Room 1

**Time: 10:40-12:10, 11 Aug, 2023**  
**Session: WCS1**  
**Session Chair: Li Wang**

10:40 Three-Dimensional Geometry-based Stochastic Model for Sub-Terahertz Air-to-Air UAV-MIMO channels  
Kai Zhang, Hua Wang and Changming Zhang (Zhejiang Lab, China); Xianbin Yu (Zhejiang University, China); Yuan Yuan Dong (Zhejiang Lab, China)

10:58 Strategic Planning for large-scale Deployment of a Geo-positioned Smart Metering Network  
Esteban Inga and Miguel Campaña (Universidad Politécnica Salesiana, Ecuador)

11:16 Minimizing Real-time Estimation Error in IoT Networks via Noisy Past Observations  
Xinbei Li and Xiaqi Qin (Beijing University of Posts and Telecommunications, China); Zijing Wang (University of Oxford, United Kingdom (Great Britain)); Yixuan Li and Nan Ma (Beijing University of Posts and Telecommunications, China); Ping Zhang (WTI-BUPT, China)

11:34 DFT-Based Channel Estimation with Iterative Denoising for OFDM-IM System  
Zhi Liu, Rugui Yao, Yongjia Zhu, Ye Fan and Xiaoya Zuo (Northwestern Polytechnical University, China)

11:52 Covert Transmission of RIS-Aided Communication Networks in the presence of Imperfect CSI and Hardware Impairments  
Wei Zhang and Liang Yang (Hunan University, China)

Room 1

**Time: 10:40-12:10, 11 Aug, 2023**  
**Session: WCS1**  
**Session Chair: Li Wang**

14:18 Multiuser MIMO Detection Via the EM Algorithm  
Bowen Wang, Shan Yang, Xiaoming She, Jianxiu Wang and Peng Chen (China Telecom Research Institute, China)

14:36 Metric Learning-Based Timing Synchronization by Using Lightweight Neural Network  
Chaojin Qing, Na Yang, Shuhai Tang, Chuangui Rao and Jiafan Wang (Xihua University, China); Hui Lin (Hangtiankaite Electromechanical Technology Co. Ltd, China)

15:12 Doppler Spread Analysis for Reducing High-Mobility Massive MIMO V2V Channel Time-Variation  
Zeyu Yan and Weile Zhang (Xi'an Jiaotong University, China)

Room 1

**Time: 13:30-15:30, 11 Aug, 2023**  
**Session: WCS2**  
**Session Chair: Hangguan Shan**

13:30 Data-Driven Non-orthogonal Random Access for Wireless IoT Networks (Invited talk)  
Lin Cai (Illinois Institute of Technology, USA)

14:00 RIS-Aided Communication with Compressed Sensing Channel Estimation: Analysis and Discrete Phase Shifts Design  
Xuying Chen and Wei Chen (Beijing Jiaotong University, China); Lei Cao (China Academy of Information and Communications Technology, China); Ning Wang (Zhengzhou University, China); Bo Ai (Beijing Jiaotong University, China)

14:18 Multiuser MIMO Detection Via the EM Algorithm  
Bowen Wang, Shan Yang, Xiaoming She, Jianxiu Wang and Peng Chen (China Telecom Research Institute, China)

14:36 Metric Learning-Based Timing Synchronization by Using Lightweight Neural Network  
Chaojin Qing, Na Yang, Shuhai Tang, Chuangui Rao and Jiafan Wang (Xihua University, China); Hui Lin (Hangtiankaite Electromechanical Technology Co. Ltd, China)

15:12 Doppler Spread Analysis for Reducing High-Mobility Massive MIMO V2V Channel Time-Variation  
Zeyu Yan and Weile Zhang (Xi'an Jiaotong University, China)
Reflective Beamforming Design for IRS-Aided MISO Multiuser Systems Under Statistical CSI
Wenwen Guan and Jiawen Tian (Jinan University, China); Theodoros Tsiftsis (University of Thessaly, Greece); Cunhua Pan (Southeast University, China)

16:54 Channel Estimation for Extremely Large-Scale Massive MIMO Systems in Hybrid-Field Channel
Xingxing Peng (Sun Yat-Sen University, China); Lei Zhao and Yuan Jiang (Sun Yat-sen University, China); Jingjing Liu (Sun Yat-Sen University, China); Weidain Li (GuangDong Communications and Networks Institute, China)

17:12 A Space-Time Non-Stationary and Consistent Model for 6G Multi-UAV Cooperative Channels
Ziwei Huang (Peking University, China); Lu Bai and Lizhen Cui (Shandong University, China); Tao Feng (PLA Academy of Military Sciences, China)

Room 2
Time: 10:40-12:10, 11 Aug, 2023
Session: MWN1
Session Chair: Yun Lin

10:40 Secure Downlink Transmission with IRS-assisted Eavesdropper and Legitimate User
Bing Wang, Huici Wu, Xiaofeng Tao and Jin Xu (Beijing University of Posts and Telecommunications, China)

10:58 Random Location Poisoning Backdoor Attack Against Automatic Modulation Classification in Wireless Networks
Zixin Li, Hang Jiang and Sicheng Zhang (Harbin Engineering University, China); Wei Xiang (La Trobe University, Australia); Yun Lin (Harbin Engineering University, China)

11:16 Impact of UAVs Equipped with ADS-B on the Civil Aviation Monitoring System
Yiyang Liao (Nanjing University of Aeronautics and Astronautics, China); Lei Zhang (NUAA, China); Ziyu Jia and Chao Dong (Nanjing University of Aeronautics and Astronautics, China); Yifan Zhang (Nanjing University of Aeronautics and Astronautics, China); Qihui Wu (Nanjing University of Aeronautics and Astronautics, China); Huiling Hu and Bin Wang (Middle-south Regional Air Traffic Management Bureau of CAAC, China)

11:34 Adversarial Domain Generalization Defense for Automatic Modulation Classification
Sicheng Zhang, Jie Liu and Zhida Bao (Harbin Engineering University, China); Shui Yu (University of Technology Sydney, Australia); Yun Lin (Harbin Engineering University, China)

11:52 A Lightweight Road Crack and Damage Detection Method Using Yolov5s for IoT Applications
Youxiang Huang, Zhengran He and Xiaohu Xu (Nanjing University of Posts and Telecommunications, China); Wenjie Qian (Nanjing Great Information Technology Co. Ltd, China); Feng Shi (Nanjing University of Posts and Telecommunications, China); Zhiyi Lu (Nanjing Great Information Technology Co. Ltd, China); Hong Wan (Nanjing University of Posts and Telecommunications, China); Guoyue Chen (Akita Prefectural University, Japan); Guan Gui (Nanjing University of Posts and Telecommunications, China)

Room 2
Time: 13:30-15:30, 11 Aug, 2023
Session: MWN2
Session Chair: Zhen Gao

13:30 Challenges and Solutions for the Next Generation Crowdsensing Networks (Invited talk)
Zhou Su (Xian Jiaotong University, China)

14:00 Transformer-based Joint Source Channel Coding for Textual Semantic Communication
Shicong Liu (Beijing Institute of Technology & City University of Hong Kong, China); Zhen Gao (Beijing Institute of Technology, China); Gaojie Chen (University of Surrey, United Kingdom (Great Britain)); Yu Su (China Mobile Chengdu Industry Research Institute, China); Lu Peng (China Mobile Institute of Research and Development, China)

14:18 Split Learning in Wireless Networks: A Communication and Computation Adaptive Scheme
Yuzhu Wang (Beijing University of Posts and Telecommunications, China); Kun Guo (East China Normal University, China); Wei Hong (Beijing Xiaomi Mobile Software, China); Qin Mu (Xiaomi Inc, China); Zhongyuan Zhao (Beijing University of Posts and Telecommunications, China)

14:36 Secure Two-Party Computation for Fingerprinting-based Indoor Localization
Xintong Wang and Ying Qiu (Tongji University, China); Jinming Hu (the Third Research Institute of Ministry, China); Lili Cao (Shanghai Aerospace Electronic Technology Institute, China); Yueyue Zhang (Southeast University, China); Yaping Zhu (Tongji University, China)

14:54 Performance Analysis for Configured Active RIS-Aided Communication Systems
Longze Li and Hai-tao Zhao (Nanjing University of Posts and Telecommunications, China); Yiyang Ni (Jiangsu Second Normal University, China); Xu Zhuoran, Wei Xun and Bangning
Xu (Nanjing University of Posts and Telecommunications, China)

15:12 Alarm Association Mining Model Based on Merging Strategy
Hong Zhu (China United Network Communications Group Co. Ltd Nanjing, China); Cheng Deng (China United Network Communications Group Co. Ltd, China); Yu Wang (China United Network Communications Group Co. Ltd Nanjing, China); Yixin Zhao (China United Network Communications Group Co. Ltd, China)

Room 2

Time: 16:00-17:30, 11 Aug, 2023
Session: MWN3
Session Chair: Yatian Li

16:00 Uplink NOMA Semantic Communications: Semantic Reconstruction for SIC
Bingcen Chen, Xiaoming Wang, Dapeng Li and Rui Jiang (Nanjing University of Posts and Telecommunications, China); Youyun Xu (Nanjing University of Posts and Telecommunications & Shanghai Jiao Tong University, China)

16:18 Power Control in Contention-Based Access for Haptic Communication: A Potential Game Approach
Jiahui Sui, Jie Liu, Yan Wu and Shengqian Yin (Army Engineering University of PLA, China)

16:36 Coverage in Cellular Networks with Cross-tier Interference Coordination for Mobile Users
Chengyao Li and Na Deng (Dalian University of Technology, China); Haichao Wei (Dalian Maritime University, China)

16:54 Channel Estimation with Predictor Antennas in High-Speed Railway
Zhaoming Dai and Jiakang Zheng (Beijing Jiaotong University, China); Jiaxun Li (National University of Defense Technology, China & University of Montreal, Canada); Xinjie Wang (SixFiveFiveTwoNine Institution, China); Jiayi Zhang (Beijing Jiaotong University, China); Bo Ai (Beijing Jiaotong University & State Key Lab of Rail Traffic Control and Safety, China)

17:12 A Joint Scheme on Spectrum Sensing and Access with Partial Observation: A Multi-Agent Deep Reinforcement Learning Approach
Yulong Zhang and Xuanheng Li (Dalian University of Technology, China); Haichuan Ding (Beijing Institute of Technology, China); Yuguang Fang (City University of Hong Kong, Hong Kong)

Room 3

Time: 10:40-12:10, 11 Aug, 2023
Session: AIN1
Session Chair: Rongfei Fan

10:40 Privacy Protection for Federated Learning in OFDM Aided Over-the-Air Computation System
Yujuan Wang, Rongfei Fan and Han Hu (Beijing Institute of Technology, China); Ning Zhang (University of Windsor, Canada)

10:58 Digital Twin-Based 3D Map Management for Edge-Assisted Mobile Augmented Reality
Conghao Zhou (University of Waterloo, Canada); Jie Gao (Carleton University, Canada); Mushu Li (Toronto Metropolitan University, Canada); Nan Cheng (Xidian University, China); Sherman Shen and Weihua Zhuang (University of Waterloo, Canada)

11:16 Channel Estimation Based on An Improved Conditional GAN for MIMO-OFDM Systems
Ming Ye, Cunhua Pan, Yinfei Xu and Ming Jiang (Southeast University, China); Xiao Liang (National Mobile Communication Research Lab., Southeast University, China); Chunguo Li (Southeast University, China)

11:34 Adaptive Digital Twin Server Deployment for Dynamic Edge Networks in IoT System
Hui Zhang (Nanjing University of Posts and Telecommunications, Nanjing, China); Tianxiang Luo and Qianqian Wang (Nanjing University of Posts and Telecommunications, China)

Room 3

Time: 13:30-15:30, 11 Aug, 2023
Session: CEC1
Session Chair: Xiaotian Zhou

13:30 Digital Twins are Driving the Future of Connected and Automated Vehicles (Invited talk)
Qingyang Song (Chongqing University of Posts and Telecommunications, China)

14:00 Wireless-Powered UAV-Assisted MEC: Joint Resource Allocation and Trajectory Optimization
Yue Zhang, Zhenyu Na, Hanhan Ren and Bin Lin (Dalian Maritime University, China)

14:18 Multipath Information Announcement Algorithm for Computing Power Network based on Self-Organizing Map Network
Kaixiang Li, Xing Zhang and Wenbo Wang (Beijing University of Posts and Telecommunications, China)

14:36 Model-heterogeneous Federated Learning
with Partial Model Training
Hongda Wu and Ping Wang (York University, Canada); Aswartha C V Narayan (Amrita University, India)
14:54 Hierarchical Federated Learning for Heterogeneous Features and Distributed Data in IoT Networks
Leyi Wang and Lingya Liu (East China Normal University, China); Yanlin Lu, Chenyu Zhang and Yongqing Zheng (China United Network Communication Co, China); Jing Xu (East China Normal University, China)

15:12 Energy Consumption Minimization for Distributed Microservice-Aware Wireless Cellular Networks
Yue Shan (Nanjing University of Posts and Telecommunications, China); Yaru Fu (Hong Kong Metropolitan University, China); Qi Zhu (Nanjing University of Posts and Telecommunications, China)

Room 3
Time: 16:00-17:30, 11 Aug, 2023
Session: IOT1
Session Chair: Zhiqing Tang
16:00 Wireless Powered Backscatter Communications with Spatially Random Tags
Yingtong Liu (Northwest Normal University, China); Yinghui Ye (Xi'an University of Posts and Telecommunications, China); Xingwang Li (Henan Polytechnic University, China); Zhongyu Ma (Northwest Normal University, China); Zhiyang Zhou (Lan Zhou Jiaotong University, China)

16:18 Online Container Scheduling for Low-Latency IoT Services in Edge Cluster Upgrade: A Reinforcement Learning Approach
Hanshuai Cui and Zhiqing Tang (Beijing Normal University, China); Jiong Lou (Shanghai Jiao Tong University, China); Weijia Jia (Beijing Normal University, China)

16:36 Joint Optimization of Service Placement and Computation Offloading for Mobile Edge Computing
Huazheng Liu (Harbin Institute of Technology, China); Zhizongkai Wang, Jiaqi Wu and Lin Gao (Harbin Institute of Technology, Shenzhen, China)

16:54 Energy-Aware Sensor Scheduling and Opportunistic Transmission for State Estimation in Industrial IoT Systems
Zexin Qiao, Ling Lyu and Yanpeng Dai (Dalian Maritime University, China); Nan Cheng (Xidian University, China); Sherman Shen (University of Waterloo, Canada)

17:12 Aging-aware Incentive Mechanism Design for Federated Learning in Industrial Internet of Things
Shuo He and Chu Wang (Zhengzhou University, China); Hui Tian (Beijing University of posts and telecommunications, China); Xiaoheng Jiang, Ruijie Zhu and Mingliang Xu (Zhengzhou University, China)

Room 4
Time: 10:40-12:10, 11 Aug, 2023
Session: SPC1
Session Chair: Liangtian Wan
10:40 RIS Design for CRB Optimization in Source Localization with Electromagnetic Interference
Yuhua Jiang (Tsinghua University, China); Wanmai Yuan (Information Science Academy of CETC, China); Feifei Gao (Tsinghua University, China)

Peixia Lyu, Yue Zhao, Zen Li and Chao Wang (Xidian University, China)

11:16 MM-APS-SCENT: A Robust Parameter Estimation Enabled Target Transmitter Localization Framework
Xudong Li (School of Electronics and Information, Northwestern Polytechnical University, China); Ye Fan, Rugui Yao, Peng Wang, Xiaoya Zuo and Jiayu Wang (Northwestern Polytechnical University, China); Yi Xie (Xian Shiyou University, China)

11:34 A Covariance Absolute Value Detection Algorithm Exploiting Generalized Stochastic Resonance
Hongyu Xu (Sun Yat-Sen University, China); Yuan Jiang and Lei Zhao (Sun Yat-sen University, China); Jingjing Liu (Sun Yat-Sen University, China)

11:52 SRS-based Wideband AoA Estimation Method in 5G New Radio
Keke Hu and Wenxuan Li (Tsinghua University, China); Qianxi Lu (OPPO Standards Research Center, China); Cong Shi (OPPO, China); Bobai Zhao (Beijing Information Science and Technology University, China); Yuan Shen (Tsinghua University, China)

Room 4
Time: 13:30-15:30, 11 Aug, 2023
Session: ISC1
Session Chair: Min Jia
13:30 Edge Computing assisted efficient resource management in Collaborative Satellite and Terrestrial Systems (Invited talk)
Min Jia (Harbin Institute of Technology, China)

14:00 Referring Image Segmentation via Text Guided Multi-Level Interaction
Shuang Qiu and Weijie Wang (Taiyuan University of Technology, China)

14:18 MicEye: Locating Sound Source in 3D with Small-size Microphone Array
Zhaohui Li, Yongmin Zhang, Chengjun Li, Haocheng Zang and Wei Wang (Central South University, China)

14:36 Indoor Human Trajectory Reconstruction via Multi-link mmWave Passive Sensing System
Renqi Chen (Southern University of Science and Technology, China)

14:54 iCar: Multi-modal Learning-Inspired Vehicle Owner Recognition Based on FMCW Radar in Internet of Things
Shuailshuai He and Yu Wang (Northwest University, China); Xueping Du (Sichuan Agriculture University, China); Zhenwen Gui (China Electronics Technology Group Corporation NO. 7 Research Institute, China); Xujia Ren and Xiaoyan Yin (Northwest University, China)

15:12 Enhancing Water Pollutant Detection with few Training Samples using Feature Image and Acoustic Signals
Jie Zhang (Xi'an University of Posts & Telecommunications, China); Kexin Zhou (Xian University of Posts and Telecommunications, China); Zhongmin Wang (Xi'an University of Posts and Telecommunications, China); Lei Xie and Lei Tang (Xian University of Posts and Telecommunications, China)

Room 4

Time: 16:00-17:30, 11 Aug, 2023
Session: NGN1
Session Chair: Chao Li

16:00 Semantic Communication on Multi-Hop Concatenated Relay Networks
Yiran Yin (Huazhong University of Science and Technology, China); Likun Huang (Wuhan Institute of Technology, China); Qiang Li and Bing Tang (Huazhong University of Science and Technology, China); Ashish Pandharipande (NXP Semiconductors, The Netherlands); Xiaohu Ge (Huazhong University of Science & Technology, China)

16:18 Link State Based Routing and Scheduling

Co-Design of Time-Triggered Traffic in Time-Sensitive Networking
Xiangcheng Wang, Ju Liu, Zheng Dong, Ziyu Li, Qian Zhang and Lina Zheng (Shandong University, China)

16:36 Contact-aware Multiple-Layer CHORD for routing in Large-scale Satellite Networks
Han Li (Harbin Institute of Technology (Shenzhen), China); Yue Li (Harbin Institute of Technology, Shenzhen, China); Qinyu Zhang (Shenzhen Graduate School, Harbin Institute of Technology, China); Zhihua Yang (Harbin Institute of Technology, China)

16:54 An Effective Resource Deployment Scheme for IoTs Devices with Federated Learning
Yongmin Zhang, Zhipeng Tang and Jianxi Chen (Central South University, China); Huilin Li (Central South University, Taiwan); Zhaohui Li (Central South University, China)

Room 5

Time: 10:40-12:10, 11 Aug, 2023
Session: MUC1
Session Chair: Yu Huang

10:40 QPCR: A Power Controlled Routing Protocol Based On Q-learning For Energy-constrained Underwater Wireless Sensor Networks
Yuan Yudong and Shanshan Song (Jilin University, China); Cangzhu Xu (JiLin University, China); Jun Liu (Beihang University & Smart Ocean Technology Co., Ltd, China); Jun-Hong Cui (University of Connecticut & Jilin University, USA)

10:58 Modeling and Analysis of End-to-End LEO Satellite-aided Shore-to-Ship Communications
Xu Hu and Bin Lin (Dalian Maritime University, China); Ping Wang (York University, Canada); Xiao Lu (University of Alberta, Canada); Haichao Wei and Shuang Qi (Dalian Maritime University, China)

11:16 Doubly-Spread Channel Equalization based on Channel Shortening in Underwater Distributed Acoustic Sensing Communications
Xingbin Tu, Shaojian Yang, Jie Xi, Yulin Jiang, Yan Wei and Fengzhong Qu (Zhejiang University, China)

Shouheng Che and Shanshan Song (Jilin University, China); Cangzhu Xu (JiLin University, China); Jun Liu (Beihang University & Smart Ocean Technology Co., Ltd, China); Jun-Hong Cui (University of Connecticut & Jilin University, USA)

11:52 A Novel Feedback-based MAC Protocol Design
for Cognitive VDES towards E-navigation
Yinhang Liang, Bin Lin and Xu Hu (Dalian Maritime University, China); YongBo Fu (DaLian Maritime University, China)

Room 5

Time: 13:30-15:30, 11 Aug, 2023
Session: SAG1
Session Chair: Celimuge Wu

13:30 Deep Learning Aided Intelligent Sensing and Identification for Future Wireless Communications
Guan Gui (Nanjing University of Posts and Telecommunications, China)

14:00 Phase Shift Signaling Reduction for IRS-Assisted Hybrid Satellite-Terrestrial Relay Networks by Exploiting Global Attention
Xianhua Yu and Li Dong (Macau University of Science and Technology, Macao); Haotong Cao (Nanjing University of Posts and Telecommunications, China); Zhi Lin (National University of Defense Technology, China); Daosen Zhai (Southeast University, Nanjing, China); Jiangzhou Wang (University of Kent, United Kingdom (Great Britain))

14:18 Joint Frame Structure and Beamforming Design for Integrated Localization and Communication Network
Yexin Shi (Zhejiang University, China); Wei Qi (Zhejiang University City, China); Rui Yin (Zhejiang University City Colle, China & KwaZulu-Natal University, South Africa); Wenjin Yu and Jie Qian (China Tobacco Zhejiang Industrial Co. LTD., China); Zhihui Ye (China Tobacco Zhejiang Industrial Co. LTD, China); Celimuge Wu (The University of Electro-Communications, Japan)

14:36 Distributed Resource Optimization and Allocation for UAV-Assisted MEC in Internet of Vehicles
Yujie Fang, Meng Li, Pengbo Si, Ruizhe Yang and Zhuwei Wang (Beijing University of Technology, China)

14:54 Challenges and Standardization on 5G with Satellite Access
Xu Xia and Wen Qi (China Telecom Research Institute, China); Chengli Mei (China Telecom Technology Innovation Center, China); Heng Wang (China Telecom Research Institute, China)

15:12 An Improved Energy Efficient Cross-layer Scheme in Underwater Wireless Sensor Networks
Chenbo Hu and Bo Li (Harbin Institute of Technology at Weihai, China); Hongjuan Yang (Harbin Institute of Technology, China); Xiuhong Wang (Harbin Institute of Technology at Weihai, China)

Room 6

Time: 16:00-17:30, 11 Aug, 2023
Session: SAG2
Session Chair: Yanpeng Dai

16:00 Soft OSD-Sliding Window Decoding for Staircase LDPC Codes in Deep Space Communications
Yaosheng Zhang (Harbin Institute of Technology (Shenzhen), China); Jian Jiao (Harbin Institute of Technology - Shenzhen, China); Ye Wang (Peng Cheng Laboratory, China); Yasong Wang (Phytium Technology Company Limited, China); Rongxing Lu (University of New Brunswick, Canada); Ginyu Zhang (Shenzhen Graduate School, Harbin Institute of Technology, China)

16:18 Resource Provisioning for Heterogeneous Services in UAV-Assisted MEC System
Lijiao Zhang, Yanpeng Dai and Ling Lyu (Dalian Maritime University, China); Qiang Ye (Memorial University of Newfoundland, Canada); Nan Cheng and Junyu Liu (Xidian University, China)

16:36 Research on Hybrid Control Architecture and Related Functions of Satellite Network
Tao Junyan and Kanglian Zhao (Nanjing University, China); Chen Linkun (Huawei, China); Wenfeng Li (Nanjing University, China)

16:54 Refined Visibility Modeling and Link Allocation Algorithm Considering Efficiency and Stability for Inter-Satellite Laser Link Network
Xingxing Bao, Wenfeng Li, Kanglian Zhao and Yuan Fang (Nanjing University, China)

17:12 A DAG-Based Reliable Routing Mechanism for Highly Dynamic UAV Mesh Network
Fajun Wang and Gaofeng Nie (Beijing University of Posts and Telecommunications, China); Hui Tian (Beijing University of posts and telecommunications, China); Zhihui Hu (Beijing University of Posts and Telecommunications, China); Bo Zhong and Yaozhong Zhao (China Huaneng Yimin Open Coal Mine, China)

Room 6

Time: 10:40-12:10, 11 Aug, 2023
Session: CIS1
Session Chair: Dongxia Liu

10:40 Intelligent Reflecting Surface-aided Robust
Directional Modulation with Hardware Impairments
Yanyun Gong (Northwest University of Technology, China); Zixiong Yang, Wenbin Sun, Qian Xu, Jiansong Huang and Ling Wang (Northwestern Polytechnical University, China)

Jiachun Li, Yan Meng, Le Zhang, Fazhong Liu and Haojin Zhu (Shanghai Jiao Tong University, China)

11:16 Adversarial Learning Aided Malicious Network Traffic Detection Based on EDE Framework
Lanping Zhang, Guan Gui and Yu Wang (Nanjing University of Posts and Telecommunications, China); Bamidele Adebisi (Manchester Metropolitan University, United Kingdom (Great Britain)); Hsiao-Chun Wu (Louisiana State University, USA); Tomoaki Otsuki (Keio University, Japan)

11:34 A Lightweight Mutual Authentication Scheme with Fault Tolerance in Smart Elderly Care System
Songnian Zhang, Zeming Zhou, Jinkun Gui and Rongxing Lu (University of New Brunswick, Canada); Mohammad Mamun (National Research Council of Canada, Canada)

11:52 A Diffusion Model-Based Open Set Identification Method for Specific Emitters
Wenyan Wang, Zheng Dou, Jiangzhi Fu and Yun Lin (Harbin Engineering University, China)

Room 6

Time: 13:30-15:30, 11 Aug, 2023
Session: CIS2
Session Chair: Chengzhe Lai

13:30 Key Technologies of Electric Power Data Security Governance in Open Network Environment (Invited talk)
Mi Wen (Shanghai University of Electric Power, China)

14:00 Secure and Reliable Multipath Transmission Scheme Based on Interleaving Network Encoding
Zongzheng Wang, Yuyang Zhang, Ping Dong, Tao Yang and Hongke Zhang (Beijing Jiaotong University, China)

14:18 GB-IDS: An Intrusion Detection System for CAN Bus Based on Graph Analysis
Yan Meng, Jiachun Li and Fazhong Liu (Shanghai Jiao Tong University, China); Shaofeng Li (Peng Cheng Laboratory, China); Haotian Hu (Intel, China); Haojin Zhu (Shanghai Jiao Tong University, China)

14:36 Digital Twin-enabled Secure Charging

Reservation for Electric Vehicle
Guanjie Li (Xi'an University of Posts and Telecommunications, China); Tom H. Luan, Jinkai Zheng and Dihao Hu (Xidian University, China); Chengzhe Lai (Xi'an University of Posts and Telecommunications, China); Zhou Su and Haixia Peng (Xi'an Jiaotong University, China)

14:54 Blockchain-based Multi-Factor Group Authentication in Metaverse
Chengzhe Lai, Hao Wang, Haoyan Ma and Dong Zheng (Xi'an University of Posts and Telecommunications, China)

15:12 A Scheme for Robust Federated Learning with Privacy-preserving Based on Krum AGR
Xiumin Li and Mi Wen (Shanghai University of Electric Power, China); Siying He (Shanghai University of Electric Power & Computer Science and Technology, China); Rongxing Lu (University of New Brunswick, Canada); Liangliang Wang (Shanghai University of Electric Power, China)

Room 6

Time: 16:00-17:30, 11 Aug, 2023
Session: MUC2
Session Chair: Haichuan Ding

16:00 Vector-Based Forwarding Protocol for Acoustic-Radio Cooperative Maritime Network
Zilong Jiang, Yan Wang, Fangjiiong Chen and Hua Yu (South China University of Technology, China)

16:18 Energy-Efficient Transmission and Computation Resource Optimization for UAV-assisted NOMA-based Maritime Internet of Things
Chaoyue Zhang, Bin Lin, Ling Lyu, Xu Hu and Shuang Qi (Dalian Maritime University, China)

16:36 Energy-efficient Data Collection in AUV-assisted 3D Clustering UASN
Zhonghan Hao (Harbin Institute of Technology, China); Wei Li (Harbin Institute of Technology, Shenzhen, China); Qinyu Zhang (Shenzhen Graduate School, Harbin Institute of Technology, China)

16:54 Cooperative Coverage Path Planning for AUVs in Integrated Underwater Acoustic Communication and Detection Networks
Yike Wu and Xiaoxiao Zhuo (Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, China); Liang Tang (Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Science, China); Wen Wu (Peng Cheng Laboratory, China); Fengzhong Qu (Zhejiang University, China)
17:12 A Deep Semantic Autoencoder for Maritime Wireless Communications
Xiaoling Han, Bin Lin, Nan Wu, Shuai Shao and Haocheng Wang (Dalian Maritime University, China)

Lobby (Poster Sessions)

**Time: 10:20-12:10, 11 Aug, 2023**

**Session: AIN5/6, CTS2, CIS5**

**P1-1 Optimizing a 5G mmWave Hybrid Beamforming Architecture in a Reinforcement Learning Approach**
Qiuhu Gong, Huanyu Dong and Xiaojun Hei (Huazhong University of Science and Technology, China)

**P1-2 Edge Caching Based on Deep Reinforcement Learning**
Farnaz Niknia and Ping Wang (York University, Canada); Aakash Agarwal (IIITNR, India); Zixu Wang (South China University of Technology, China)

**P1-3 Age of Local Information for Fusion Freshness in Internet of Things**
Taige Chang and Xianghui Cao (Southeast University, China); Yu Cheng (Illinois Institute of Technology, USA)

**P1-4 A training-time friendly network for real-time drone detection**
Miao Li, Shengjian Mao, Hanzhuo Wang, Zhiguo Shi and Chengwei Zhou (Zhejiang University, China)

**P1-5 Novel Online-Offline MA2C-DDPG for Efficient Spectrum Allocation and Trajectory Optimization in Dynamic Spectrum Sharing UAV Networks**
Rui Ding, Fuhui Zhou, Yuben Qu, Chao Dong and Qihui Wu (Nanjing University of Aeronautics and Astronautics, China); Tony Q. S. Quek (Singapore University of Technology and Design, Singapore)

**P1-6 Leveraging Deep Reinforcement Learning for Geolocation-based MIMO Transmission in FD-RAN**
Zongxi Liu, Kai Yu and Tianqi Zhang (Nanjing University, China); Jingbo Liu (Shanghai Jiao Tong University, China); Jiacheng Chen (Peng Cheng Laboratory, China); Haibo Zhou (Nanjing University, China); Sherman Shen (University of Waterloo, Canada)

**P1-7 Interpretable and Secure Trajectory Optimization for UAV-Assisted Communication**
Yunhao Quan, Nan Cheng, Xiucheng Wang, Jinglong Shen, Longfei Ma and Zhisheng Yin (Xidian University, China)

**P1-8 An Efficient Multimodal Fusion Pipeline for Nighttime 3D Object Detection with PointrendPainting**
Xiting Peng, Tingkai Zhang and Xiaoyu Zhang (Shenyang University of Technology, China)

**P1-9 PHY Secure Hybrid Precoding with Max-Min Fair Energy Harvesting for mmWave MU-MIMO-SWIPT Communications**
Bowen Xue (Zhengzhou University, China); Chi Zhang (China Information Technology Consulting & Designing Institute Ltd., China); Dandan Mao and Zhengyu Zhu (Zhengzhou University, China); Wenxiang Shi (China Information Technology Consulting & Designing Institute Ltd., China); Ning Wang (Zhengzhou University, China)

**P1-10 Multi-agent Reinforcement Learning-based User Scheduling and Resource Allocation in Cell-free Networks**
Wei Zhang, Yurong Qian and Wei Xu (Southeast University, China); Derrick Wing Kwan Ng (University of New South Wales, Australia); Xiaohu You (National Mobile communication Research Lab., Southeast University, China)

**P1-11 A Unified Framework of Array Codes Based on Vector Linear Network Coding**
Qifu T Sun, Sheng Jin, Zhe Zhai and Hao Wei (University of Science and Technology Beijing, China); Zongpeng Li (Tsinghua University, China)

**P1-12 A Novel Hamming Check Concatenated Polarization-Adjusted Convolutional (PAC) Codes**
Aolin Liu (Harbin Institute of Technology Shenzhen, China); Bowen Feng (Harbin Institute of Technology (Shenzhen), China); Chulong Liang (ZTE Corporation, China & State Key Laboratory of Mobile Network and Mobile Multimedia Technology, China); Jin Xu (ZTE, China); Qinyu Zhang (Shenzhen Graduate School, Harbin Institute of Technology, China)

**P1-13 STAR-RIS Enhanced Covert Communication with Delay Constraint**
Beixi Cheng, Jinsong Hu and Youjia Chen (Fuzhou University, China); Feng Shu (Hainan University, China); Zhizhang (David) Chen (Dalhousie University, Canada)

**P1-14 Secure and Privacy-preserving Network Slicing in 3GPP 5G System Architecture**
Xiangman Li, Miao He and Jianbing Ni (Queen's University, Canada)

**P1-15 Privacy-Preserving Model Aggregation for Asynchronous Federated Learning**
Jianxiang Zhao (Queens University, Canada); Xiangman Li and Jianbing Ni (Queen's University, Canada)
P1-16 One-class Physical Layer Authentication under Time-varying Fading Channels
Boliang Han, Zhenzhen Gao, Xuewen Liao and Kangze Li (Xi'an Jiaotong University, China)

P1-17 Entity Interactivity-Aware Graph Encoder-Decoder Networks for Explainable Relation Prediction against Advanced Persistent Threats
Xiao Yang (Shanghai Jiao Tong University, China); Mianxiong Dong and Kaoru Ota (Muroran Institute of Technology, Japan); Gaolei Li (Shanghai Jiao Tong University, China); Chaoefeng Zhang (Advanced Institute of Industrial Technology, Japan)

P1-18 Deep Learning-Based Log Anomaly Detection for 5G Core Network
Yawan Tan (Xidian University, China); Jiadai Wang, Jiajia Liu and Yuanhao Li (Northwestern Polytechnical University, China)

P1-19 Blockchain-assisted Cross-Domain Authentication and Access Control for Low-altitude UAV
Hengchang Pan, Ping Cao and Wei Wang (Nanjing University of Aeronautics and Astronautics, China); Yiliang Liu (Xi'an Jiaotong University, China); Zhisheng Yin (Xidian University, China)

Lobby (Poster Sessions)

Time: 15:30-17:30, 11 Aug, 2023
Session: IOT3/4, SAG6, CEC3

P2-1 SA-SWS: A Self-Adaptive Sleep/Wake-Up Scheduling Approach for Linear Sensor Networks
Jiao Ma and Fei Tong (Southeast University, China)

P2-2 Remaining Useful Life Prediction of the Aviation Engine Based on the Long-Short-Term-Memory Network with a Feature Selection Mechanism
Qiu Xiaohan and Fan Yuxin (Key Lab of CS&AUS of Zhejiang Province, Zhejiang, China); Zhiguo Shi and Yong Wang (Zhejiang University, China)

P2-3 On the Performance of Joint Resource Allocation and Control in Industrial IoT
Ying Wang (Harbin Institute of Technology (Shenzhen), China); Shaohua Wu (Harbin Institute of Technology, China); Jian Jiao (Harbin Institute of Technology - Shenzhen, China); Ning Zhang (University of Windsor, Canada); Qinyu Zhang (Shenzhen Graduate School, Harbin Institute of Technology, China)

P2-4 Covert Communication for Intelligent Reflecting Surface based Symbiotic Radio Systems
Zhen Xu, Manlin Wang and Bin Xia (Shanghai Jiao Tong University, China); Jiangzhou Wang (University of Kent, United Kingdom (Great Britain))

P2-5 Anomaly Detection Method based on Multi-Source Subsequence Multi-View Fusion
Yizhuo Guo (Beijing University of Posts and Telecommunications); Peng Xu, Keqi Liu and Anyi Zhang (Beijing University of Posts and Telecommunications, China)

P2-6 Resource Allocation for Coupled Slices in Edge-Assisted Industrial IoT Systems
Xiaojing Wen and Caillian Chen (Shanghai Jiao Tong University, China); Cheng Ren (Shanghai Jiaotong University, China); Ling Lyu (Dalian Maritime University, China); Xinping Guan (Shanghai Jiao Tong University, China)

P2-7 Multi-Agent Reinforcement Learning for UAVs 3D Trajectory Designing and Mobile Ground Users Scheduling with No-Fly Zones
Yunfei Gao (Wuhan University, China); Song Wang (Avic Xian Aircraft Industry Group Company LTD, China); Mingliu Liu and Yulin Hu (Wuhan University, China)

P2-8 Incremental Tensor Decomposition and BiGRU based Network Traffic Prediction for IIoT
Sifu Yan, Na Li, Hangguan Shan, Shibo He and Zhiguo Shi (Zhejiang University, China); Qi Zhang and Xianhua He (Nokia Solutions and Networks System Technology (Beijing) Co., Ltd, China)

P2-9 Distributed Computation Offloading Based on Deep Reinforcement Learning and Blockchain in Internet of Vehicles
Guobin Zhang and Luo Zehao (Dongguan University of Technology, China); Tingting Yang (Pengcheng Laboratory, Shenzhen, China)

P2-10 Blockchain-Empowered Space-Air-Ground Integrated Networks for Remote Internet of Things
Wenchao Liu (Shenzhen Institute of Advanced Technology, China); Junyu Wang (The Chinese University of Hong Kong, Shenzhen, China); Huijun Xing (The Chinese University of Hong Kong (Shenzhen), China); Zhenzhao Jin (Southern University of Science and Technology, China); Yanyan Shen (Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, China); Xuhui Zhang (Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences & The Chinese University of Hong Kong, Shenzhen, China)

Jingjing Tan, Fengxiao Tang and Ming Zhao (Central South University, China); Nei Kato (Tohoku University, Japan)

P2-12 MIMO Signals Classification with Cauchy Noise in Space-air-ground Integrated Networks
Mingqian Liu and Yae Chai (Xidian University, China)

P2-13 A Novel Spatial Spectrum Sensing Scheme Enabled by an Unmanned Aerial Vehicle
Hairen Zhang, Fuhui Zhou and Chao Dong (Nanjing University of Aeronautics and Astronautics, China); Qihui Wu (PLA University of Science and Technology, China)

P2-14 A General 3D GBSM for 6G Satellite Communication Systems
Zixin Li (Southeast University, China); Hengtai Chang (The Purple Mountain Laboratories Southeast University, China); Jie Huang (Southeast University, China); Cheng-Xiang Wang (Southeast University, China & Purple Mountain Laboratories, China)

P2-15 Secure Mobile Edge Computing for Integrated HAP and UAV Networks
Xiaofei Qin (Dalian Maritime University & No, China); Zhenyu Na, Xu Wu, Mudi Xiong and Bin Lin (Dalian Maritime University, China)

P2-16 Resource Allocation Strategy in UAV-D2D-Aided Multi-Relay MEC System with Energy Harvesting
Hongyi You, Yisheng Zhao, Kaige Jian, Liang Li and Xinyu Zhang (Fuzhou University, China)

P2-17 Joint Task Offloading and Resource Allocation for RIS-assisted UAV for Mobile Edge Computing Networks
Qilie Liu, Jie Han and Qian Liu (Chongqing University of Posts and Telecommunications, China)

P2-18 Heterogeneous Federated Learning with Cross-layer Model Fusion
Jing Jin, Qing Wang and Xiaofeng Liu (Tianjin University, China)

P2-19 Game-Based Task Offloading and Resource Allocation in Multi-UAV-assisted MEC Networks
Bowen Li, Han Hu and Longxiang Yang (Nanjing University of Posts and Telecommunications, China); Fuhui Zhou (Nanjing University of Aeronautics and Astronautics, China)

P2-20 Energy-efficient data compression and resource allocation for edge assisted IoT networks
Wei Jiang, Zenan Teng, Mingqing Li and Liping Qian (Zhejiang University of Technology, China)
Room 1

**Time:** 10:30-12:00, 12 Aug, 2023

**Session:** WCS4

**Session Chair:** Xingbin Tu

10:30 RIS-Assisted Federated Edge Learning Exploiting Statistical CSI
Heju Li and Rui Wang (Tongji University, China); Jun Wu (Fudan University, China); Wei Zhang (The University of New South Wales, Australia); Ismael Soto (University of Santiago, Chile)

10:48 Channel Estimation and Receiver Design for URLLC in Distributed MIMO-NOMA Systems Uplink
Shihao Han (Southeast University, China); Pengcheng Zhu (National Mobile Communications Research Laboratory, Southeast University, China); Jiamin Li (National Mobile Communications Research Lab., Southeast University, China); Wang Yan (Southeast University, China)

11:06 AoI Minimization for Multi-user Networks with Delayed Feedback
YuXiao Lu and Xiaoli Xu (Southeast University, China); Xinmei Huang (Nanjing Forestry University, China)

11:24 A Method of Determining the Optimized Working SNR for OTFS Modulation with AMP Receiver
Xu Zhou and Yuan Zhang (Southeast University, China)

11:42 A Low-Complexity PAPR Reduction Scheme for Multi-User MIMO-OFDM Systems
Zhang Xi, Zhong Zheng, Fei Zesong and Weihua Yu (Beijing Institute of Technology, China)

Room 1

**Time:** 14:00-15:30, 12 Aug, 2023

**Session:** WCS6

**Session Chair:** Qihao Li

14:00 Wideband Doppler Channel Modeling for Wireless Communications with High Mobility
Xiong Deng (Southwest Jiaotong University and TU Eindhoven, The Netherlands); Hongyu Meng, Ziqiang Gao, Xihua Zou and Peixuan Li (Southwest Jiaotong University, China); Pan Wei (Chengdu, China); Lianshan Yan (Southwest Jiaotong University, China)

14:18 Two-Stage Beamforming Design for Massive MIMO with Finite-Alphabet Inputs
Conghao Zhang, Qi Wang and Wuyang Zhou (University of Science and Technology of China, China)

14:36 Topology Optimized Design of Non-uniform Planar Array for Massive MIMO Systems
Lihua Pang and Yeqian Cheng (Xi'an University of Science and Technology, China); Yang Zhang (Xidian University, China); Yijian Chen (ZTE Corporation, China); Anyi Wang (Xi'an University of Science and Technology, China)

14:54 Content-Adaptive Cache Partitioning for Two-Layer Mobile Edge Networks
Yingxue Zhao (Beijing University of Post and Telecommunications, China); Ailing Xiao (Beijing University of Posts and Telecommunications & School of Information and Communication Engineering, China); Sheng Wu (Beijing University of Posts and Telecommunications, China); Chunxiao Jiang (Tsinghua University, Beijing, China); Linling Kuang (Tsinghua University, Beijing, China)

15:12 DDQN Assisted Intelligent Covert Communication for Cooperative UAV Swarm
Xiaomeng Li (Xidian University, China)
Room 2

**Time: 10:30-12:00, 12 Aug, 2023**  
**Session: MWN4**  
**Session Chair: Fei Shen**

10:30 Performance Evaluation of Wireless PoW Blockchain Networks: A Complex Network Perspective  
Jiankun Su and Yutao Jiao (Army Engineering University, China); Wei Yi Wang (Army Engineering University of PLA, China); Yuhua Xu (College of Communications Engineering, PLA University of Science and Technology, China); Gui Fang, Haichao Wang and Guoxin Li (Army Engineering University of PLA, China)

10:48 Multiuser Selection and Performance Analysis for Mobile Computing and 5G Aided Smart Grid Network  
Zhu Hailong (China Southern Power Grid Co., Ltd, China); Liming Chen (China Southern Power Grid, China); Guo Yi Zhang (China Southern Power Grid, Hong Kong); Danke Hong (Power Dispatching and Control Center of China Southern Power Grid, China)

11:06 Learn to Wait and Minimize Age of Information over Markov Channels  
Baoluo Chen, Yingcun Su and Liang Huang (Zhejiang University of Technology, China)

11:24 A Routing Algorithm Based on Prioritized Replay Double DQN for Private Internet of Things  
Wei Wu, Chang Liu and Pengfei Sun (Harbin Institute of Technology, China); Li Tang and Yang Yu (Hytera Communications Corporation Limited, China)

11:42 A Geographic Location Prediction-based Routing Algorithm for Flying Ad Hoc Networks  
Tianxiang Zhou (National Mobile Communications Research Laboratory, Southeast University, China); Feng Yan (Southeast University, China); Fei Shen (Shanghai Institute of Microsystem and Information Technology & Chinese Academy of Sciences, China); Weiwei Xia and Lianfeng Shen (National Mobile Communications Research Laboratory, Southeast University, China)

14:00 Utility Maximization for NFV-Based Tactile Internet  
Xinmian Xu, Haie Dou, Mingkai Chen and Lei Wang (Nanjing University of Posts and Telecommunications, China)

14:18 Risk-aware Online Optimization of Cross-Layer Resource Allocation in Next-Generation WLANs  
Jing Zhang and Jinke Zheng (Huazhong University of Science and Technology, China); Lin Xiang (Technical University of Darmstadt, Germany); Xiaohu Ge (Huazhong University of Science & Technology, China)

14:36 Real-Time Search-Driven Content Delivery in Vehicular Networks for AR/VR-Enabled Autonomous Vehicles  
Daniel Mawunyo Doe (University of Houston, USA); Dawei Chen (InfoTech Labs, Toyota North America R&D, USA); Kyungtae Han (InfoTech Labs, Toyota Motor North America R&D, USA); Yanpeng Dai (Dalian Maritime University, China); Linda Jiang Xie (University of North Carolina at Charlotte, USA); Zhu Han (University of Houston, USA)

14:54 Minimum Latency Packet Coding and Scheduling in Multi-path Networks with Delayed Feedback  
Zihao Dai, Zhicheng Zhu and Xiaoli Xu (Southeast University, China); Xinmei Huang (Nanjing Forestry University, China)

15:12 Joint Design of Power Allocation and Beamforming for Energy Efficiency Optimization in D2D-Enabled Distributed MIMO System  
Guangying Wang, Xiangbin Yu, Jinjin Zhu, Kai Yu and Panpan Qian (Nanjing University of Aeronautics and Astronautics, China)

Room 2

**Time: 14:00-15:30, 12 Aug, 2023**  
**Session: MWN5**  
**Session Chair: Guan Gui**

14:00 Utility Maximization for NFV-Based Tactile Internet  
Xinmian Xu, Haie Dou, Mingkai Chen and Lei Wang (Nanjing University of Posts and Telecommunications, China)

14:18 Risk-aware Online Optimization of Cross-Layer Resource Allocation in Next-Generation WLANs  
Jing Zhang and Jinke Zheng (Huazhong University of Science and Technology, China); Lin Xiang (Technical University of Darmstadt, Germany); Xiaohu Ge (Huazhong University of Science & Technology, China)

14:36 Real-Time Search-Driven Content Delivery in Vehicular Networks for AR/VR-Enabled Autonomous Vehicles  
Daniel Mawunyo Doe (University of Houston, USA); Dawei Chen (InfoTech Labs, Toyota North America R&D, USA); Kyungtae Han (InfoTech Labs, Toyota Motor North America R&D, USA); Yanpeng Dai (Dalian Maritime University, China); Linda Jiang Xie (University of North Carolina at Charlotte, USA); Zhu Han (University of Houston, USA)

14:54 Minimum Latency Packet Coding and Scheduling in Multi-path Networks with Delayed Feedback  
Zihao Dai, Zhicheng Zhu and Xiaoli Xu (Southeast University, China); Xinmei Huang (Nanjing Forestry University, China)

15:12 Joint Design of Power Allocation and Beamforming for Energy Efficiency Optimization in D2D-Enabled Distributed MIMO System  
Guangying Wang, Xiangbin Yu, Jinjin Zhu, Kai Yu and Panpan Qian (Nanjing University of Aeronautics and Astronautics, China)
**Room 3**

**Time: 10:30-12:00, 12 Aug, 2023**

**Session Chair: Sheng Yue**

10:30 **Reinforcement Learning based Downlink OFDMA Scheduling for Time-Sensitive WiFi Networks**
Junjie He, Bowen Tan and Yayu Gao (Huazhong University of Science and Technology, China)

10:48 **Ranking Cellular Internet Card User VIP Values Based on Graph Clustering with Usage Data**
Shijie Gao, Fan Wu, Kai Qian and Feng Lyu (Central South University, China); Jinbao Ren (Aerospace Information Innovation Research Institute, Chinese Academy of Sciences (Su Zhou), China); Shixu Chen (Chinese Academy of Sciences Su Zhou, China)

11:06 **QoE-based Deep Reinforcement Learning for Resource Allocation in Real Time XR Video Transmission**
Zhaocheng Wang and Rui Wang (Tongji University, China); Jun Wu (Fudan University, China)

**11:24 Channel Estimation for mmWave Massive MIMO Systems Using Graph Neural Networks**
Ming Ye (Southeast University, China); Xiao Liang (National Mobile Communication Research Lab., Southeast University, China); Cunhua Pan, Yinfei Xu, Ming Jiang and Chenguang Li (Southeast University, China)

11:42 **A Routing Optimization Policy Using Graph Convolution Deep Reinforcement Learning**
Yongan Guo, Wu Qingpeng and Hao She (Nanjing University of Posts and Telecommunications, China)

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**Room 3**

**Time: 14:00-15:30, 12 Aug, 2023**

**Session Chair: Minghui Min**

14:00 **Secure IoV Access Control with Safe Reinforcement Learning**
Lixin Liu (Nanjing University of Aeronautics and Astronautics, China)

14:18 **Reinforcement Learning Based AUV Localization in Underwater Acoustic Sensor Networks**
Chuhuan Liu, Yifan Chen, Liang Xiao, Helin Yang, Wei Su and Xudong You (Xiamen University, China)

14:36 **IRS-Aided Mobile Edge Computing for Mine IoT Networks using Deep Reinforcement Learning**
Peng Zhang, Minghui Min, Jiayang Xiao and Shiyin Li (China University of Mining and Technology, China); Hongliang Zhang (Peking University, China)

14:54 **Flexible Channel Access Against Unknown Dynamic Jamming Attack: A Reinforcement Learning Approach**
Songyi Liu (Army Engineering University of PLA, China); Wen Li (Army Engineering University, China); Li Cui (Army Engineering University of PLA, China); Xin Liu (Guilin University of Technology, China); Chen Xueqiang (Nanjing University of Aeronautics and Astronautics, China); Runfeng Chen and Yangyang Li (Army Engineering University of PLA, China); Yuhua Xu (College of Communications Engineering, PLA University of Science and Technology, China)

15:12 **5G Spectrum Learning-Based Passive UAV Detection in Urban Scenario**
Luning Lin, Ningning Yu, Yong Wang and Zhiguo Shi (Zhejiang University, China)
Room 3

**Time:** 16:00-17:30, 12 Aug, 2023  
**Session:** AIN4  
**Session Chair:** Tom H. Luan

**16:00** Mobility-Aware Joint User Scheduling and Resource Allocation for Low Latency Federated Learning  
Kecheng Fan and Wen Chen (Shanghai Jiao Tong University, China); Jun Li and Xiumei Deng (Nanjing University of Science and Technology, China); Xuefeng Han (Shanghai Jiao Tong University, China); Ming Ding (Data 61, Australia)

**16:18** Dynamic Caching and Rate Control System for Short Videos using Reinforcement Learning  
Jianke Li, Yanming Sun, Dihao Hu, Chao He and Tom H. Luan (Xidian University, China)

**16:36** Collaborative Inference for MEC Services Based on Multimodal Deep Neural Network  
Yu Liu and Chuxuan Wang (Xiamen University, China); Yilin Xiao (Shenzhen Institute of Artificial Intelligence and Robotics for Society, China); Zefang Lv and Liang Xiao (Xiamen University, China); Xiangyang Ji (Tsinghua University, China)

**16:54** 3D Hand Pose Estimation and Gesture Recognition Network Based on Hand-Object Interaction Information  
Qingshan Yin (Shandong New Generation Information Industrial Technology Research Institute, China); Qiaochu Zhao (Xian Jiaotong Liverpool University, China); Huijie Jia (Qilu University of Technology, China); Yan Gao, Luoluo Feng, Chaoming Li and Yao Cheng (Shandong New Generation Information Industrial Technology Research Institute, China); Bin Lin (Dalian Maritime University, China)

Room 4

**Time:** 10:30-12:00, 12 Aug, 2023  
**Session:** SPC2  
**Session Chair:** Jianhua Tang

**10:30** Securing NOMA by an Active RIS: Joint Reflection and Jamming Design  
Mengyi Ji, Jian Chen and Lu Lv (Xidian University, China); Yinghui Ye (X’ian University of Posts and Telecommunications, China); Hao Luo (Xidian University, China); Zhiguo Ding (University of Manchester, United Kingdom (Great Britain))

**10:48** Markov Chain Monte Carlo Based MIMO Detection with Reduced Complexity  
Bowen Wang and Shan Yang (China Telecom Research Institute, China); Nanxi Li (China Telecom, China); Hang Yin, Xiaoming She, Jianxiu Wang and Peng Chen (China Telecom Research Institute, China)

**11:06** Data Transmission Based on RNN Compensation over Mobile Voice Channel  
Xiang Gao and Tao Peng (Beijing University of Posts and Telecommunications, China)

**11:24** A Novel Godard Algorithm Based On Convex Combination Pair Structure  
Rui Du, Chenyan Yun, Kangkang Wang and Bin Lin (Dalian Maritime University, China)

**11:42** The parameter estimation of LFM signal using generalized Versoria Wigner-Ville distribution in impulsive noise  
Yuzi Dou, Sen Li and Bin Lin (Dalian Maritime University, China)

Room 4

**Time:** 14:00-15:30, 12 Aug, 2023  
**Session:** SPC3  
**Session Chair:** Jianhua Tang

**14:00** Subcarrier Modulation Classification for MIMO-OFDM System with Non-Gaussian Noise  
Mingqian Liu and Yi Wang (Xidian University, China); Yunfei Chen (University of Durham, United Kingdom (Great Britain))

**14:18** Prediction-Assisted Compressed Spectrum Sensing  
Zihang Song (King’s College London, United Kingdom (Great Britain)); Jian Yang (China Academy of Information and Communications Technology, China); Han Zhang (University of Surrey, UK); Jinbo Peng and Yue Gao (Fudan University, China)

**14:36** Blind Beamforming for RIS-aided High-Speed Train Communication with Doppler Pre-Compensation  
Fuyong Han, Jiakang Zheng and Mingbo You (Beijing Jiaotong University, China); Huahua Xiao (ZTE Corporation, China); Jiayi Zhang (Beijing Jiaotong University, China); Bo Ai (Beijing Jiaotong University & State Key Lab of Rail Traffic Control and Safety, China)

**14:54** An Improved Particle Swarm Optimization Indoor Positioning Method based on the Weighted Adaptive KNN Algorithm  
Jin Wang and Feiyue Shi (X’ian University of Posts and Telecommunications, China); Pengwu Wan (X’AN University of...
15:12 Time-Averaged Fractionally pth-order Moments Algorithm for Cyclostationary Signals Under non-Gaussian Environments
Omer M. Abdelrhman, Sen Li and Bin Lin (Dalian Maritime University, China)

Room 4
Time: 16:00-17:30, 12 Aug, 2023
Session: SPC4
Session Chair: Jian Wang

16:00 Off-grid DOA Estimation on Uniform Plane Array Based on Structured Sparse Bayesian Learning
Siuyan Wang, Wei Chen and Bo Ai (Beijing Jiaotong University, China)

16:18 Modeling of Multi-granularity Electromagnetic Spectrum Sequence Based on TS Model
Zhuangzhuang Nie, Zhigang Li, Shuang Li and Yu Han (Harbin Engineering University, China)

16:36 BiLSTM-Based Frame Synchronization for Overlapped S-AIS Signals: A Learning-Empowered Approach
Tiancheng Yang and Dongxuan He (Beijing Institute of Technology, China); Zhiping Lu (China Academy of Telecommunication Technology, China); Hua Wang, Hongye Zhao and Zheng Wu (Beijing Institute of Technology, China)

16:54 Anti-Eavesdropping and Anti-Jamming Waveform Design with Coding Split Index Modulation
Yinglin Chen (China Telecom Research Institute, China); Chao Wang (Xi'an University, China); JiangBo Si (Xi'dian, China); Tongyang Xu (University College London, United Kingdom (Great Britain))

17:12 On the Spectral Efficiency of Uplink Massive MIMO with Low-Resolution ADCs Over Finite-Dimensional Channels
Junxian Chen, Weiqiang Tan and Maobin Tang (Guangzhou University, China); Xianda Wu (South China Normal University, China)

Room 5
Time: 10:30-12:00, 12 Aug, 2023
Session: SAG3
Session Chair: Wenbin Sun

10:30 UAV-Assisted Data Synchronization for Digital-Twin-Enabled Vehicular Networks
Guoquan Wu (Yanshan University, China); Jiangtian Nie (Nanyang Technological University (NTU), Singapore); Jianhang Tang (Guizhou University, China); Yang Zhang (Nanjing University of Aeronautics and Astronautics, China); Jiang Xiao (Huazhong University of Science and Technology, China); Zehui Xiong (Singapore University of Technology and Design, Singapore)

10:48 QoE-Driven UAV Video Transmission in a Multi-UAV Network
Kesong Wu, Peng Yang, Xianbin Cao and Zongyang Yu (Beihang University, China)

11:06 Joint Offloading Selection, Beamforming Design and Resource Allocation for Satellite-Terrestrial Computing
Qi Wang and Xiaoming Chen (Zhejiang University, China); Qiao Qi (ZheJiang University, China)

11:24 Distributed Deep Learning for RIS Aided UAV-D2D Communications in Space-Air-Ground Networks
Qian You, Qian Xu, Xin Yang, Wenbin Sun and Ling Wang (Northwestern Polytechnical University, China)

11:42 Channel Prediction-based Robust Multibeam Precoding Design for LEO Satellite Internet of Things
Ming Ying and Xiaoming Chen (Zhejiang University, China)

Room 5
Time: 14:00-15:30, 12 Aug, 2023
Session: SAG4
Session Chair: Na Deng

14:00 Low-Delay Transmission for Non-Terrestrial Networks Based on FEC and Reinforcement Learning
Jianhao Yu, Sibo Pan, Ruiying Gao and Ye Li (Nantong University, China)

14:18 Dynamic Unmanned Aerial Vehicle Selection via Evolutionary Game
Anqi Meng (Beijing Information Science and Technology University, China); Tianshi Ren (Beijing Institute of Technology, China); Mei Yang (Beijing Institute of Fashion Technology, China); Xiaozheng Gao (Beijing Institute of Technology, China); Xianchao Zhang (Jiaxing University, China); Jinbo
14:36 An AoI-Guaranteed Sensor Data Collection Strategy for RIS-assisted UAV Communication System
Bowen Yang, Yao Yu, Jianqi Li and Tongze Xu (Northeastern University, China); Der Jiunn Deng (National Changhua University of Education, Taiwan); Hui-Hsin Chin (Overseas Chinese University, China); Yonghui Li (University of Sydney, Australia)

14:54 Adaptive Timescale Load Balancing Routing Algorithm for LEO Satellite Network
Shuyang Liu, Jing Liu and Bin Xia (Shanghai Jiao Tong University, China)

15:12 A Novel MIMO Channel Model for Underground Mine Communications
Xingyu Ji (Southeast University, China); Cheng-Xiang Wang (Southeast University, China & Purple Mountain Laboratories, China); Hengtai Chang (The Purple Mountain Laboratories Southeast University, China)

Room 5

Time: 16:00-17:30, 12 Aug, 2023
Session: SAG5
Session Chair: Haichao Wei

16:00 Trajectory and User Assignment Design for UAV-Assisted Wireless Communications under Rician Fading Channels
Peng Wu (Wuhan University, China); Xiaopeng Yuan, Yulin Hu and Anke Schmeink (RWTH Aachen University, Germany)

16:18 Throughput Optimization for UAV WPCN Systems with Assistance of IRS under Malicious Jamming
Shenqian Yin, Wendong Yang, Jiahui Sui and Zenghui Jiang (Army Engineering University of PLA, China)

16:36 Preamble Design for LEO Satellite Communication System
Yuan Jiang and Lei Zhao (Sun Yat-sen University, China); Wang Yanzhao (Sun Yat-Sen University, China)

16:54 Link Selection Based on Acquisition Probability in Mega Constellation Laser Networks
Junyi Yang (Harbin Institute of Technology (Shenzhen), China); Zhikai Zhang (Harbin Institute of Technology, Shenzhen & Peng Cheng Laboratory, China); Bowen Feng and Lirong An (Harbin Institute of Technology (Shenzhen), China); Qiuyu Zhang (Shenzhen Graduate School, Harbin Institute of Technology, China)

17:12 Joint Relay Selection and Location Deployment for Multi-UAV Relaying Systems Based on Stackelberg Game
Jialiang Liu, Zhenyu Na and Ye Lin (Dalian Maritime University, China); Jiaxin Chen (Nanjing University of Aeronautics and Astronautics, China); Bin Lin (Dalian Maritime University, China)

Room 6

Time: 10:30-12:00, 12 Aug, 2023
Session: CIS3
Session Chair: Qichao Xu

10:30 Two-Server Private Information Retrieval with High Throughput and Logarithmic Bandwidth
Cheng Huang (University of Waterloo, Canada); Anjia Yang (Jinan University, China); Dongxiao Liu (University of Waterloo, Canada); Rongxing Lu (University of New Brunswick, Canada); Sherman Shen (University of Waterloo, Canada)

10:48 Efficient Group Authentication and Key Agreement Scheme for Vehicular Digital Twin
Chengzhe Lai and Meng Li (X’ian University of Posts and Telecommunications, China); Guanjie Li (Xidian University, China); Dong Zheng (Xi’an University of Posts and Telecommunications, China)

11:06 Deep Reinforcement Learning for Network Security Applications With A Safety Guide
Zhibo Liu, Xiaozhen Lu and Yuhan Chen (Nanjing University of Aeronautics and Astronautics, China); Yilin Xiao (Shenzhen Institute of Artificial Intelligence and Robotics for Society, China); Yanling Bu (Nanjing University of Aeronautics and Astronautics, China)

11:24 An Efficient Dynamic Key Management Scheme for IoT Devices in Aging in Place Systems
Vishnu Prasanth Vikraman Pillai, Zeming Zhou, Songnian Zhang and Rongxing Lu (University of New Brunswick, Canada); Mohammad Mamun (National Research Council of Canada, Canada)

11:42 An Efficient and Privacy-Preserving Outsourced Heavy Hitter Query Scheme with LDP Technique
Ellen Z. Zhang, Yunguo Guan, Songnian Zhang, Rongxing Lu and Harry Zhang (University of New Brunswick, Canada)

Room 6

Time: 14:00-15:30, 12 Aug, 2023
**Session: CIS4**

**Session Chair: Haixia Peng**

14:00 Secure Communication Using WFRFT-DSSS Based on Chaotic Cyclic Shift  
Chenxuan Gao, Yichen Wu and Yu Zhang (Tsinghua University, China)

14:18 Estimating Location Distribution under Local Differential Privacy  
Yuanyuan Hong, Youwen Zhu and Wei Wang (Nanjing University of Aeronautics and Astronautics, China)

14:36 Enhancing Digital Twin Model for Connected Vehicles by Powertrain and Longitudinal Dynamics  
Xiaoxu Wang, Rong Yu, Mingxing Ye and Min Hao (Guangdong University of Technology, China)

14:54 Covert and Reliable Short-Packet Communications against A Proactive Warder  
Manlin Wang, Yao Yao, Bin Xia and Zhiyong Chen (Shanghai Jiao Tong University, China); Jiangzhou Wang (University of Kent, United Kingdom (Great Britain))

15:12 An Approach for Attack Scenario Construction Based on Dynamic Attack Path Graph  
Siying He (Shanghai University of Electric Power & Computer Science and Technology, China); Mi Wen and Xiumin Li (Shanghai University of Electric Power, China); Zhou Su (Xi'an Jiaotong University, China)

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**Session Chair: Xiaoyan Yin**

16:00 PianoRF: A Portable and Light-Weight Piano System based on RFID  
Wenlong Yan and Li Huang (Northwest University, China); Chen Liu (University of Victoria, Canada)

16:18 OTFS Waveform Design Based on WFRFT for Integrated Sensing and Communication  
Zhenduo Wang, Zhipeng Liu, Shuai Hao and Xingyu Chen (Harbin Engineering University, China); Ruoyu Zhang (Ministerial Key Laboratory of JGMT, Nanjing University of Science and Technology, China)

16:36 Optimal Waveform Design Based on Concave - Convex Penalty Algorithm for DFRC System  
Yujie Zhang and Feng Tian (Nanjing University of Posts and Telecommunications, China); Shao Zi Ling (Nanjing University of Posts and Telecommunications & School of Communications and Information Engineering, China)

16:54 Integrated Sensing and Communication enabled Doppler Frequency Shift Estimation and Compensation  
Jinzhu Jia, Zhiqing Wei, Zhang Ruiyun and Lin Wang (Beijing University of Posts and Telecommunications, China)

17:12 A Spatial Spectrum Estimation Algorithm for 3D Localization and Mapping in ISAC  
Rongkang Zhou, Feng Tian and Xiao Zhao (Nanjing University of Posts and Telecommunications, China)

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**Room 7**

**Time: 10:30-12:00, 12 Aug, 2023**

**Session: CTS1**

**Session Chair: Xiaoming Yuan**

10:30 The Capacity-Achieving Input of Optical Wireless Channels: The Number of Mass Points  
Sufang Yang (Tsinghua University, China); Longguang Li (East China Normal University, Shanghai, China); Jintao Wang (Tsinghua University, China)

10:48 Statistical CSI-Based Transmission Design for RIS and DMA Assisted MIMO Communication System  
Xiaojun Huang and Jun Zhang (Nanjing University of Posts and Telecommunications, China); Yu Han (Southeast University, China); Kaizhe Xu (University of Macau, China); Shi Jin (Southeast University, China); Shaodan Ma (University of Macau, China)

11:06 Distributed Beamforming For Small Cell Networks via Generalized Nash Equilibrium  
Yuhe Chen (Southeast University, China); Leixin Han (National Mobile Communications Research Laboratory, Southeast University, China); Jiaheng Wang (National Mobile Communications Research Lab, Southeast University, China); Liang Xia (China Mobile Research Institute, China); Xiqi Gao (Southeast University, China)

11:24 A New JSCC Scheme for Transmission of Gaussian Sources Over AWGN Channels  
Jifan Liang (Sun Yat-Sen University, China); Tingting Zhu (Sun Yat-sen University, China); Baodian Wei (Sun Yat-Sen University, China); Xiao Ma (Sun Yat-sen University, China)
Time: 14:00-15:30, 12 Aug, 2023  
Session: CEC2  
Session Chair: Yiqin Deng

14:00 Secure Task Offloading and Resource Scheduling in Maritime Edge Computing Systems  
Ying Wang, Yi Zheng and Jiahui Liu (Dalian Maritime University, China)

14:18 Personalized Federated Deep Reinforcement Learning-based Trajectory Optimization for Multi-UAV Assisted Edge Computing  
Zhengrong Song (Nanjing University of Science and Technology, China); Chuan Ma (Zhejiang Lab, China); Ming Ding (Data 61, Australia); Howard Yang (ZJU-UIUC Institute & University of Illinois at Urbana Champaign (UIUC), China); Yuwen Qian (Nanjing University of Science and Technology, China); Xiangwei Zhou (Louisiana State University, USA)

14:36 Mobility-Aware Offloading Scheme for 6G’s Real-Time Tasks with Temporal Graphs and Graph Matching  
Jianhong Cai and Xiaorong Zhu (Nanjing University of Posts and Telecommunications, China)

14:54 Joint 3C Scheduling with Coordinated Multi-point Transmission  
Zishuo You and Qiang Li (Huazhong University of Science and Technology, China); Ashish Pandharipande (Philips Research, The Netherlands); Xiaohu Ge (Huazhong University of Science & Technology, China); Ronghua Liu (Wuhan Jingge Electronic Group Company Limited, China); Min Shuai (Wuhan Jingli Electronic Technology Company Limited, China)

Yu Zhou and Xiaohui Zhao (Xi’an Jiaotong University, China); Xuemei Liu (Tongji University, China); Lei You (Technical University of Denmark, Denmark); Lei Lei (Xi’an Jiaotong University, China)

16:18 Joint Optimization of Privacy Protection and Resource Allocation for Vehicular Edge Networks  
Tianqi Gao, Hongfeng Tao, Yuanzhi Ni, Jun Shi and Fengcheng Jiang (Jiangnan University, China)

16:36 Delay-aware Resource Utilization Optimization for SFC Deployment in Heterogeneous Edge Computing  
Qingli Xiong (Changsha University of Science and Technology, China); Zhuofan Liao (Changsha University of Science & Technology, China); Shuangle Xu (Changsha University of Science and Technology, China); Chaochao Feng (School of Computer, National University of Defense Technology, China)

16:54 Adaptive MAC Schemes in Dynamic MANETs: Parameter Adjustment versus Mechanism Combination on Real-time  
Zhichao Zheng, Shengming Jiang and Xiang Zou (Shanghai Maritime University, China)

Room 7

Time: 16:00-17:30, 12 Aug, 2023  
Session: NGN2  
Session Chair: Fan Wu

16:00 Resource Allocation and Computation Offloading for Delay Sensitive Large-scale Edge Tasks  
Shuangle Xu (Changsha University of Science and Technology, China); Zhuofan Liao (Changsha University of Science & Technology, China); Weibo Hu (Changsha University of Science and Technology, China); Chaochao Feng (School of Computer, National University of Defense Technology, China)

16:18 Joint Optimization of Privacy Protection and Resource Allocation for Vehicular Edge Networks  
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16:36 Delay-aware Resource Utilization Optimization for SFC Deployment in Heterogeneous Edge Computing  
Qingli Xiong (Changsha University of Science and Technology, China); Zhuofan Liao (Changsha University of Science & Technology, China); Shuangle Xu (Changsha University of Science and Technology, China); Chaochao Feng (School of Computer, National University of Defense Technology, China)

16:54 Adaptive MAC Schemes in Dynamic MANETs: Parameter Adjustment versus Mechanism Combination on Real-time  
Zhichao Zheng, Shengming Jiang and Xiang Zou (Shanghai Maritime University, China)

Ball Room

Time: 10:30-12:00, 12 Aug, 2023  
Session: WCS7  
Session Chair: Conghao Zhou

10:30 Blockchain Empowered Reliable Computation Offloading and Resource Allocation for Mobile Edge Computing Networks  
Weiwei Yang (Dongguan University of Technology, China); Long Shi (Nanjing University of Science and Technology, China); Hui Liang (Dongguan University of Technology, China); Wei Zhang (The University of New South Wales, Australia)

10:48 A Unified Approach for Physical-layer Security over $\alpha-\eta-F$ and $\alpha-\kappa-F$ Fading Channels  
Junhao Chen, Xiaoshi Liu and Weijun Cheng (Minzu University of China, China); Gaofeng Nie (Beijing University of Posts and Telecommunications, China)

11:06 A Sequential-Fairness RIS Deployment for Indoor Multi-User Systems  
Qirui Chang and Gaofeng Nie (Beijing University of Posts and Telecommunications, China); Hui Tian (Beijing University of posts and telecommunications, China); GuoPeng Li and Bo Zhang (China Huaneng Yimin Open Coal Mine, China)
11:24 A Novel 3D Wideband Geometry-Based Channel Model for Massive MIMO V2V Communications in Riverside Urban Road Environments
Yaning Chen (Beijing University of Post and Telecommunications, China); Nan Ma, Shaoyi Liu and Kaiheng Zhang (Beijing University of Posts and Telecommunications, China)

11:42 1-Bit Reconfigurable Intelligent Surface Element Design and its Equivalent Circuit Model
Xin Zhang (Shandong University, China); Jian Sun (ShanDong University, China); Liqiang Ma and Wensheng Zhang (Shandong University, China); Cheng-Xiang Wang (Southeast University, China & Purple Mountain Laboratories, China)

Ball Room
Time: 14:00-15:30, 12 Aug, 2023
Session: WCS8
Session Chair: Chuan Lin

14:00 Waveform Design for Communication-Assisted Sensing in 6G Perceptive Networks
Fuwang Dong, Fan Liu, Shihang Lu, Weijie Yuan and Yuanhao Cui (Southern University of Science and Technology, China); Yifeng Xiong (Beijing University of Posts and Telecommunications, China); Feifei Gao (Tsinghua University, China)

14:18 RIS-Aided Communications at 3.5GHz: Some Insights from Practical Measurement Results
Shun Zhang, Haoran Sun, RunZe Yu, Hongshenyuan Cui and Jian Ren (Xidian University, China); Feifei Gao (Tsinghua University, China); Shi Jin (Southeast University, China); Hongxiang Xie (Huawei Technologies Co., Ltd, China); Hao Wang (Hisilicon, Huawei, China)

14:36 Probe Selection Method based on Switch Matrix for 5G Massive MIMO Base Station OTA Testing
Jie Zhao, Nan Ma and Baoling Liu (Beijing University of Posts and Telecommunications, China)

14:54 Inter-Cell Interference Coordination for AirComp Federated Learning in Cellular Networks
Ranqiang Zhang and Na Deng (Dalian University of Technology, China); Haichao Wei (Dalian Maritime University, China)

15:12 Image Structural Similarity-Based Channel Similarity Analysis across Multiple Frequency Bands in the Office Campus Environment
Cheng Yi, Meng Zhao and Zhi Chen (Southeast University, China); Haiming Wang (Southeast University, China & Purple Mountain Laboratories, China)

Ball Room
Time: 16:00-17:30, 12 Aug, 2023
Session: IOT2
Session Chair: Minghui Dai

16:00 Freshness-aware Incentive Mechanism for Mobile AI-Generated Content (AIGC) Networks
Jinbo Wen and Jiawen Kang (Guangdong University of Technology, China); Minrui Xu and Hongyang Du (Nanyang Technological University, Singapore); Zehui Xiong (Singapore University of Technology and Design, Singapore); Yang Zhang (Nanjing University of Aeronautics and Astronautics, China); Dusit Niyato (Nanyang Technological University, Singapore)

16:18 FedAG: A Federated Learning Method Based on Data Importance Weighted Aggregation
Mengchu Xu, Yan Zeng, Meiting Xue, Ji-Lin Zhang and Jian Wan (Hangzhou Dianzi University, China); Mingyao Zhou (Huawei Enterprise Communication Technology Co., China); Yilin Wen and Yukun Shi (Hangzhou Dianzi University, China)

16:36 Enhancing User Experience in High-Resolution Collaborative Virtual Reality on Commodity Mobile Devices
Hongyuan Liang, Yuqi Li, Senyang Zhu, Liang Huang and Kaikai Chi (Zhejiang University of Technology, China)

16:54 Energy Efficiency and Spectral Efficiency Tradeoff in Multi-BD Symbiotic Radio Systems
Jinxin Wan (Chongqing University of Posts and Telecommunications, China); Yingying Guan and Jing Song (Northeastern University, China); Qingyang Song and Lei Guo (Chongqing University of Posts and Telecommunications, China)

17:12 Average AoI Minimization in WP-IoT Networks: Optimal Scheduling for NOMA Transmission
Shuang Li and Hong-Chuan Yang (University of Victoria, Canada); Fengye Hu (Jilin University, China)

Lobby (Poster Sessions)
Time: 10:00-12:00, 12 Aug, 2023
Session: WCS9/10/11, NGN3, ISC3

P3-1 Ray Tracing Based 6G RIS-Assisted MIMO Channel Modeling and Verification
P3-2 On the Effect of BLER Requirement on Outer-Loop Link Adaptation
Shiyong Chen and Shengqian Han (Beihang University, China)

P3-3 Multi-IRS Assisted Multi-UAV Wireless Resource Allocation and Deployment Optimization
Lianwen Zhang and Zhiqun Hu (Beijing University of Posts and Telecommunications, China); Zhaoming Lu (BUPT, China); Yujing Zhang (Beijing University of Posts and Telecommunications, China)

P3-4 ADMM-Based Hybrid-Field Uplink Channel Estimation for Extremely Large-Scale MIMO Systems
Yiqing Li and Miao Jiang (Guangdong University of Technology, China)

P3-5 A New Variational Bayesian-based Radiation Source Positioning Method with Multistage Parameter Modification
Xuezhao Cai (Nanjing University of Aeronautics and Astronautics, China); Zhipeng Lin (NanJing University of Aeronautics and Astronautics, China); Yuqing Peng, Qiuming Zhu, Jie Wang, Xiaoxiang He, Qihui Wu and Kun Liu (Nanjing University of Aeronautics and Astronautics, China)

P3-6 Rate Adaptation with Correlated Multi-Armed Bandits in 802.11 Systems
Yuzhou Tong, Jiakun Fan, Xuhong Cai and Yi Chen (The Chinese University of Hong Kong, Shenzhen, China)

P3-7 Meta-Learning Based Semi-blind Data Detection for Cell-Free Systems
Guanyang Fu, Qing Wang, Rui Zhu and Haozhi Wang (Tianjin University, China)

P3-8 Jamming-Assisted Short Packet Covert Communications in Multi-Hop Wireless Networks
Zhengyu Yuan (Army Engineering University of PLA, China); Weiwei Yang (PLA Army Engineering University, China); Xingbo Lu (Army Engineering University of PLA, China)

P3-9 CS-LSTM: a hybrid channel estimation scheme in IDFT-VFDM system
Hongyu Yang (China); Yanzhao Hou, Chen Dong and Guoshun Nan (Beijing University of Posts and Telecommunications, China)

P3-10 Ray Tracing Based Channel Modeling and Characteristics Analysis in 6G IIIoT scenarios
Yuxiao Li (Southeast University, China); Li Zhang (Southeast University, China); Cheng-Xiang Wang (Southeast University, China & Purple Mountain Laboratories, China); Fu-Chun Zheng (University of York, United Kingdom (Great Britain) & Southeast University, China); Songjiang Yang and Yinghua Wang (Purple Mountain Laboratories, China); Jie Huang (Southeast University, China)

P3-11 Learning-Based Latency and Energy Optimization in SCMA-Enhanced UAV-MEC Networks
Pengtao Liu (National University of Defense Technology, China); Jing Lei (National University of Defense Technology, China); Wei Liu (National University of Defense Technology, China)

P3-12 A New Spectrum Map Fusing Method Based on Difference Group Sparsity
Kun Liu (Nanjing University of Aeronautics and Astronautics, China); Zhipeng Lin (NanJing University of Aeronautics and Astronautics, China); Yuchao Liu (China Research Institute of Radiowave Propagation, China); Qiuming Zhu, Qihui Wu and Xuezhao Cai (Nanjing University of Aeronautics and Astronautics, China)

P3-13 A General 3D GBSM for 6G Indoor Optical Wireless Communication Systems
Xiuming Zhu and Jun Wang (Southeast University, China); Rui Feng (Purple Mountain Laboratories & Southeast University, China); Jie Huang (Southeast University, China); Cheng-Xiang Wang (Southeast University, China & Purple Mountain Laboratories, China)

P3-14 Path Planning Based on Traffic Flow Prediction for Vehicle Scheduling
Lei Mo and Yiming Zhao (Southeast University, China); Ji Liu (Baidu Research, China)

P3-15 LEAM: A Large-scale Events Aware Module for Multi-step Intercity Flow Prediction
Qihao Huang and Chao Li (Zhejiang University, China); Mincheng Wu (Zhejiang University of Technology, China)

P3-16 Fairness-aware Location and Hybrid Beamforming Optimization in IRSs-aided Cell-free MIMO System
Wang Kewei (Nanjing University of Aeronautics and Astronautics, China)
P3-17 A Routing Scheme Based on Multi-Objective Optimization in Quantum Satellite Networks
Miao Zhao and Na Deng (Dalian University of Technology, China); Haichao Wei (Dalian Maritime University, China)

P3-18 WVGR: Gesture Recognition based on WiFi-Video Fusion
Zixin Dai, Shuangjiao Zhai, Pinle Qin, Rui Chai and Pengcheng Zhao (North University of China, China)

P3-19 Optimal Sensing Time Design in ISAC-enabled Vehicular Network
Bai Zhiyue (University of Macau, China); Fen Hou (University of Macau, Macao); Hangguan Shan (Zhejiang University, China)

P3-20 Intelligent reflecting surface aided robust secure integrated sensing and communication systems
Xin Chen (Xi’an Jiaotong University, China); Tong-Xing Zheng (Xi’an Jiaotong University, China); Xinji Wang (Xi’an Jiaotong University); Umar Zeb (Xian Jiaotong University, China); Xiaoyan Hu (Xi’an Jiaotong University, China); Chaowen Liu (Xi’an University of Posts and Telecommunications, China); Yi He (National University of Defense Technology, China)

P3-21 EarAE: An Autoencoder based User Authentication using Earphones
Yuli Wu and Jing He (Northwest University, China)

P3-22 Bayesian CFAR Detector in Weibull Clutter via Interference Control
Xinchao Zhu (Zhejiang University, China); Chaoqun Yang (SouthEast University, China); Chengwei Zhou and Zhiguo Shi (Zhejiang University, China)

P3-23 An Indoor NLOS Identification and Extraction Algorithm Based on Multi-dimensional Data Correlation
Xinrui Zhang and Jin Xu (Beijing University of Posts and Telecommunications, China)

P4-1 Ray-Tracing Based Large Indoor Office Base Station Deployment Optimization at Millimeter Wave Bands
Dantong Chen (Nanjing University of Aeronautics and Astronautics, China); Songjiang Yang and Yinghua Wang (Purple Mountain Laboratories, China); Jie Huang (Southeast University, China); Cheng-Xiang Wang (Southeast University, China & Purple Mountain Laboratories, China); Qiuming Action (Nanjing University of Aeronautics and Astronautics, China)

P4-2 Maximum Key-based Joint Topology Construction and Routing over Quantum Satellite Networks
Miao Zhao and Na Deng (Dalian University of Technology, China); Haichao Wei (Dalian Maritime University, China); Nan Zhao (Dalian University of Technology, China)

P4-3 Flexible Link Adaptation in Fully-Decoupled RAN: A Machine Learning Approach
Xianfeng Zou, Jiwei Zhao and Kai Yu (Nanjing University, China); Jiacheng Chen (Peng Cheng Laboratory, China); Haibo Zhou (Nanjing University, China); Sherman Shen (University of Waterloo, Canada)

P4-4 A Physical-Layer Key Generation Scheme for Non-Square Channel Matrices Based on PMI
Haixi Sun, Guyue Li, Haoyu Li and Hu Aiqun (Southeast University, China); Yexia Cheng, Ye Tian and Shenn He (China Mobile Research Institute, China)

P4-5 Maritime Search and Rescue Leveraging Heterogeneous Units: A Multi-Agent Reinforcement Learning Approach
Chengjia Lei (Harbin Institute of Technology, Shenzhen & Peng Cheng Laboratory, China); Shaohua Wu (Harbin Institute of Technology, China); Yi Yang and Jiayin Xue (Peng Cheng Laboratory, China); Qinyu Zhang (Shenzhen Graduate School, Harbin Institute of Technology, China)

P4-6 Exploiting the Collision-Free Region with Slotting Access for Data-Gathering in the Linear UANs
Yan Wang, Fei Ji, Quansheng Guan and Hao Zhao (South China University of Technology, China); Weiqi Chen (Guangdong University of Finance, China)

P4-7 Computation Offloading for Dependency Task in MEC-Enabled MloT
Cong Wang, Xiaopei Chen, Jianjie Yang, Wenhao Wu, Pingping Chen and Zhijian Lin (Fuzhou University, China)

P4-8 Anti-jitter Beamforming Design for UAV-Assisted Maritime Monitoring Networks
Yongchun Han and Bin Lin (Dalian Maritime University, China); Lin Liu (Dalian, China)

Lobby (Poster Sessions)

Time: 15:30-17:30, 12 Aug, 2023
Session: MWN7, MUC3/4, SPC5/6
P4-9 A Parallel-Transmission Enhanced Random Time Slot MAC Protocol for UASNs
Zheng Fu, Yan Wang, Fangjiogon Chen, Quansheng Guan and Hua Yu (South China University of Technology, China)

P4-10 Energy-Efficient and Link-Stability based Ant Colony Optimization Routing Protocol for Underwater acoustic Networks
Xuewen Liao and Xuan Geng (Shanghai Maritime University, China)

P4-11 Efficient Trajectory Planning for UAV-Relaying Maritime Communication Systems
Donghu Chen, Jiale Zhong, Yingdong Hu, Ye Li and Jue Wang (Nantong University, China)

P4-12 A Real-Time 3D Data Visualization System for Underwater Wireless Sensor Networks
Bingwen Huangfu, Jianyi Guo and Shanhan Song (Jilin University, China); Jun Liu (Beihang University & Smart Ocean Technology Co., Ltd, China); Jun-Hong Cui (University of Connecticut & Jilin University, USA)

P4-13 A Maximum Flow Routing Algorithm for Multi-Unmanned Surface Vessel Networks
Haosheng Wang and Bin Lin (Dalian Maritime University, China); Lin X. Cai (Illinois Institute of Technology, USA); Xiaoling Han (Dalian Maritime University, China)

P4-14 A DenseNet-Based Learning Framework Toward Maritime End-to-End Autoencoder Communication Systems
Shuai Shao, Bin Lin, Nan Wu and Xiaoling Han (Dalian Maritime University, China)

P4-15 OFDR Spatial Resolution Optimization Using Equal Sampling and Gaussian Fitting Method
JingCheng Shi, Xu Guo, Zhongbo Miao and Jianjun Wu (Peking University, China)

P4-16 Directional modulation based dual function radar-communication design
Zichao Zhuang (Tianjin Normal University, China)

P4-17 Deep Learning Based CSI Feedback Method Exploiting Channel Correlation in Massive MIMO
Jingyuan Yu (BUPT, China); An Chen and Wenbo Xu (Beijing University of Posts and Telecommunications, China)

P4-18 Cross-modal Semantic Communications in 6G
Mingkai Chen, Minghao Liu, Wenjun Wang, Haie Dou and Lei Wang (Nanjing University of Posts and Telecommunications, China)

P4-19 Sparsity Prediction-based Deep Compressed Sensing for MEC-enabled IoT Systems
Jingyu Zhang, Yiwen Deng and Haixia Zhang (Shandong University, China); Xianhao Chen (University of Hong Kong, China)

P4-20 Secure Computation Offloading for IRS-Assisted Mobile Edge Computing Networks
Mengru Wu (Zhejiang University of Technology, China); Weijin Chen (Zhejiang University of Technology, China); Kexin Li and Liping Qian (Zhejiang University of Technology, China)

P4-21 MI-based Joint Source Channel Coding for Wireless Image Transmission
Ningwei Huang, Wenhui Hua and Lingyu Chen (Xiamen University, China)

P4-22 LSTM-embedding Transformer model for LoS/NLoS recognition in indoor localization
Lucong Chen, Chao Dong and Kai Niu (Beijing University of Posts and Telecommunications, China); Qiubin Gao (CICT Mobile Communication Technology, China); Yongqiang Fei and Yuwan Su (CICT Mobile Communications Technology, China)

P4-23 EFK localization method in NLOS environment based on residual discrimination
Jin Wang (Xi'an University of Posts and Telecommunications, China); Xiyl Dong (Xi'an University of Posts and Telecommunications, China); Yan Xing (National Time Service Center, China); Shaoqing Lv (Xi'an University of Posts and Telecommunications, China); Pengwu Wan (XI'AN University of Posts&Telecommunications, China)
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