Ding (Beijing Institute of Technology)

11:30-11:45 | Paper ID: 1571174321

Title: Performance Analysis of RIS-Assisted Cooperative NOMA Systems with Finite Blocklength

Author(s): Wenbin Song; Dechuan Chen; Jin Li, Xingang Zhang and Zhipeng Wang (Nanyang Normal University, China)

11:45-12:00 | Paper ID: 1571174331

Title: Throughput Optimization for Ambient IoT Systems in Indoor Factory Environments

Author(s): Tianxiao Zhang and Yong Li (Beijing University of Posts and Telecommunications, China)

Oral Sessions

Session 24: Signal Processing for Communications Symposium-IV

Session Chair	Xiaohuan Wu, Nanjing University of Posts and Telecommunications		
Time	10:45-12:00, October 25, 2025	Venue	VIP.Meeting Room

10:45-11:00 | Paper ID: 1571186060

Title: Low-Complexity Precoding Design for mmWave/Terahertz Multiuser System in Near Field

Author(s): Mengyu Liu and Cunhua Pan (Southeast University, China); Kangda Zhi (Technical University of Berlin, Germany); Hong Ren (Southeast University, China); Jiangzhou Wang (National Mobile Communications Research Lab., Southeast University, China)

11:00-11:15 | Paper ID: 1571186342

Title: Efficient Shuffled Sliding Window Decoding of SC-LDPC Codes

Author(s): Qin Du, Lisha Luo and Xuan He (Southwest Jiaotong University, China)

11:15-11:30 | Paper ID: 1571186675

Title: Multi-State RIS-Enabled near-Field Separate Channel Estimation Through Multi-Carrier NOMP

Author(s): Xiao Ye, Yanqing Ren, Jiachen Tian, Xiaokun Teng, Weicong Chen, Wankai Tang, Yu Han and Shi Jin (Southeast University, China)

11:30-11:45 | Paper ID: 1571186753

Title: A 3-D MIMO GBSM for In-Vehicle Communication Scenarios

Author(s): Houqiu Ye (Southeast University, China); Zhen Lv (Purple Mountain Laboratories, China); Lijian Xin (China); Cheng-Xiang Wang (Southeast University, China & Purple Mountain Laboratories, China)

11:45-12:00 | Paper ID: 1571190290

Title: An SC-Fano Based Enumerator of Low-Weight Codewords for Polar/PAC Codes

Author(s): Xingyu Zhou (Harbin Institute of Technology, Shenzhen, China); Shaohua Wu (Harbin Institute of Technology and Pengcheng Laboratory, China); Junhua You and Yajing Deng (Harbin Institute of Technology (Shenzhen), China); Qinyu Zhang (Harbin Institute of Technology (Shenzhen) and Pengcheng Laboratory, China)

Oral Sessions

Session 25: Wireless Networking, Services, and Security Symposium-V

Session Chair	Yueyue Dai, Huazhong University of Science and Technology		
Time	14:00-15:30, October 25, 2025	Venue	Hao Yi Hall

14:00-14:15 | Paper ID: 1571186336

Title: Dual-Polarized RIS-Aided Beamforming Design for MIMO System

Author(s): Dongnan Xia, Cunhua Pan, Hong Ren, Zhiyuan Yu and Yasheng Jin (Southeast University, China)

14:15-14:30 | Paper ID: 1571190636

Title: QoE-Based Intent Dependency Using Multi-Agent PPO in Autonomous Aerial Vehicles

Author(s): Rui Yuan, Huajun Cui, Zanhao Wang and Jinghuan Liu (Power China Beijing Engineering Corporation Limited, China); Yinqiu Liu (Nanyang Technological University, Singapore); Yunzhe Jiang (University of Electronic Science and Technology of China, China)

14:30-14:45 | Paper ID: 1571179826

Title: STAR-RIS-Assisted Covert Communications with Positional Randomisation of the Eavesdropper

Author(s): Pengze Zhao, Xiaoyan Hu, Han Xiao and Wenjie Wang (Xi'an Jiaotong University, China); Kun Yang (Nanjing University, China)

14:45-15:00 | Paper ID: 1571180917

Title: Joint Trajectory and Power Allocation Optimization for Secure Real-Time UAV Communication

Author(s): Zhuoran Tian, Zeyu Wang, Haitao Zhao, Jingyi Wu, Xinyi Hui and Haifeng Tang (Nanjing University of Posts and Telecommunications, China)

15:00-15:15 | Paper ID: 1571186358

Title: A Two-Stage Threat Flow Detection Framework Based on Autoencoder and Support Vector Data Description

Author(s): Jinghui Tian and Yu Wu (Chongqing University of Posts and Telecommunications, China); Mingfeng Wu (Hunan University, China); Han Shen (Chongqing University of Posts and Telecommunications, China); Li Zhou (National University of Defense Technology, China); Xuanrui Xiong (Chongqing University of Posts and Telecommunications, China)

15:15-15:30 | Paper ID: 1571186797

Title: Generative PPO for Computation Offloading in Internet of Vehicles

Author(s): Yanxia Mao and Gaofeng Wang (Nanjing University of Post and Telecommunication, China)

Oral Sessions

Session 26: Wireless Optical Communication Symposium

Session Chair	Tingwei Wu, Chongqing University of Posts and Telecommunications		
Time	14:00-15:30, October 25, 2025	Venue	Hao Xin Hall

14:00-14:15 | Paper ID: 1571176578

Title: Secrecy Performance Analysis of Inter-Satellite Communication Based on Non-Homogeneous Poisson Point Process

Author(s): Jiaping Shi (Hangzhou Dianzi University, China); Shuyuan Lu and Fangxin Qu (East China Normal University, China); Junjun Cui and Guanjun Xu (HangZhou DianZi University, China)

14:15-14:30 | Paper ID: 1571186008

Title: Optimized User Pairing Strategy for Indoor VLC Precoding Considering Receiving Orientation

Author(s): Suqin Xie, Sihao Lu and Qiong Zhao (Xi'an University of Posts and Telecommunications, China)

14:30-14:45 | Paper ID: 1571186741

Title: Design of an Offline-Online Integrated Power Allocation Scheme for Indoor VLC Systems

Author(s): Qiong Zhao, Henghui Zhang and Jiahao Chen (Xi'an University of Posts and Telecommunications, China)

14:45-15:00 | Paper ID: 1571187883

Title: Heterogeneous Cooperative Transmission for Free-Space Optical Networks

Author(s): Feiming Jin (Chongqing University of Posts and Telecommunications, China); Li Zhang (Northeastern University, China); Zhili Yu (Chongqing University of Posts and Telecommunications, China)

15:00-15:15 | Paper ID: 1571173140

Title: A Solution to Asynchronous Issue for Imperceptible Screen-Camera Communications

Author(s): Jiaxing Peng, Han Zhang and Bingcheng Zhu (Southeast University, China); Zaichen Zhang (National Mobile Communications Research Laboratory, Southeast University, China)

15:15-15:30 | Paper ID: 1571186009

Title: Channel Estimation Based on GAN-Mamba-Perceptual for Indoor VLC Systems

Author(s): Sihao Lu, Suqin Xie and Qiong Zhao (Xi'an University of Posts and Telecommunications, China)

Oral Sessions

Session 27: AI for Communications and Networking Symposium-III

Session Chair	Xu Wang, Jinan University		
Time	14:00-15:30, October 25, 2025	Venue	VIP.Meeting Room

14:00-14:15 | Paper ID: 1571185290

Title: Spatiotemporal-Aware Resilient Routing Algorithm Based on Graph Attention Double DQN

Author(s): Jie Zhang, Hao Huang, Chao Shi, Yang Zhang, Bingyang Fan and Dapeng Li (Nanjing University of Posts and Telecommunications, China)

14:15-14:30 | Paper ID: 1571166972

Title: A RIS-assisted Federated Learning System Based on Mutual Information

Author(s): Yujun Cai, Shufeng Li and Jianbo Liu (Communication University of China, China); Qing Yang (National Radio and Television Administration, China)

14:30-14:45 | Paper ID: 1571174437

Title: Deep Learning Based Dual-Stage Motion-Parameter Estimation for High-Mobility Target Trajectory Prediction in OTFS-ISAC System

Author(s): Jiaxuan Liu, Fei Li and Wei Ji (Nanjing University of Posts and Telecommunications, China)

14:45-15:00 | Paper ID: 1571174461

Title: Continual Learning-Aided Super-Resolution Scheme for Channel Reconstruction and Generalization

Author(s): Jianqiao Chen (ZGC Institute of Ubiquitous-X Innovation and Applications, China); Nan Ma, Wenkai Liu, Yuhang Ma and Xiaodong Xu (Beijing University of Posts and Telecommunications, China)

15:00-15:15 | Paper ID: 1571174619

Title: Explainable Meta-Learning on GNNs for Inter-Cell Interference Modeling

Author(s): Hong Liang, Youjia Chen, Boyang Guo and Yuchuan Ye (Fuzhou University, China); Xi Wang (China Mobile Communications Group, Fujian co., ltd & China Mobile Communications Group, China); Jinsong Hu and Haifeng Zheng (Fuzhou University, China)

15:15-15:30 | Paper ID: 1571187805

Title: Queue-Aware Collaborative DNN Inference for Digital Twin Synchronization in Cloud-Edge Networks

Author(s): Yuao Wang, Ye Tian and Shuai Qi (Nanjing University of Posts and Telecommunications, China); Gan Zheng (University of Warwick, United Kingdom (Great Britain)); Yongan Guo (Nanjing University of Posts and Telecommunications, China)

Oral Sessions

Session 28: Convergence of Sensing, Communication, and Computing Symposium-III

Session Chair	Lan Wu, Hefei University of Technology		
Time	16:00-17:30, October 25, 2025	Venue	Hao Yi Hall

16:00-16:15 | Paper ID: 1571181827

Title: Impact of Antenna Siting Openness on VHF Channel Characteristics

Author(s): Kai Yi, Xiaoying Zhang, Zhihao Mu, Xiaoran Liu, Haitao Zhao and Jun Xiong (National University of Defense Technology, China)

16:15-16:30 | Paper ID: 1571185328

Title: Decentralized Channel Estimation and User Localization for XL-MIMO Systems

Author(s): Lun Han, Yusong Wang, Yunchao Song and Mujun Qian (Nanjing University of Posts and Telecommunications, China)

16:30-16:45 | Paper ID: 1571186142

Title: Deep Unfolding Beamforming and Antenna Selection for uRLLC Communication Systems

Author(s): Wu Lan and Wei Huang (Hefei University of Technology, China); Shiwen He (Central South University, China); Caihong Kai (Hefei University of Technology, China)

16:45-17:00 | Paper ID: 1571186426

Title: ISAC 3D Imaging in Urban Environments: A Joint Active and Passive Sensing Approach

Author(s): Linbin Zheng, Yixin Zhang, Zhiqing Wei, Dingyou Ma, Haotian Liu, Qixun Zhang and Zhiyong Feng (Beijing University of Posts and Telecommunications, China)

17:00-17:15 | Paper ID: 1571186761

Title: SNR-Constrained Beamforming Joint and Reflection Designs for near-Field RIS-ISAC Systems

Author(s): Jushang Wang, Hong Wang and Heyi Li (Nanjing University of Posts and Telecommunications, China)

17:15-17:30 | Paper ID: 1571186947

Title: Robust and Secure Beamforming Design for Active RIS Aided ISAC Systems

Author(s): Tianhao Zhong, Yulong Zou, Yizhi Li, Die Hu and Xianyang Liu (Nanjing University of Posts and Telecommunications, China)

Oral Sessions

Session 29: Edge Intelligence for Space-Air-Ground Integrated Networks Symposium-II

Session Chair	Hualing Ren, Chongqing University of Posts and Telecommunications		
Time	16:00-17:30, October 25, 2025	Venue	Hao Xin Hall

16:00-16:15 | Paper ID: 1571186069

Title: Edge Computing-Driven Optimization Scheme for Video Streaming in High-Dynamic Mobile Terminals

Author(s): Haie Dou, Ziyu Zhong, Bin Kang, Jingwu Cui and Lei Wang (Nanjing University of Posts and Telecommunications, China)

16:15-16:30 | Paper ID: 1571185284

Title: Multi-Tier UAV Edge Computing for Low Altitude Networks Towards Long-Term Energy Stability

Author(s): Yufei Ye, Shijian Gao and Xinhu Zheng (The Hong Kong University of Science and Technology (Guangzhou), China); Liuqing Yang (Hong Kong University of Science and Technology, China)

16:30-16:45 | Paper ID: 1571190730

Title: CFR2: LLM-Empowered Device-Free Cross-Subject Feature Recognition Utilizing Channel Frequency Response in Wireless Communication

Author(s): Yaoxin Duan, Yuekai Wang and Jingsong Zhuo (Chongqing University of Posts and Telecommunications, China); Kam-Yiu Lam (City University of Hong Kong, Hong Kong); Wendi Nie (Chongqing University of Posts and Telecommunications, China); Yongli Song (Beijing Institute of Computer Technology and Applications, China)

16:45-17:00 | Paper ID: 1571190926

Title: Multidimensional Resource Optimization for Beam-Hopping Satellite Multicast Networks

Author(s): Chongxi Qu, Haobin Mao and Zhenyu Xiao (Beihang University, China)

17:00-17:15 | Paper ID: 1571174247

Title: Decision Transformer Based Approach for Joint Resource Allocation and Task Offloading in LEO Satellite Edge Computing Networks

Author(s): Jian Chang, Ting Ma and Guangji Chen (Nanjing University of Science and Technology, China); Yiyang Ni (Jiangsu Second Normal University, China); Tingting Liu (Nanjing University of Posts and Telecommunications, China); Jun Li (Southeast University, China)

17:15-17:30 | Paper ID: 1571174442

Title: Decision Transformer for Dynamic Optimization in Satellite-Terrestrial Integrated Networks

Author(s): Pengcheng Xia, Haoze Shan and Ting Ma (Nanjing University of Science and Technology, China); Yiyang Ni (Jiangsu Second Normal University, China); Changxu Ni (Nanjing University of Science and Technology, China); Jun Li (Southeast University, China)

Oral Sessions

Session 30: Signal Processing for Communications Symposium-V

Session Chair	Chaowen Liu, Xi'an University of Posts and Telecommunications		
Time	16:00-17:30, October 25, 2025	Venue	VIP.Meeting Room

16:00-16:15 | Paper ID: 1571190961

Title: RIS-Mounted UAV Enhanced Wireless Secrecy with Covert Transmission Constraint

Author(s): Chaowen Liu, Tianwei Wang and Xianwei Ke (Xi'an University of Posts and Telecommunications, China); Tong-Xing Zheng (Xi'an Jiaotong Unviersity, China); Yimeng Ge and Guangyue Lu (Xi'an University of Posts and Telecommunications, China)

16:15-16:30 | Paper ID: 1571174028

Title: How to Deploy STAR-RIS in Three Operating Protocols for Multi-User Communication Systems

Author(s): Lihua Pang (Xi'an University of Science and Technology and Xidian University, China); Jing Yang (Xi'an University of Science and Technology, China) ; Yang Zhang (Xidian University, China); Yuer Su (Xi'an University of Science and Technology, China); Yijian Chen (ZTE Corporation, China); Anyi Wang (Xi'an University of Science and Technology, China)

16:30-16:45 | Paper ID: 1571174210

Title: A Probe Selection Method based on Enhanced Electrostatic Discharge Algorithm for 5G MIMO OTA Test

Author(s): Yuping Wang, Nan Ma, Ke Peng, Zhaoting Li and Xuanrong Li (Beijing University of Post and Telecommunication, China)

16:45-17:00 | Paper ID: 1571174514

Title: A Joint Channel Estimation and Equalization Method Based on Partial Interference Exploitation

Author(s): Defeng Ren and Rongchang Jing (Xi'an University of Posts and Telecommunications, China); Jing Li (State Key Lab. of Integrated Service Networks, Xidian University, China); Qin Huang (Xi'an University of Posts and Telecommunications, China)

17:00-17:15 | Paper ID: 1571174603

Title: Alamouti Space-Time Symbiotic Schemes for RIS-Enabled Backscatter System

Author(s): Zhen Wen and Haiyang Ding (National University of Defense Technology, China); Wankai Tang (Southeast University, China); Xiaoyi Huang, Shilian Wang and Guoxi Song (National University of Defense Technology, China); Jules Moualeu (University of the Witwatersrand, South Africa); Chau Yuen (Nanyang Technological University, Singapore)

17:15-17:30 | Paper ID: 1571174832

Title: Superposition Coded Modulation with Zero-Padding for Channel-Adaptive Transmission

Author(s): Ruijie Li, Xinwei Xu, Haihui Zhang and Yue Xiao (University of Electronic Science and Technology of China, China); Xiaogang Gou (The 54th Research Institute of China Electronics Technology Group Corporation, China); Jie Tian (China Academy of Engineering Physics, China)

Poster Sessions

Session I

Time	14:00-15:00, October 23, 2025	Venue	Foyer

Poster No.: 1

Paper ID: 1571190573

Paper Title: DET-MUSIC: Deep-Augmented MUSIC Algorithm in Dense Multipath MIMO-OFDM Channels

Authors: Xi Chen, Ming Lei and Yongqi Zhao (Zhejiang University, China)

Poster No.: 2

Paper ID: 1571190729

Paper Title: OIC: An Online Incentivized and Context-Aware Scheme for Task Assignment

Authors: Jiamei Ji, Kechao Cai, Zhuoyue Chen and Jinbei Zhang (Sun Yat-sen University, Shenzhen, China)

Poster No.: 3

Paper ID: 1571168970

Paper Title: Multi-Scale Fusion Based near-Field CSI Feedback for XL-MIMO Systems

Authors: Yuhang Ma, Nan Ma and Wenkai Liu (Beijing University of Posts and Telecommunications, China); Jianqiao Chen (ZGC Institute of Ubiquitous-X Innovation and Applications, China); Kaiheng Zhang (Beijing University of Posts and Telecommunications, China)

Poster No.: 4

Paper ID: 1571190328

Paper Title: Joint Transmitter and Receiver IQ Imbalance Correction via Ellipse Fitting and Affine Transformation

Authors: Jiaye Li (Sun Yat-sen University, China); Yun Liu, Ruiliang Song and Xiaoyi Yu (Academy for Network & Communications of China Electronics Technology Group Corporation, China); Xiang Chen, Zihan Cen and Xuebin Zhuang (Sun Yat-sen University, China)

Poster No.: 5

Paper ID: 1571173102

Paper Title: BiLSTM-Based Automatic Detection Framework for Heavy Metal Pollution Using Sediment Microbial Fuel Cell Sensor

Authors: Chenlu Li (Nanjing Normal University, China); Yiyang Ni (Jiangsu Second Normal University, China); Ruochen Huang (The First Affiliated Hospital of Nanjing Medical University, China); Changwei Zhang (Purple Mountain Laboratories, China); Huan Deng (Nanjing Normal University, China)

Poster No.: 6

Paper ID: 1571174517

Paper Title: Decision Causal ConvFormer for Energy-Saving Optimization in PV Storage-Aided 5G Base Stations

Authors: Yi He and Pengcheng Xia (Nanjing University of Science and Technology, China); Yiyang Ni (Jiangsu Second Normal University, China); Jun Li (Southeast University, China)

Poster No.: 7

Paper ID: 1571189625

Paper Title: Fluid Antenna Array Empowered ISAC System with Ultra Reliability and Low Latency

Authors: Shizheng Wang (Southeast University, China); Changfeng Ding (Nanjing University of Posts and Telecommunications, China); Yanping Liu (Guizhou University of Finance and Economics, China); Liang Wu (Southeast University, China); Min Lin (Nanjing University of Posts and Telecommunications, China); Zaichen Zhang (National Mobile Communications Research Laboratory, Southeast University, China)

Poster No.: 8

Paper ID: 1571190583

Paper Title: Joint Optimization of Computation Offloading and Service Caching for Satellite Edge Networks

Authors: Qi Wu and Lidong Zhu (University of Electronic Science and Technology of China, China)

Poster No.: 9

Paper ID: 1571190640

Paper Title: Near-Field Beamforming Design for Integrated Sensing and Communication in Cell-Free Massive MIMO Systems with AP Clustering

Authors: Han Zhang, Qi Zhang, Shu Cai and Jun Zhang (Nanjing University of Posts and Telecommunications, China)

Poster No.: 10

Paper ID: 1571174873

Paper Title: Coexistence Analysis for IMT and GSO Satellite Services in the 7125-8400 MHz Band

Authors: Sheng Xie, Cheng Wang, Yuehang Zuo, Linqing Gong, Songsong Cai and Weidong Wang (Beijing University of Post and Telecommunications, China)

Poster No.: 11

Paper ID: 1571174884

Paper Title: Integrated Distributed Caching and Edge Collaboration for Content Delivery in LEO Satellite Constellations

Authors: Guoxiang Yuan (Beijing University of Posts and Telecommunications, China); Qixuan Cao (China Academy of Launch Vehicle Technology, China); Xin He and Xing Zhang (Beijing University of Posts and Telecommunications, China)

Poster No.: 12

Paper ID: 1571192140

Paper Title: Bayesian-Aided Lyapunov-Optimized ADMM for Narrowband Emergency Satellite Communications

Authors: Lu Wang (China Telecom Research Institute, China); Yusheng Zhou (Shanghai Jiao Tong University, China); Dongliang Cui (China Telecommunications Corporation, China); Haobo Yang (China Telecom Corporation Ltd. Shanghai Branch, Hong Kong); Xiaoyu Liu and Hongbo Sun (Nanjing University of Posts and Telecommunications, China); Athanasios V. Vasilakos (Fuzhou University & University of Agder, China)

Poster No.: 13

Paper ID: 1571174606

Paper Title: A Novel Phase-Shifter-Based Backscatter Modulation Scheme for Dual-Sided RIS-Segmented Two-Way Symbiotic Backscatter Systems

Authors: Xiaoyi Huang and Haiyang Ding (National University of Defense Technology, China); Gang Yang (University of Electronic Science and Technology of China, China); Zhen Wen (National University of Defense Technology, China); Haifan Yin (Huazhong University of Science and Technology, China); Jules Moualeu (University of the Witwatersrand, South Africa); Chau Yuen (Nanyang Technological University, Singapore)

Poster No.: 14

Paper ID: 1571183913

Paper Title: Blockchain-Based Collaborative Learning for Autonomous Driving in IoV with Federated Mutual Distillation

Authors: Miaorong Gan, Xiaoge Huang and Sa Xiao (Chongqing University of Posts and Telecommunications, China); Junyi Li (Chongqing Digital Transportation Industry Group Co, Ltd., China); Qianbin Chen (Chongqing University of Posts and Telecommunications, China)

Poster No.: 15

Paper ID: 1571184415

Paper Title: Improved-SqueezeNet for NILM Appliance Classification with Multi-Channel V-I Trajectory Encoding

Authors: Jing Tang and Jiantao Yuan (Hangzhou City University, China); Shengli Liu (Shanghai University, China); Rui Yin and Feng Gao (Hangzhou City University, China); Junhua Kuang (Beijing Sankaiwei Technology Co., Ltd., China)

Poster Sessions

Session II

Time	16:00-17:00, October 23, 2025	Venue	Foyer

Poster No.: 1

Paper ID: 1571184713

Paper Title: A Snow Geese Algorithm-Based Connectivity Restoration Scheme in Clustered UAV Networks

Authors: Lidan Zhang, Dongtang Ma, Haijun Wang, Li Zhou, Haitao Zhao and Jibo Wei (National University of Defense Technology, China)

Poster No.: 2

Paper ID: 1571185436

Paper Title: FE2Par: An Automatic Extraction Model for Protocol State Machines

Authors: Jinfeng Mao and Yu Wu (Chongqing University of Posts and Telecommunications, China); Li Zhou (National University of Defense Technology, China); Xin Wan, Xiaojie Wang and Zhaolong Ning (Chongqing University of Posts and Telecommunications, China)

Poster No.: 3

Paper ID: 1571190297

Paper Title: Multi-Instance Learning via Progressive Multi-Label Regularization Constraints

Authors: Xuguang Zhang and Zhiguo Yu (Shandong Management University, China); Rui Ding (Nanjing University of Posts and Telecommunications, China); Jun Cai (Nanjing University of Chinese Medicine, China)

Poster No.: 4

Paper ID: 1571175157

Paper Title: A Federated Deepfake Speech Detection Method Based on Layer-Wise Center-Guided Weighting Aggregation

Authors: Yingjian Yu, Haiyan Guo, Tianshun Wang, Zirui Ge and Chi Liu (Nanjing University of Posts and Telecommunications, China)

Poster No.: 5

Paper ID: 1571174450

Paper Title: XJSCC: ROI-Guided Joint Source-Channel Coding for Robust Wireless Image Transmission

Authors: Keyu Chen, Xiaohui Chen, Li Chen and Huarui Yin (University of Science and Technology of China, China)

Poster No.: 6

Paper ID: 1571176484

Paper Title: A Multimedia Digital Twin-Driven Intelligent Compression Method

Authors: Tao Xiang (Tsinghua University, China); Linghui Guo (Beijing Megvii Technology Co., Ltd., China); Ning Ge and Qiwei Song (Tsinghua University, China)

Poster No.: 7

Paper ID: 1571180500

Paper Title: Deep Learning Based Joint Wideband Spectrum Sensing and Automatic Modulation Classification
Authors: Shaojie Wu, Jingchun Wang, Peihao Dong, Fuhui Zhou and Qihui Wu (Nanjing University of Aeronautics and Astronautics, China)

Poster No.: 8
Paper ID: 1571183796
Paper Title: Active Sensing for Localization with Reconfigurable Intelligent Surface Based on LSTM Network
Authors: Hongzhi Bian and Jianxun Zhang (Construction Branch of State Grid Fujian Electric Power Co., Ltd., Fuzhou, China); Chaozhang Yu (State Grid Fujian Electric Power Co., Ltd., Fuzhou, China); Lingfeng Zhu, Yufan Yan, Yue Yu and Linyu Lin (Construction Branch of State Grid Fujian Electric Power Co., Ltd., Fuzhou, China); Rongkang Zhou (Jiangsu Toyou Research Institute of Information Intelligence & Technology, China)

Poster No.: 9
Paper ID: 1571181538
Paper Title: A Framework for ISAC Systems Using Non-Uniformly Distributed Sensing Resource
Authors: Boshi Wang, Cunhua Pan, Hong Ren and Zhiyuan Yu (Southeast University, China)

Poster No.: 10
Paper ID: 1571185846
Paper Title: Domain-Adaptive Modulation Recognition via Multi-Space Mapping
Authors: Jing Yuan, Hanmin Sheng, Rui Cao, Zixin Wang and Zihan Xu (University of Electronic Science and Technology of China, China)

Poster No.: 11
Paper ID: 1571186013
Paper Title: Hierarchical QAM Based Downlink Multiple Access for Multi-Antenna Systems
Authors: Jie Huang and Ming Zhao (University of Science and Technology of China, China); Shengli Zhou (University of Connecticut, USA); Ling Qiu and Jinkang Zhu (University of Science and Technology of China, China)

Poster No.: 12
Paper ID: 1571190190
Paper Title: Joint Optimization of Routing, Compression, and Trajectory for TaskDriven UAV Networks
Authors: Jihang Li, Fan Wu, Ke Zhang, Xiaoyan Huang and Supeng Leng (University of Electronic Science and Technology of China, China)

Poster No.: 13
Paper ID: 1571190279
Paper Title: Secure Communications via Two-Phase Jamming Beamforming in UAV Relaying Networks
Authors: Xiaozheng Gao, Yalin Zhang, Qi Shen and Xuhui Ding (Beijing Institute of Technology, China); Qinglin Zhu (China Research Institute of Radiowave Propagation, China); Dusit Niyato (Nanyang Technological University, Singapore); Kai Yang (Beijing Institute of Technology, China)

Poster No.: 14
Paper ID: 1571195868

Paper Title: Multi-scale Bidirectional Cross-modal Attention Network for RGB-D Semantic Segmentation

Authors: Wanyu Yan, Yingchi Mao and Zhenxiang Pan (Hohai University, China); Bingbing Nie (Huaneng Lancang Hydropower INC, China); Shi Chen, Yanfang Wang and Qian Huang (Hohai University, China)

Poster No.: 15

Paper ID: 1571188590

Paper Title: Performance Analysis of UAV-Assisted Dual-Hop Optical Wireless Communication System with Spatial Diversity

Authors: Pu Li (Southeast University, China); Zaichen Zhang (National Mobile Communications Research Laboratory, Southeast University, China)

Poster Sessions

Session III

Time	14:00-15:00, October 24, 2025	Venue	Foyer

Poster No.: 1

Paper ID: 1571179176

Paper Title: Differentiable Channel Knowledge Map Reconstruction via Kolmogorov-Arnold Networks

Authors: Le Zhao, Silu Zhao, Xinyi Wang, Jingxuan Huang and Fei Zesong (Beijing Institute of Technology, China); Yong Zeng (Southeast University, China)

Poster No.: 2

Paper ID: 1571180899

Paper Title: Received Signal Strength Based Beam Space Traffic Prediction in 5G Systems

Authors: Shuaiqi Shi, Caihao Weng and Ying Wang (Beijing University of Posts and Telecommunications, China)

Poster No.: 3

Paper ID: 1571184162

Paper Title: Wideband Spectrum Sensing Based on CNN-Transformer Hybrid Architecture

Authors: Maolin Li, Chunjing Hu, Tao Peng and Wenbo Wang (Beijing University of Posts and Telecommunications, China)

Poster No.: 4

Paper ID: 1571185706

Paper Title: End-to-End Learning of Joint Transceiver Design for Multiuser Massive MIMO-OFDM Systems

Authors: Jiali Xi, Shuntian Zheng, Haoge Jia, Sheng Wu, Zhe Ji and Ailing Xiao (Beijing University of Posts and Telecommunications, China)

Poster No.: 5

Paper ID: 1571184318

Paper Title: Federated Contrastive Learning from Unlabeled Streaming Data in AI-RAN

Authors: Haoran Wen and Zhiheng Guo (Sun Yat-sen University, China); Chenyuan Feng (University of Exeter, United Kingdom (Great Britain)); Xiang Chen (Sun Yat-sen University, China); Tony Q. S. Quek (Singapore University of Technology and Design, Singapore); Xijun Wang (Sun Yat-sen University, China)

Poster No.: 6

Paper ID: 1571173875

Paper Title: SATENet: Zenith-Angle-Assisted and Sparse-Aware CSI Prediction for LEO Satellite mMIMO Systems

Authors: Junzhe Wang, Wenpeng Jing, Zhaoming Lu, Shuyue Zhao and Shirui Zuo (Beijing University of Posts and Telecommunications, China)

Poster No.: 7

Paper ID: 1571178671

Paper Title: Generative Model-Based Urban Blockage Modeling for Non-Line-of-Sight Networks with Partial Spatial Information

Authors: Yulong Yi, Qinwen Ji and Yongxu Zhu (Southeast University, China); Guoxin Li (Army Engineering University of PLA, China); Lizhe Liu (55th Research Institute of China Electronics Technology Group Corporation, China); Jin Chen (Army Engineering University of PLA, China)

Poster No.: 8

Paper ID: 1571173367

Paper Title: DRL-Based Cellular Connected UAV Inspection System with Integrated Sensing and Communication

Authors: Zhijie Wang, Fahui Wu and Yu Xu (Nanchang University, China); Yipeng Liang (Wuhan University, China & Nanchang University, China); Dingcheng Yang and Lin Xiao (NanChang University, China)

Poster No.: 9

Paper ID: 1571186309

Paper Title: Cohesion, Exploration, and Alignment: Towards Resilient Swarm Network with Distributed Intelligence

Authors: Huan Lin, Lianghui Ding and Lin Wang (Shanghai Jiao Tong University, China)

Poster No.: 10

Paper ID: 1571186501

Paper Title: ISAC 3D Imaging in Smart Factories Assisted by Multipath Components

Authors: Han Wang, Yixin Zhang, Zhiqing Wei, Haotian Liu, Hui Yu, Dingyou Ma, Qixun Zhang and Zhiyong Feng (Beijing University of Posts and Telecommunications, China)

Poster No.: 11

Paper ID: 1571186934

Paper Title: Transformer and Multi-Scale GAT-Based DRL for SFC Deployment in LEO Satellite Networks

Authors: Liuyang Yi, Jiangtao Luo and Yongyi Ran (Chongqing University of Posts and Telecommunications, China)

Poster No.: 12

Paper ID: 1571191930

Paper Title: SynBEV: A Height-Depth Synergy Framework for Infrastructure-Centric Camera 3D Object Detection

Authors: Wenjie Ji, Jinkun Xu, Chunlin Li, Jie Hu and Ke Xiao (Chongqing Normal University, China)

Poster No.: 13

Paper ID: 1571181843

Paper Title: Research on UAV-Based Post-Disaster Emergency Communication Deployment Methods for Power Distribution Networks

Authors: Guo Yunfei (China Electric Power Research Institute, China); Gao Peng, Hao Jiakai and Bai Haoyang (State Grid Beijing Electric Power Company, China)

Poster No.: 14

Paper ID: 1571184674

Paper Title: Transceiver Design for Thermal Noise Modulation Based MISO Communication Systems

Authors: Zhicheng Li, Hong Shen and Zhou Yang (Southeast University, China)

Poster No.: 15

Paper ID: 1571185744

Paper Title: Enhancing ISAC Performance in Low-Altitude Economy with Fluid Antennas

Authors: Yiping Zuo, Yupeng Nie and Hengyi Liu (Nanjing University of Posts and Telecommunications, China); Lingfeng Zuo (Jinling Institute of Technology, China); Chen Dai (Nanjing University of Posts and Telecommunications, China)

Poster Sessions

Session IV

Time	16:00-17:00, October 24, 2025	Venue	Foyer

Poster No.: 1

Paper ID: 1571186071

Paper Title: IPv6 Interoperability Assessment for Heterogeneous Systems: Addressing Cross-Platform Communication Barriers in Next-Generation Networks

Authors: Ke Lu (Nanjing Vocational Institute of Mechatronic Technology, China); Xin Wang and Meng Yao (Zhejiang Dahua Technology Co. Ltd, China); Shuyi Wang (Nanjing Normal University of Special Education, China)

Poster No.: 2

Paper ID: 1571186092

Paper Title: Research on IPv6 Compatibility and Stability Testing Methods for Multi-Network Interfaces in IoT Terminals

Authors: Ke Lu, Ben Wang, Jiankun Shao and Junjiao Li (Nanjing Vocational Institute of Mechatronic Technology, China)

Poster No.: 3

Paper ID: 1571186396

Paper Title: A β-VAE-WGAN-Based Traffic Augmentation Model for Enhanced IoT Intrusion Detection

Authors: Tong Liu and Yu Wu (Chongqing University of Posts and Telecommunications, China); Li Zhou (National University of Defense Technology, China); Mengting He, Gao Chen and Xuanrui Xiong (Chongqing University of Posts and Telecommunications, China)

Poster No.: 4

Paper ID: 1571186677

Paper Title: DRL-Based Adaptive RIS Phase Shift Optimization for Multi-User MIMO Systems

Authors: Qilie Liu, Lu Wang, Yanan Xin and Xuan Wang (Chongqing University of Posts and Telecommunications, China)

Poster No.: 5

Paper ID: 1571179262

Paper Title: A DRL-Based Low Detection Probability Dynamic Area Coverage Algorithm for UAV Swarms

Authors: Yuyang Yao, Gaoqing Shen, Pan Cao, Sheng Tang and Entao Tuo (Nanjing University of Aeronautics and Astronautics, China)

Poster No.: 6

Paper ID: 1571186673

Paper Title: A Cross-Perspective Annotated Dataset for Dynamic Object-Level Interest Encoding in Cloud Gaming

Authors: Hongqin Lei, Haowei Tang, Xuan Zhang, Sai Li and Zhe Zhang (Nanjing University of Posts and Telecommunications, China)

Poster No.: 7

Paper ID: 1571186239

Paper Title: Joint Delay and Energy Optimization in MEC-Enabled Multi-UAV Semantic Communication Systems

Authors: Shihan Zhang, Haibo Dai and Haitao Zhao (Nanjing University of Posts and Telecommunications, China)

Poster No.: 8

Paper ID: 1571190600

Paper Title: An Adversarial Embodied Intelligent Resource Allocation Scheme for Anti-jamming Spectrum Sharing UAV Networks

Authors: Rui Ding and Zhijie Zeng (Nanjing University of Aeronautics and Astronautics, China); Haotian Quan (The University of Sydney, Australia); Yuhang Wu (NanJing University of Aeronautics and Astronautics, China); Marco Giordani (University of Padova, Italy); Qihui Wu (Nanjing University of Aeronautics and Astronautics, China); Michele Zorzi (University of Padova, Italy)

Poster No.: 9

Paper ID: 1571173820

Paper Title: Probabilistic Semantic Communication for Image Transmission via Scene Graph Compression

Authors: Chen Zhu, Zhouxiang Zhao, Siyun Liang, Zhicai Jiang and Zhaohui Yang (Zhejiang University, China); Jianrong Bao (Hangzhou Dianzi University, China); Zhaoyang Zhang (Zhejiang University, China)

Poster No.: 10

Paper ID: 1571186088

Paper Title: MIMO Symbol Detection via Deep Learning with Diverse Hidden Layer Update Strategies

Authors: Jiachen He and Hui Li (University of Science and Technology of China, China)

Poster No.: 11

Paper ID: 1571186355

Paper Title: Detecting Suspicious Wireless Transmission by an Aerial Base Station

Authors: Xu Jiang, Xiuzhao Ji and Hongjuan Yang (Harbin Institute of Technology (Weihai), China); Bo Li (Harbin Institute of Technology, China); Jie Tang (South China University of Technology, China);

Poster No.: 12

Paper ID: 1571186798

Paper Title: Mapping Relationships of the 6G Pervasive Channel Model Parameters, Statistical Properties, and System Performance in Terrestrial Scenarios

Authors: Xueke Dong (Southeast University, China); Zhen Lv (Purple Mountain Laboratories, China); Zheng-Rong Jin (Southeast University, China); Cheng-Xiang Wang (Southeast University, China & Purple Mountain Laboratories, China)

Poster No.: 13

Paper ID: 1571183634

Paper Title: X-MIND: A XGBoost-Based Multi-Classification Detector for NAS Attacks in Cellular Networks

Authors: Quan Peng (National University of Defense Technology, China & College of Electronic Science and Technology, China); Shan Wang (National University of Defense Technology, China & University of Montreal, Canada); Jinkun Zhu (National University of Defense Technology, China); Jian Wang (University of Calgary, China)

Poster No.: 14

Paper ID: 1571185990

Paper Title: Resource Allocation for Hierarchical QAM-Based Multiple Access with Proportional Rate Constraints

Authors: Xuan Liu, Ming Zhao and Jinkang Zhu (University of Science and Technology of China, China)

Poster No.: 15

Paper ID: 1571189736

Paper Title: Energy-Efficient Cooperative Secure Transmission in UAV-Enabled ISAC Wireless Networks with Mobile Eavesdroppers

Authors: Tianyi Zheng, Xin Liu and Zechen Liu (Dalian University of Technology, China); Bao Peng (Chongqing University of Posts and Telecommunications, China)

Poster Sessions

Session V

Time	09:00-10:00, October 25, 2025	Venue	Foyer

Poster No.: 1

Paper ID: 1571170271

Paper Title: Dynamic Resource Selection for High-Speed NOMA Networks: A Mean Field Multi-Agent Learning Approach

Authors: Hongwei Gao, Haibo Wang and Qihong Duan (Beijing Jiaotong University, China)

Poster No.: 2

Paper ID: 1571185815

Paper Title: A Deep Reinforcement Learning Framework for the Latency-Energy Trade-off in Drone-Enabled Networks

Authors: Yiwei Zhang and Yaping Li (Beijing University of Posts and Telecommunications, China); Yong Lee (Yonsei University, Korea (South)); Qing Yan and Yang Yang (Beijing University of Posts and Telecommunications, China)

Poster No.: 3

Paper ID: 1571186868

Paper Title: Denoising and Augmentation: A Dual Use of Diffusion Model for Enhanced CSI Recovery

Authors: Yupeng Li (China Mobile Research Institute, China); Ruhao Zhang (Graduate College for Engineers, China); Yitong Liu (Beijing University of Posts and Telecommunications, China); Chunju Shao (Future Research Lab, China); Jing Jin (CMRI, China); Shijian Gao (The Hong Kong University of Science and Technology (Guangzhou), China)

Poster No.: 4

Paper ID: 1571190505

Paper Title: HetRGNN-MARL: A Graph-Enhanced Multi-Agent Reinforcement Learning Approach for Resource Allocation and Trajectory Optimization in UAV-Assisted ISAC Networks

Authors: Jian Zhang and Lianming Xu (Beijing University of Posts and Telecommunications, China); Ruoguang Li (Hohai University, China); Dingyou Ma (Beijing University of Posts and Telecommunications, China); Yingyan Hou (Aerospace Information Research Institute, China); Li Wang (Beijing University of Posts and Telecommunications, China)

Poster No.: 5

Paper ID: 1571189630

Paper Title: A Design of Wireless Meta Semantic Communication System: An Abstract Approach

Authors: Yashuang Guo and Lintao Gong (Beijing Jiaotong University, China); F. Richard Yu (Carleton University, Canada); Victor C.M. Leung (The University of British Columbia, Vancouver, Canada)

Poster No.: 6

Paper ID: 1571185867

Paper Title: Latency Optimization in D2D-Assisted MEC System with Short Packet Communication via Reinforcement Learning

Authors: Mengqi Wang and Yan Cai (Nanjing University of Posts and Telecommunications, China)

Poster No.: 7

Paper ID: 1571190767

Paper Title: DRL-Empowered Joint Semantic Representation and Resource Allocation for Multi-User Multi-Task Communication Systems

Authors: Hangyu Ren and Juan Liu (Ningbo University, China); Richeng Jin (Zhejiang University, China); Xijun Wang (Sun Yat-sen University, China)

Poster No.: 8

Paper ID: 1571190527

Paper Title: Dynamic User Positioning and Environment Sensing with NLOS Multipath Signals

Authors: Zhixian Kong, Zhaoyang Zhang, Zijie Liu, Rui Wang and Xin Tong (Zhejiang University, China)

Poster No.: 9

Paper ID: 1571191790

Paper Title: Multi-View FMCW Radar Sensing with Pose Calibration

Authors: Fandong Kong, Zhaoyang Zhang and Ziheng Ding (Zhejiang University, China)

Poster No.: 10

Paper ID: 1571161531

Paper Title: Deep Reinforcement Learning Based Global-Local Collaborative Trajectory Planning Algorithm

Authors: Peiquan Rao and Ang Li (Nanjing University of Posts and Telecommunications, China)

Poster No.: 11

Paper ID: 1571186414

Paper Title: Sample Selection and Resource Management for Online Split Learning in UAV Swarm

Authors: Zang Boyu and Yuben Qu (Nanjing University of Aeronautics and Astronautics, China); Tao Wu (National University of Defense Technology, China); Chao Dong and Qihui Wu (Nanjing University of Aeronautics and Astronautics, China)

Poster No.: 12

Paper ID: 1571190563

Paper Title: ICAP: A Two-tier Scope Compensation Wi-Fi RTT Indoor Localization System Based on LOS/NLOS Identification

Authors: Minghui Ma, Yunfan Jiang, Hao Zhang and Xin Deng (Chongqing University of Posts and Telecommunications, China); Kai Liu (Chongqing University, China)

Poster No.: 13

Paper ID: 1571186487

Paper Title: Localizing High-Fidelity Cardiac Reflections for Radio Sensing via Deep Inter-Beat Learning

Authors: Xinmeng Cai (University of Science and Technology of China, China); Jinbo Chen (Nanyang Technological University, Singapore); Qibin Sun and Yan Chen (University of Science and Technology of China, China)

Poster No.: 14

Paper ID: 1571189654

Paper Title: Supervised Learning Method for Fingerprint Generation in Indoor Scenes: A Case Study

Authors: Yu Zhou and Hui Zhang (Nanjing University of Posts and Telecommunications, China); Yuanji Shi (Zhongke Nanjing Mobile Communication & Computing Innovation Institute, China); Ruiyang Li (Army Engineering University, China); Pingping Tang (Anhui Normal University, China); Junbo Cheng (Shandong University of Science and Technology, China)

Poster No.: 15

Paper ID: 1571190311

Paper Title: Offline-Online Mixed Trajectory and Action Planning for Multi-UAV Collaborative Sensing over Unpredictable Points of Interest

Authors: Wenhan Jia (XiaMen University, China); Minghui Liwang and Houyi Qi (Tongji University, China); Yuhan Su (Xiamen University, China)

Poster Sessions

Session VI

Time	11:00-12:00, October 25, 2025	Venue	Foyer

Poster No.: 1

Paper ID: 1571190545

Paper Title: V2X Resource Allocation Algorithm Based on Multi-Agent Deep Reinforcement Learning with Dynamic Reward Weighting

Authors: Yiyuan Feng, Hui Zhi and Jiawei Li (Anhui University, China)

Poster No.: 2

Paper ID: 1571186941

Paper Title: A Dense False-Target Strategy via Adjusted ISRJ/ISNPRJ Parameters for CFAR Threshold Manipulation

Authors: Yifeng Qin, Qinglou Zhang and Yuan Chen (Chongqing University of Posts and Telecommunications, China); Mingfeng Wu (Hunan University, China); Li Zhou (National University of Defense Technology, China); Ling Yi (Chongqing University of Posts and Telecommunications, China)

Poster No.: 3

Paper ID: 1571190250

Paper Title: Joint Optimization of Routing and Power Control in UAV Networks via Graph Reinforcement Learning

Authors: Chenchen Wang (Shenzhen University, China); Yun Liu (The 54th Research Institute of China Electronics Technology Group Corporation, China); Ruiliang Song (The 55th Research Institute of CETC, China); Xiaoyi Yu (Beijing University of Posts and Telecommunications, China); Xijun Wang and Xiang Chen (Sun Yat-sen University, China); Jing Liu (Shenzhen University, China)

Poster No.: 4

Paper ID: 1571191751

Paper Title: Leveraging Local and Global Spatiotemporal Interactions for Pedestrian Trajectory Prediction

Authors: Mengyang Liu and Xuanrui Xiong (Chongqing University of Posts and Telecommunications, China); Li Zhou (National University of Defense Technology, China); Mengru Liu (Chongqing University of Posts and Telecommunications, China); Mingfeng Wu (Hunan University, China); Amr Tolba (King Saudi University, Saudi Arabia)

Poster No.: 5

Paper ID: 1571182758

Paper Title: A Two-Branch Feature Fusion Based No-Reference Image Quality Assessment Algorithm

Authors: Ming Hou, Zhidan Ye, Zhenxing Zhu, Haiming Li and Tianqi Yu (Soochow University, China); Jianling Hu (Wuxi University & Soochow University, China)

Poster No.: 6

Paper ID: 1571186701

Paper Title: Feature-Space Based Joint Source-Channel Coding for Video Wireless Transmission

Authors: Yanbing Wu, Haoshuo Zhang, Jianhua Mo and Meixia Tao (Shanghai Jiao Tong University, China)

Poster No.: 7

Paper ID: 1571188894

Paper Title: Semantic Communication-Enhanced Cooperative Object Detection Framework in IoV

Authors: Lekang Ye, Puning Zhang and Guangqian Wang (Chongqing University of Posts and Telecommunications, China); Jie Yang and Wei Xie (Chongqing Chenling Technology Co., Ltd., China); Zhigang Yang (Chongqing University of Posts and Telecommunications, China)

Poster No.: 8

Paper ID: 1571188899

Paper Title: SemCom-Enabled Cross-Modal Searchable Encryption for IoT

Authors: Yingjie Wang and Puning Zhang (Chongqing University of Posts and Telecommunications, China); Jie Yang and Wei Xie (Chongqing Chenling Technology Co., Ltd., China); Zhigang Yang and Jing Yang (Chongqing University of Posts and Telecommunications, China)

Poster No.: 9

Paper ID: 1571165131

Paper Title: An Improved ESPRIT-Based Algorithm for Coherent Time of Arrival Estimation

Authors: Qingyue Huang and Zhiwen Pan (Southeast University, China)

Poster No.: 10

Paper ID: 1571172831

Paper Title: Generalized Receive Space Shift Keying Empowered by Reconfigurable Intelligent Surfaces

Authors: Xiangyi Lin and Qiang Li (Jinan University, China); Lei Tang (Guang'an Municipal Audit Bureau, China); Miaowen Wen (South China University of Technology, China); Xiaoyu Dang (Hangzhou Dianzi University, China)

Poster No.: 11

Paper ID: 1571174469

Paper Title: Collaborative Design of Antenna Array Topology and AP Deployment for Distributed MIMO Systems

Authors: Lihua Pang and Haobing Jin (Xi'an University of Science and Technology, China); Yang Zhang (Xidian University, China); Zenghong Ke and Ao Du (Xi'an University of Science and Technology, China); Yijian Chen (ZTE Corporation, China); Anyi Wang (Xi'an University of Science and Technology, China)

Poster No.: 12

Paper ID: 1571178877

Paper Title: Enhancing Adversarial Robustness in Radio Frequency Fingerprint Identification via Logit-Oriented Regularization

Authors: Di Wei, Zhisheng Yao and Hengda Su (Nanjing University of Posts and Telecommunications, China);

Xixi Zhang (Hohai University, China); Qi Xuan (Zhejiang University of Technology, China); Guan Gui (Nanjing University of Posts and Telecommunications, China)

Poster No.: 13

Paper ID: 1571190288

Paper Title: Survey of HMIMO Transmission Schemes: System Modeling, Beamforming and Performance Analysis

Authors: Yiting Chen, Yuxin Xie, Zhili Long, Shuo Lv, Yu Qian and Tongrui Zhang (Southeast University, China); Pengcheng Zhu (National Mobile Communications Research Laboratory, Southeast University, China)

Poster No.:14

Paper ID: 1571190451

Paper Title: Perception Utility-Driven Resource Allocation for Multi-Modal Data Transmission

Authors: Yanghan Wang, Yuchuan Ye, Youjia Chen and Boyang Guo (Fuzhou University, China); Changyang She (Harbin Institute of Technology (Shenzhen), China); Jinsong Hu (Fuzhou University, China)

Poster No.: 15

Paper ID: 1571185703

Paper Title: A Multi-Scale Feature Enhanced YOLO model with Spatial High-Frequency Attention for UAV Object Detection

Authors: Kun Zhou and Hao Luo (Chongqing University of Posts and Telecommunications, China); Li Zhou (National University of Defense Technology, China); Tianyu Li (Chongqing University of Posts and Telecommunications, China); Mingfeng Wu (Hunan University, China); Xuanrui Xiong (Chongqing University of Posts and Telecommunications, China)

Poster Sessions

Session VII

Time	14:00-15:00, October 25, 2025	Venue	Foyer

Poster No.: 1
Paper ID: 1571187389
Paper Title: Distributed Resource Block Allocation for Wideband Cell-Free System
Authors: Yang Ma, Shengqian Han and Chenyang Yang (Beihang University, China)

Poster No.: 2
Paper ID: 1571172892
Paper Title: AI-Based Resource Scheduling in 5G NOMA Cellular Networks
Authors: Mincheng Zhao (CETC20, China & BUPT, China); Mingqing Han (China Mobile Communications Group, China); Ligang Du, Jiyuan Pan, Yongfeng Yan and Fuqiang Li (CETC20, China & BUPT, China);

Poster No.: 3
Paper ID: 1571185112
Paper Title: MLGC-Net: A Lightweight Network with IQ Fusion for Automatic Modulation Recognition
Authors: QiEr Qin, Qi Tang, Shuangmin Zhou, Pengshan Ji, Dongtang Ma and Jibo Wei (National University of Defense Technology, China)

Poster No.: 4
Paper ID: 1571190947
Paper Title: Communication-Efficient Collaborative LLM Inference via Distributed Speculative Decoding
Authors: Ce Zheng and Tingting Yang (Peng Cheng Laboratory, China)

Poster No.: 5
Paper ID: 1571180345
Paper Title: A Lightweight Authentication and Key Agreement Protocol Design for FANET
Authors: Yao Wu, Ziye Jia, Qihui Wu and Yian Zhu (Nanjing University of Aeronautics and Astronautics, China)

Poster No.: 6
Paper ID: 1571186118
Paper Title: An Attention-Enhanced Transformer for Channel Prediction in High-Frequency Indoor Scenarios
Authors: Chenliang Li, Jin Xu, Xuefei Zhang and Xiaofeng Tao (Beijing University of Posts and Telecommunications, China)

Poster No.: 7
Paper ID: 1571174698
Paper Title: A Single-Card Wi-Fi-Based System for 3D Localization Using Coordinated Antenna Arrays
Authors: Fuhai Wang, Zhe Li, Rujing Xiong, Tiebin Mi and Robert C. Qiu (Huazhong University of Science and Technology, China)

Poster No.: 8
Paper ID: 1571175968
Paper Title: Aperture Efficiency-Based Multi-Hop RIS Design for Wireless Communications
Authors: Rujing Xiong, Jianan Zhang, Jialong Lu, Xuehui Dong and Kai Wan (Huazhong University of Science

and Technology, China); Gui Zhou (Friedrich-Alexander-University Erlangen-Nürnberg, Germany); Fuhai Wang and Robert Caiming Qiu (Huazhong University of Science and Technology, China)

Poster No.: 9

Paper ID: 1571184172

Paper Title: Multi-Task Panoptic Perception of Autonomous Vehicle Based on Federated Learning

Authors: Ming Chen and Xiaoge Huang (Chongqing University of Posts and Telecommunications, China); Zhen Dai (Chongqing Digital Transportation Industry Group Co., Ltd., China); Qianbin Chen (Chongqing University of Posts and Telecommunications, China)

Poster No.: 10

Paper ID: 1571184465

Paper Title: A Prototype of AI-Generated Network Protocol and Capability Maturity Evaluation

Authors: Yi Wang, Ziyue Wang, Wennai Wang and Wei Wu (Nanjing University of Posts and Telecommunications, China)

Poster No.: 11

Paper ID: 1571190827

Paper Title: QAT-DFL: A Communication Efficient Decentralized Federated Learning with Quantization-Aware Training Design

Authors: Xiang Fang, Li Chen and Huarui Yin (University of Science and Technology of China, China)

Poster No.: 12

Paper ID: 1571190906

Paper Title: Service-Aware Satellite Handover Based on Deep Reinforcement Learning

Authors: Wang Huang, Jiangtao Luo and Yongyi Ran (Chongqing University of Posts and Telecommunications, China)

Poster No.: 13

Paper ID: 1571192799

Paper Title: Task-Oriented Communications for Agentic IoT: An LLM-Driven QoS/Security Policy Generation via Dynamic Model Context Protocol

Authors: Shuaishuai Guo (Shandong University, China); Jiabing Zhu (Inspur Software Group Co., Ltd., China); Jia Ye (Chongqing University, China); Anbang Zhang (Shandong University, China); Geyong Min (University of Exeter, United Kingdom (Great Britain))

Poster No.: 14

Paper ID: 1571189313

Paper Title: Research on Mixed Flow Scheduling in 5G-TSN System Based on MCQF Mechanism

Authors: Guanzhi Wang, Zheng Sheng and Pengcheng Zhu (National Mobile Communications Research Laboratory and Southeast University, China)

Poster No.: 15

Paper ID: 1571185864

Paper Title: LOS and NLOS Fusion Localization in RIS-Aided Heterogeneous Networks

Authors: Lele Cong and Deshi Li (Wuhan University, China); Kaitao Meng (University of Manchester, United Kingdom (Great Britain)); Rui Wang and Liang Xu (Wuhan University, China)

Poster Sessions

Session VII

Time	16:00-17:00, October 25, 2025	Venue	Foyer

Poster No.: 1
Paper ID: 1571186052
Paper Title: FedMSG: Federated Multi-Scale Spatio-Temporal Graph Neural Network for EV Charging Demand Forecasting
Authors: Honghu Lan, Xiaoge Huang and Sa Xiao (Chongqing University of Posts and Telecommunications, China); Yi Tang (Chongqing Digital Transportation Industry Group Co, Ltd., China); Qianbin Chen (Chongqing University of Posts and Telecommunications, China)

Poster No.: 2
Paper ID: 1571191759
Paper Title: Dual-timescale Joint Service Caching and Computation Offloading Optimization in AIoT Systems
Authors: Qian Liu, Qiangmin Du and Qilie Liu (Chongqing University of Posts and Telecommunications, Chongqing, China)

Poster No.: 3
Paper ID: 1571192617
Paper Title: Resource Optimization for UAV-Aided ISAC Considering the Sensing-Communication Performance Trade-off
Authors: Zechen Liu, Xin Liu, Weidan Wang, Xuehao Feng and Tianyi Zheng (Dalian University of Technology, China)

Poster No.: 4
Paper ID: 1571186099
Paper Title: An Efficient Physical Layer Security Scheme Based on Beam Matching for AAV Ad Hoc Networks
Authors: Mingdong Zeng, Lin Bai, Jiaxing Wang, Xin Xie and Rui Han (Beihang University, China)

Poster No.: 5
Paper ID: 1571172852
Paper Title: Survival Prediction Accuracy vs. Tumor Segmentation: An Example of Diffuse Large B-Cell lymphoma
Authors: Yuhang Sun and Weiwen Cheng (Nanjing University of Posts and Telecommunication, China); Songwen Chen (Oxford Academy, USA); Wenzhuo Zhao and Yawen Fan (Nanjing University of Posts and Telecommunications, China); Jingyan Xu (Nanjing Drum Tower Hospital, China)

Poster No.: 6
Paper ID: 1571190777
Paper Title: Audio-Visual Semantic Transmission and Synchronization with Adaptive Video Bitrate Selection
Authors: Wenjia Zhang, Yantong Wang and Yiming Liu (Beijing University of Posts and Telecommunications, China)

Poster No.: 7
Paper ID: 1571184117
Paper Title: Wireless Semantic Communication in MIMO Systems: A Probability Distribution Approach

Authors: Xiang Wang, Yashuang Guo and Qingxiang Luo (Beijing Jiaotong University, China); F. Richard Yu (Carleton University, Canada)

Poster No.: 8
Paper ID: 1571185298
Paper Title: Channel Capacity Constrained Secure Semantic Communications Against Eavesdropping
Authors: Yuxiang Liu, Xu Wang, Zheng Shi, Jintao Wang and Guanghua Yang (Jinan University, China); Shaodan Ma (University of Macau, China)

Poster No.: 9
Paper ID: 1571185156
Paper Title: Joint Detection Based on Virtual Angular Domain Channels for Massive Grant-Free Access Systems
Authors: Shanshan Zhang (China Mobile Group Design Institute Co., Ltd., China); Peng Zhang and Jianhui Mao (China Mobile Communications Group, China); Qing Huang (China Mobile Communications Group Co., Ltd, China); Songtao Gao and Qixuan Zhang (China Mobile Group Design Institute Co., Ltd., China)

Poster No.: 10
Paper ID: 1571185318
Paper Title: Covert Communication for Dual-Sided Hybrid STAR-RIS Assisted Integrated Sensing and Communication Systems
Authors: Jiawei Lu, Fangqing Tan, Hongbin Chen and Shichao Li (Guilin University of Electronic Technology, China); Xingwang Li (Henan Polytechnic University, China)

Poster No.: 11
Paper ID: 1571185746
Paper Title: Accurate Positioning and Motion Detection by Neural Metalens-Integrated Camera
Authors: Chengyao Hao, Zhongyi Yuan, Ji Chen and Zaichen Zhang (Southeast University, National Mobile Communications Research Laboratory, China)

Poster No.: 12
Paper ID: 1571190113
Paper Title: Frequency Synchronization for OTFS-Based LEO Satellite Communication Systems
Authors: Xingwei Zhang, Hairong Wang and Jun Zhang (Nanjing University of Posts and Telecommunications, China); Yi Wu (Fujian normal University, China); Song Xing (California State University, Los Angeles, USA)

Poster No.: 13
Paper ID: 1571190934
Paper Title: Minimizing Energy Consumption for Movable Antenna-Assisted Mobile Edge Computing System
Authors: Xiaoxiao Jiang, Yejun He and Xiaowen Cao (Shenzhen University, China)

Poster No.: 14
Paper ID: 1571190954
Paper Title: Performance Optimization for UAV Cooperative Localization Based on Multidimensional Scaling
Authors: Wenkai Dou, Yujiao Zhu and Sihua Wang (Beijing University of Posts and Telecommunications, China); Zhaohui Yang (Zhejiang University, China); Meixuan Li and Changchuan Yin (Beijing University of Posts and Telecommunications, China)