

ICCCN 2025 Workshop Program Overview

August 7, 2025 (Thursday, Local times in Tokyo, Japan)			
8:00: Registration Open			
(Rooms)	Asakaze	Shunyo	Matsukaze
8:30-10:00		Session 23 (WK 1): SoftIoT + IoTPST + ISCC-IoT (3+1+1)	Session 24 (WK 2): BDSSN 1 (5)
10:00-10:30	Coffee Break		
10:30-12:00	Session 25 (WK 3): BDMLN (5)	Session 26 (WK 4): AIECN (Keynote) + Quantum (2)	Session 27 (WK 5): BDSSN 2 + SCIAN (4+1)
12:00-13:30	Lunch (on your own)		
13:30-14:30	Session 28 (WK 6): EAI-IoT (5)	Session 29 (WK 7): AIECN 2 (6)	Session 30 (WK 8): HRLLC in 6G 1 (5)
14:30-15:00	Coffee Break		
15:00-17:00	Session 31 (WK 9): VENITS + COHEREENT (4+3)	Session 32 (WK 10): AIECN 3 (7)	Session 33 (WK 11): HRLLC in 6G 2 + DISCS (5+2)

ICCCN 2025 Workshop Program

August 7 (Thursday)

8:30 - 10:00

Session 23 (WK1): SoftIoT + ISCC-IoT + IoTPST

Session Chair: Haotong Cao (Nanjing University of Posts and Telecommunications),

haotong.cao@njupt.edu.cn

- **LLM-Based V2X Multi-Model Sensor Data Fusion for Improved Road Safety and Data Privacy**
Chengpeng Guo (University of Bristol), Binta Hu (Xi'an Jiaotong-Liverpool University), Junwei Zhang (Communication University of China), Zhengyu Wan (Shenzhen MSU-BIT University), Jianbo Du (Xi'an University of Posts and Telecommunications), Xiaolin Mou (Shenzhen Technology University)
- **CFcoQUIC: CPU/FPGA Co-design Accelerated QUIC for Low-Power IoT Communication**
Xin Dong, Lizhuang Tan, Huiling Shi, Wei Zhang (Shandong Computer Science Center), Peiying Zhang (University of Petroleum (East China))
- **Wheeled Robot SLAM in Degenerate Environments**
Min Xue (Xi'an Research Institute of Navigation Technology, China), Xiaoqiao Tian (Xi'an University of Posts and Telecommunications)
- **A multi-features fused AP Selection Strategy for Wide-range Indoor Localization System with Sparse Deployment**
Jiahong Xiao, Jianhong Chu, Zhi Zhang, Yuyao Wang (Beijing University of Posts and Telecommunications), Min Liang, Xingyu Zhang (Hanshow Technology Co.)
- **Smart Traps for Smart Systems: Scalable Honeynets for IIoT Cybersecurity**
Wael Alsabbagh, Diego Urrego (Brandenburg University of Technology Cottbus–Senftenberg, Germany), Peter Langendörfer (IHP – Leibniz-Institut für innovative Mikroelektronik, Germany)

Session 24 (WK2): BDSSN 1

Session Chair: Chair: Hanlin Zhang (Qingdao University), hanlin@qdu.edu.cn

- **MaEA: A Secure Aggregation Defense Method Against Poisoning Attacks in Federated Learning**
Yujie Xue, Zheyi Chen, Hailin Feng (Zhejiang A&F University), Hansong Xu (Shanghai Jiao Tong University), Kun Hua, Dongfeng Fang (California Polytechnic State University)
- **An STGNN Model Based Traffic Prediction for Complex Patterns**
Nuri Alperen Kose, Kubra Kose, Fan Liang (Sam Houston State University)
- **SMART: a practical and robust client-side RAP detection approach**
Tong Sun, Qian Lu, Hanlin Zhang, Qianqian Su, Xinrui Ge (Qingdao University)
- **Adaptive Selective Encryption for Surveillance Videos via Hierarchical Grading and YOLO Detection**
Hanlin Zhang (College of Computer Science and Technology, Qingdao University), Weihao Wang, Hequn Xian (Qingdao University)
- **DABE-PU: Decentralized Attribute-Based Data Sharing Scheme with Policy Update Privacy**
Fan hao Meng, Qianqian Su (Qingdao University)

10:30 - 12:00

Session 25 (WK3): BDMLN

Session Chair: Genya Ishigaki (San Jose State University), genya.ishigaki@sjsu.edu

- **MODL-CM: Metaheuristic-Optimized Deep Learning Frameworks for IoT-Based Condition Monitoring**
Akeem Kareem, Jang-Wook Hur (Kumoh National Institute of Technology, Gumi)
- **Taming Imbalance and Complexity in WAN Traffic Engineering**
Yufeng Xin, Sajith Sasidharam, Cong Wang, Mert Cevik (University of North Carolina at Chapel Hill)
- **Performance Comparison of HTTP/3 and HTTP/2 with Proxy Integration**
Fan Liu, Behrooz Farkiani, John Dehart, Jyoti Parwatikar, Patrick Crowley (Washington University in St. Louis)
- **An Approximate Solution Using Graph Convolutional Network for a Load Balancing Problem in Communication Networks**
Shota Osada, Norihiko Shinomiya (Soka University)
- **Secure Personalized Federated Learning Based on Oblivious Transfer**
Yue Cao, Murugaraj Odiathevar, Winston K.G. Seah, Gang Xu, Feng Zhang

Session 26 (WK 4): ICCCN Workshop AIECN Keynote + Quantum

Session Chair: Bintao Hu (Xi'an Jiaotong-Liverpool University), Bintao.Hu@xjtlu.edu.cn

- **ICCCN AIECN Workshop Keynote: Discussion on Intelligent Optimization Methods for Sensing, Communications, and Computing Integrated Wireless Networks**
Jianbo Du, Xi'an University of posts and Telecommunications
- **Quantum Feature Optimization for Enhanced Clustering of Blockchain Transaction Data**
Yun-Cheng Tsai (National Taiwan Normal University), Samuel Yen-Chi Chen (Wells Fargo)
- **Energy Efficient Quantum Entanglement Generation Optimizing Resource Utilization in Large Network**
Vineet Dwivedi, Chandrashekar Jatoth, Vivek Sukla (National Institute of Technology, Raipur), Rajkumar Buyya (The University of Melbourne)

Session 27 (WK5): BDSSN 2 + SCAIN

Session Chair: Hansong Xu (Shanghai Jiao Tong University), hansongxu@sjtu.edu.cn

- **Breaking Android with AI: A Deep Dive into LLM-Powered Exploitation**
Wanni Vidulige Ishan Perera, Xing Liu, Fan Liang (Sam Houston State University), Junyi Wang (Lawrence Technological University)
- **Blockchain-Based Network-Aware Task Offloading in Intelligent Transportation**
Fan Liang (Sam Houston State University)
- **A Gaussian Temporal Based Graph Convolutional Network for Traffic Operation Flow Forecasting**
Jiahao Zhang, Shulan Guo, Hequn Xian (Qingdao University), Shangda Xiao (Manual School Qingdao), Zesheng Cheng (College of Computer Science and Technology, Qingdao University), Mingxuan He (Dalian University of Technology)
- **Proactive Task Migration with Server Grouping for Co-Resident Mitigation in AI Computing Clusters**
Xiangbin Wang, Qiang Wu, Meng Yuan (Nanjing University of Aeronautics and Astronautics)

13:30 - 14:30

Session 28 (WK6): Edge-AI

Session Chair: Shuhui Yang (Purdue University Northwest), Shuhuiyang@pnw.edu

- **Enabling Federated Learning for Object Detection in Connected Autonomous Driving Using YOLO with the Flower Framework**
Komala Subramanyam Cherukuri, Kewei Sha, Junhua Ding (University of North Texas)

- **Bayesian Deep Neural Network-empowered Thompson Sampling for Context-aware Task Offloading in Dynamic Fog Computing** Tran-Dang Hoa, Dong-Seong Kim (Kumoh National Institute of Technology)
- **Resource Trading for Vehicular Edge Computing Networks: A Trust-Based Double Auction Approach** Weiwei Yang, Xiaoyi Zeng, Jinkai Zheng, Yanfeng Zhang, Kaihui Liu (Dongguan University of Technology), Xiaoyan Li (Jilin University), Kangle Mu (Northwestern University)
- **FaaS and Furious: Accelerating Privacy-Preserving ML with Function as a Service at the Edge** Francesco Tusa (University of Westminster and University College London), Antonis Michalas (Tampere University), James Bowden (Universitätsmedizin Göttingen), Tamas Kiss (University of Westminster)

Session 29 (WK7): AIECN 2

Session Chair: Bintao Hu (Xi'an Jiaotong-Liverpool University), Bintao.Hu@xjtlu.edu.cn

- **Misalignment Discussion of an Eight-Coil Wireless Power Transfer System** Yuanpu Zheng, Hanxiao Su, Shuangyao Huang, Guangyu Ren, Wenzhang Zhang (Xi'an Jiaotong-Liverpool University), Chen Xu (Vivo Mobile Communication Co. Ltd.)
- **Low-Altitude Economy-Oriented Multi-Layer UAV NOMA Caching Networks: Deployment and Resource Optimization** Qing Ren, Hui Wang (Huaxin Consulting CO., Ltd), Yue Yin (Keio University)
- **Resource Coordination Learning for End-to-End Network Slicing Under Limited State Visibility** Xiang Liu, Genya Ishigaki, (San Jose State University), Jason P. Jue (The University of Texas at Dallas)
- **Improving Image Transmission with VAE-based Semantic Communication Using HQAM** Carlos Guerra Yáñez, Stanislav Zvánovec (Czech Technical University in Prague), Antonio Mederos Barrera (University of Las Palmas de Gran Canaria), Zabih Ghassemlooy (Northumbria University)
- **Topo-X: Co-optimize Flow Scheduling, Topology, and ML Training Parallelism** Yi-Xiang Hu, Han Tian, Yifang Zhao, Feng Wu, Xiang-Yang Li (University of Science and Technology of China)

Session 30 (WK 8): HRLLC in 6G 1

Session Chair: Fanqin Zhou, Beijing University of Posts and Telecommunications, yangzx@bupt.edu.cn

- **An Equivalent Channel-based Hybrid Precoding Scheme for Multi-user Massive MIMO Systems** Shiguo Wang, Jun Zhang, Yun Zhao (Changsha University of Science and Technology), Xiukai Ruan (Wenzhou University)
- **Joint Time Slot Access and Transmit Beamforming for Multi-User Symbiotic Radio System on the PSR** Yujie Qiu, Zhixiang Yang, Jing Gao (Beijing University of Posts and Telecommunications)
- **Joint Optimization for Semantic-Aware Communication and Control: A GDM-Empowered DRL Approach** Lijie Zhou, Shiyi Gu, Yu Zhou, Wenjing Li (Beijing University of Posts and Telecommunications), Zheng Dong, Haoyang Bai, Jiakai Hao (State Grid Beijing Electric Power Company, Beijing)
- **Leveraging Generative Diffusion Models for Enhanced Beam Alignment in Cell-Free MIMO Systems** Jinli Zhang, Yikun Zhao (Beijing University of Posts and Telecommunications)
- **HAtt3EGNN: An Unsupervised Power Allocation Method for Cell-Free Massive MIMO** Tengan Guo, Kunyi Xie, Wenjing Li (Beijing University of Posts and Telecommunications)

15:00 - 17:00

Session 31 (WK9): VENITS + COHEREENT

Session Chair: Francesco Tusa (University of Westminster and University College London),
f.tusa@westminster.ac.uk & **Francisco J. Martinez (University of Zaragoza),** f.martinez@unizar.es

- **Learning Based Rate Adapter for UAV Streaming**
Nassim Sehad, Riku Jäntti (Aalto University), Jashanjot Singh Sidhu, Abdelhak Bentaleb (Concordia University), Hamed Hellaoui (Nokia), Mérouane Debbah (Khalifa University)
- **Load Balancing in Connected Vehicle Services.**
Akira Ito, Toru Furusawa, Lei Zhong (TOYOTA MOTOR CORPORATION), Takuro Sakai, Tatsuki Agatsuma (KDDI CORPORATION)
- **Enhancing Vehicular Charging Systems with a Natural Language HMI Solution**
Pablo Donate, Julio A. Sanguesa, Piedad Garrido, Vicente Torres-Sanz (Universidad de Zaragoza)
- **LoRaWAN for ITS: Overcoming Connectivity Challenges in Remote Areas**
Pablo Donate, Julio A. Sanguesa, Piedad Garrido (University of Zaragoza)
- **SFIOC: a Platform to Support Service Dependency Injection in Serverless Functions**
Andrea Sabbioni, Luca Foschini (University of Bologna)
- **A DRL-Based Scheduler for FaaS in Smart Grids: Balancing URLLC Reliability & mMTC Connectivity**
Vajiheh Farhadi (Bucknell University)
- **Edge Serverless Autoscaling managed via Proximal Policy Optimization**
Mauro Femminella, Gianluca Reali (University of Perugia - DI)

Session 32 (WK 10): AIECN 3

Session Chair: Yuan Gao (Shanghai University), gaoyuansie@shu.edu.cn

- **Voice-Activated Control System for Drone-Mounted PTZ Cameras**
Xuehan Chen, Wenzhang Zhang, Guangyu Ren, Shanshan Zhao (Xi'an Jiaotong-Liverpool University)
- **A Blockchain-Enhanced Deep Learning Platform for Secure Semantic Alignment and Sharing of Chemical-Biological Data**
Sida Huang, Jialuoyi Tan, Jingxuan Liu, Zhiran Wang, Wenzhang Zhang, Yuji Dong (Xi'an Jiaotong-Liverpool University), Xie He (Nanyang Technological University)
- **HAFE: Hierarchical Attention-based Frontier Exploration for Multi-Robot Mapping**
Xueyan Yao, Yuji Dong, Matilda Isaac (Xi'an Jiaotong-Liverpool University)
- **Diffusion Model-aided Resource Scheduling for Multiple GAI Training Jobs**
Meng Yuan, Qiang Wu, Xiangbin Wang, Siyang Sun (Nanjing University of Aeronautics and Astronautics)
- **An Incentivization Strategy toward E2E Network Slice as a Service**
Yosha Mundhra, Riti Gour, Genya Ishigaki (San Jose State University)
- **Link-level Blocking Prediction for Dynamic Network Slicing using Graph Neural Networks**
Manmohanbabu Rupanagudi, Genya Ishigaki (San Jose State University)
- **Blockchain-Enabled Personalized Travel Recommendations with Semantic Search and Transparent Data**
Yihan Huang, Jingxuan Liu, Sida Huang, Jialuoyi Tan (Xi'an Jiaotong-Liverpool University), Xie He (Nanyang Technological University), Shuangyao Huang, Yuji Dong (Xi'an Jiaotong-Liverpool University)

Session 33 (WK 11): HRLLC in 6G 2

Session Chair: Zhixiang Yang, Beijing University of Posts & Telecommunications,
fqzhou2012@bupt.edu.cn

- **Analysis of Time Synchronization for 6G-TSN Networks with Hot Standby**
Mahin Ahmed, Raheeb Muzaffar, Damir Hamidovic, Armin Hadziaganovic, Hans-Peter Bernhard (Silicon Austria Labs GmbH), Lucas Haug (University of Stuttgart), Hans-Peter Bernhard (Silicon Austria Labs GmbH and Johannes Kepler University), Marilet De Andrade (Ericsson Research), Janos Farkas (Ericsson Research)
- **GDM enhanced CNN-based first arrival path delay estimation framework.**
Jiale Quan, Xudong Wang, Tianhang Sun, Wenjing Li (Beijing University of Posts and Telecommunications)

- **Dynamic Cell Association for Hierarchical Over-the-air Federated Learning with Non-IID Data**
Zerui Zhen, Fanqin Zhou, Xuesong Qiu (Beijing University of Posts and Telecommunications), Sheng Hong (Beihang University)
- **Distributed Robust Control Mechanisms for Power Wireless Network Control Systems**
Huanpeng Hou, Xiaoyong Qi, Jing Zong, Ming Li (State Grid Henan Information & Telecommunication Co., Ltd), Tianle Lin, Shiyi Gu, Fanqin Zhou (Beijing University of Posts and Telecommunications)
- **Cross-Layer Latency Compression and Spectrum Compaction Framework for Event-Triggered Traffic in HRLLC Industrial Network**
Kang Li, Jiaxing Fang, Yan Wang, Pengcheng Zhu (National Mobile Communications Research Laboratory, Southeast University)
- **Cell-Expansion and Region-Cut-Split Algorithms for Steiner Tree Problem in HAPS Networks**
Yuqiang Wen, K. L. Eddie Law (Macao Polytechnic University)
- **The Impact of GEO Satellite Latency on Twitch Live Streams**
Ziv Weissman, Jiamo Liu, Elizabeth Belding (University of California, Santa Barbara)

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