

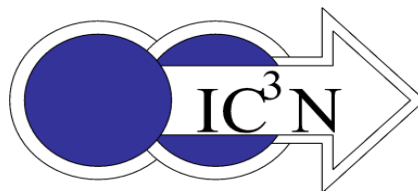
ICCCN 2026

The 35th International Conference on Computer Communications and Networks

July 27 - 30, 2026

Technical Program

Honolulu, Hawaii, USA



ICCCN2026 Program Overview - Honolulu, Hawaii • Hyatt Waikiki

July 26, 2026 (Sun): Registration opens 9pm – 10pm (Kou Ballroom)

Day 1 – Monday, July 27, 2026 (conference)

Registration open 7:30 AM (Kou Ballroom)

8:15–8:30	Opening Remarks (Kou Ballroom)				
8:30–9:30	Keynote #1 in Kou Ballroom by Dr. Prasant Mohapatra				
9:30–10:00	Coffee Break				
10:00–12:00	Session 1 (Invited , Kou Ballroom)	Session 2 (Room: EKAHI)	Session 3 (Room: ELUA)	Session 4 Room: EKOLU)	Session 5 (Room: EHA)
12:00–1:30	Lunch (on your own)				
1:30–3:00	Panel #1 on “Intelligence at the Edge: Grand Challenges for AI and Networked Systems” (Kou Ballroom)				
3:00–3:30	Coffee Break				
3:30–5:30	Session 6 (Invited 2, Kou Ballroom)	Session 7 (Room: EKAHI)	Session 8 (Room: ELUA)	Session 9 (Room: EKOLU)	Session 10 (Room: EHA)
6:30/7:00–8:30	Conference Reception				

Day 2 - Tuesday, July 28, 2026 (conference)

Registration open 8:00 AM (Kou Ballroom)

8:30–9:30	Keynote #2 in Kou Ballroom by Dr. Hang Liu				
9:30–10:00	Coffee Break				
10:00–12:00	Session 11 (Invited 3, Kou Ballroom)	Session 12 (Room: EKAHI)	Session 13 (Room: ELUA)	Session 14 (Room: EKOLU)	Session 15 (Room: EHA)
12:00–1:30	Lunch (on your own)				
1:30–3:00	Panel #2 on “Emerging Technologies for NextG Networks” (Kou Ballroom)				
3:00–3:30	Coffee Break				
3:30–5:30	Session 16 (Invited 4 in Kou Ballroom)	Session 17 (Room: EKAHI)	Session 18 (Room: ELUA)	Session 19 (Room: EKOLU)	Session 20 (Room: EHA)
7:00–9:00	Conference Dinner Banquet				

Day 3 – Wednesday, July 29, 2026 (conference + workshops)

Registration open 8:00 AM (Kou Ballroom)

8:30–9:30	Keynote #3 in Kou Ballroom by Dr. Nageswara (Nagi) Rao				
9:30–10:00	Coffee Break				
10:00–12:00	Session 21 (Invited 5 in Room Kou)	Session 22 (Room: EKAHI)	Session 23 (Room: ELUA)	Session 24 (Poster 1 in Room: EKOLU)	Session 25 (Poster 2 in Room: EHA)
12:00–1:30	Lunch (on your own)				
1:30–2:30	Keynote #4 in Kou Ballroom by Dr. Shivakant Mishra				
2:30–3:00	Coffee Break				
3:00–5:00	Session 26 (EAI-IoT, Kou Ballroom)	Session 27 (BDMLN in EKAHI)	Session 28 (IoTTPST in ELUA)	Session 29 (ISCC-IoT in EKOLU)	Session 30 (AIECN in EHA)

Day 4 – Thursday, July 30, 2026 (workshops)

Registration open 8:00 AM (Workshops continue); Reg Desk: 7:30 AM (Kou Ballroom)

8:30-10:00	Session 31 BDSSN 1 (Kou Ballroom)	Session 32 COHERENT + DICSC + HCDT (EKAIUH)
10:30-12:00	Session 33 BDSSN 2 (Kou Ballroom)	Session 34 QML (EKAHI)

ICCCN 2026 Technical Program

July 27, 2026, Mon (Day 1): (local times) Conference

7:30 Registration open

8:15 – 8:30 Opening Remarks (Kou Ballroom)

8:30 – 9:30 **Keynote #1** (Kou Ballroom) by **Dr. Prasant Mohapatra**

9:30 – 10:00 Coffee break

10:00 – 12:00 Technical Sessions

Session 1 (Invited 1) - **AI-Driven Sensing and Real-Time Network Intelligence**

Session Chair: Danda B. Rawat

- **SenseAgent: Signal-Grounded Wireless Sensing via a Training-Free Mixture of Experts**
Ziqi Wang, Feng Bao, Yanzhao Cao and Shiwen Mao
- **Diagnosing Performance Divergence in Ethereum Execution Clients**
Chon Kit Lao, Nora Sinong Lu, Jingyi Ning, Lei Xie, Meng Qu, Kanye Ye Wang and Xiaobo Zhou
- **REMIX: Adaptive Open-Domain Signal Mixing for Efficient Sensing Data Augmentation**
Denizhan Kara, Tomoyoshi Kimura, Chenzhi Hu, Jinyang Li, Yizhuo Chen, Yigong Hu, Hongjue Zhao, Shengzhong Liu and Tarek Abdelzaher
- **Twin-Guided Meta Learning for Generalizable UAV Trajectory Planning in Low-Altitude Wireless Networks**
Jiayuan Huang, Everett Tucker, Ruozhou Yu and Yuchen Liu
- **Enabling Real-Time AI in O-RAN: Deploying and Measuring AI Inside a Near-RT RIC xApp**
Lawrence Obiuevwi, Krzysztof J. Rechowicz, Sampath Jayarathna, Safdar Hussain Bouk, Fahmida Afrin, C. Nicolas Barati, Neda Moghim, Valentina Nanou, Muhammad Enayetur Rahman and Sachin Shetty

Session 2 (Regular) - Network Security & Threat Intelligence

Session Chair: Abdullatif M. A. Al-Baseer

- **Modeling Overlap and Observability in IP Threat Intelligence**
Errin Fulp, Angel Kodituwakku, Daniel Rogers, David Ahn
- **GASLIGHT: Spoofing Gas Measurements Using Laser-Based Signal Injection Attacks in WSNs**
Abdellatif Bendjeddou, Ahmed Boubriema, Walid Bechkit, Lotfi Berguiga, Cécile Jamois, Zhambyl Shaikhanov
- **Insourcing IoT Security with Edge Agents**
Yangyong Zhang, Sung Min Hong, Guofei Gu
- **VERA: A Dual-Validated, Behaviorally Verified Repository of 15,000+ Raw Windows Ransomware Binaries**
Garvit Agarwal, Nithish Vasanth, Seunghyun Cho, Yousef Alomayri, Noah D. Pumphrey, Feng Li, Yucheng Xie, Xukai Zou

Session 3 (Regular) - Blockchain Systems & Distributed Ledgers

Session Chair: Chin-tser Huang

- **Fresco: A Permissioned Blockchain Framework for Securing Model**
Zhankai Ye, Yusen Wu, Shixian Sheng, Phuong Nguyen, Yili Ren, Bingyang Wei, Yelena Yesha, Xin Liu
- **Blockchain-Based Spatial Registry and Management in Multi-User Mixed Reality**
Jubayer Hossain, M. Rasel Mahmud, Honghui Xu, Chenyu Wang
- **Reputation-Aware Routing in Payment Channel Networks via Secure Multiparty Computation**
Arun Shrestha, Kyle Downing, Hsiang-Jen Hong
- **Early Admission of Privileged Blocks: Increasing Efficiency of Time-Sensitive Blockchain Applications Using Reputation and Smart Markers**
Matthew Sharp, Laurent Njilla, Chin-Tser Huang

- **Efficient and Fair Scheduling Schemes for Enabling Priority Awareness in Blockchain Systems**
Matthew Sharp, Chin-Tser Huang, Soamar Homsri

Session 4 (Regular) - Wireless Networks & IoT Connectivity

Session Chair: Yanxiao Zhao

- **Adapting LoRaWAN Relay Specification for Battery-Sustainable Subterranean LoRa Mesh Networks**
Nalith Udugampola, Xiaoyu Ai, Binghao Li, Henry Gong, Aruna Seneviratne
- **WHO: World Model approach for Handover Optimization in 5G networks**
Uyen Truong Thi Thu, Nguyen Doan Van, Tuan Do Ngoc, Nam Nguyen Van, Dung Pham Kim Anh, Duc Vu Tuan
- **Weather-Aware Optical Attenuation Modeling Using Meteorological Data in Non-Terrestrial Networks**
Tomohiro Korikawa, Kyota Hattori, Chikako Takasaki, Takaaki Moriya, Daisuke Ikegami
- **Resilient Load Balancing Routing for LEO Satellite Constellations**
Anindo Mahmood, Murat Yuksel

Session 5 (Regular) - Federated Learning & Distributed AI

Session Chair: Kazuya Anazawa

- **Bandwidth-Aware Decentralized Federated Learning in Wired Networks**
Kengo Tajiri, Ryoichi Kawahara
- **Cross-Domain UAV Swarm Cooperation based on Decentralized Federated Learning with Hierarchical Aggregation**
Zheyi Chen, Yujie Xue, Hansong Xu, Kun Hua, Hailin Feng, Jia Lu
- **Joint Training and Inference Scheduling in Wireless Decentralized Federated Learning**
Zihan Gao, Siyuan Zhou, Zhihao Qu, Bin Tang
- **Fed-Listing: Federated Label Distribution Inference in Graph Neural Networks**
Suprim Nakarmi, Junggab Son, Yue Zhao, Zuobin Xiong
- **Rethinking the Transferable Adversarial Attacks and Robust Defense in Federated Learning**
Zuobin Xiong, Deval Mukherjee, Homook Cho, Wei Li

12:00 – 1:30 Lunch (on your own)

1:30 – 3:00 **Panel #1** (Kou Ballroom) on “Intelligence at the Edge: Grand Challenges for AI and Networked Systems.”

3:00 – 3:30 Coffee break

3:30 – 5:30 Technical Sessions

Session 6 (Invited 2) - **Resilient AI and Next-Generation Wireless Systems**

Session Chair: Shiwen Mao

- **A Security Analysis of the OpenClaw AI Agent Framework**
Surada Suwansathit, Yuxuan Zhang and Guofei Gu
- **Over-the-Air Backdoor Injection in Deep Learning-Based Semantic Communication Systems**
Yuan Zhou, Le Xia and Rose Qingyang Hu
- **Deep Learning-Enabled Energy-Efficient Joint CSI Estimation and Phase Shift Prediction in Large-Scale RIS-Assisted NOMA Systems**
Syed Samiul Alam, Yanxiao Zhao, Haolin Tang, Tahmid Tah, Wei Wang, Nibir K. Dhar and Min Song
- **Hierarchical Resource Scheduling for Multi-Access Point Coordination in IEEE 802.11be**
Yongchun Lu, Fanqin Zhou, Lei Feng, Zhixiang Yang and Wenjing Li
- **EdgeServing: Deadline-Aware Multi-DNN Serving at the Edge**
Jiahe Cao, Xiaomeng Li, Qiang Liu, Tao Han, Ning Zhang and Weisong Shi

Session 7 (Regular) - Reinforcement Learning for Networking

Session Chair: Ran Dubin

- **Deep Reinforcement Learning-based Dynamic TWT Scheduling for Heterogeneous Wi-Fi Networks**
Ahmed Maksud, Marcelo Carvalho
- **GenRL-CC: A GAN-Augmented Deep Reinforcement Learning Framework for Adaptive Congestion Control in Real-Time Communication**
Md Ruman Islam, Xiaoqian Zhang, Pei-Chi Huang
- **Effective Fingerprinting-Driven IoT Zero-Day Moving Target Defense Using Deep Reinforcement Learning**
Abdul Sami Mohammed, Yahya Osais
- **LLM-Powered Multi-Agent Attacks on Cooperative Spectrum Sensing**
Yu Cai, Ziang He, Yanyan Luo, Ziyue Zhang, Jie Cao, Yuchen Liu, Zhengping Luo, Shangqing Zhao
- **LLM-Assisted Task-Adaptive Semantic Communication over Non-Ideal Channels for Vision-Language Systems**
Oluwagbenga Orimoogunje, Shouvon Sarker, Xiangfang Li, Lijun Qian

Session 8 (Regular) - Edge Computing & Scheduling

Session Chair: Chenyu Wang

- **Adaptive Edge Inference Scheduling under Dynamic Network Conditions**
Mark Kotys, Yijie Zhang, Chase Wu, Gil Einziger, Suman Kumar
- **Managing KV Cache for Coordinated Waiting and Execution Time in LLM Serving**
Haiying Shen, Tanmoy Sen, Masahiro Tanaka
- **Straggler Tolerant and Resilient DL Training on Homogeneous GPUs**
Zeyu Zhang, Haiying Shen
- **ReMix: Resource-Reclaiming Mixed-Criticality Scheduling for Industrial IoT**
Md Ashikul Haque, Abusayeed Saifullah
- **Profiling and Scheduling Complex O-RAN Applications Across the 5G Edge and Cloud**
Yoonjae Hwang, Bhaskar Krishnamachari

Session 9 (Regular) - Network Architecture & Optimization

Session Chair: Ronal Kumar

- **A Techno-Economic Framework for Cost Modeling and Revenue Opportunities in Open and Programmable AI-RAN**
Gabriele Gemmi, Michele Polese, Tommaso Melodia
- **Network Slice Embedding over Space Division Multiplexed Elastic Optical Networks**
Divya Khanure, Riti Gour, Congzhou Li, Jason P. Jue
- **Efficient Fiber Link Discovery Algorithm for Multi-Stage Optical Data Center Networks**
Kazuya Anazawa, Toru Mano, Yoshiaki Sone, Eiji Oki
- **Packet Fragmentation for Low Latency Block-based FEC**
William Wulff, Thomas Wild, Andreas Herkersdorf
- **Protocol-Aware Semantic Mixture-of-Experts Graph Learning for Intrusion Detection in IoT Networks**
Gayatri Malladi, Geethapriya Thamilarasu

Session 10 (Regular) - Experimental Systems & Measurement

Session Chair: Asaad Althoubi

- **Field-Deployable RF Capture System for Indoor, Outdoor, and Foliage Environments**
Lawrence Obiuevwi, Krzysztof J. Rechowicz, Vikas Ashok, Sachin Shetty, Peter B. Foytik, Jared Cochran, Jeff Bobrow, Sampath Jayarathna
- **Delay-Consistent Cross-Traffic Generation for Extending Network Digital Twins to Unidentified Networks**
Ryohei Yamada, Hideaki Kimura, Takashi Nakanishi, Tatsuya Shimada
- **RadTwin: Generalizable Wireless Digital Twin for Dynamic Environments**
Yuru Zhang, Ming Zhao, Qiang Liu, Ahmed Alkhateeb, Abhishek K. Agrawal, Qi Qu
- **Hex2Wave: A Cross-Modal Framework for Unknown Protocol Clustering via Traffic Sonification**
Yonghao Wang, Jing Jing, Youwei Zhang, Hongjun Yang

- **Experimental Characterization of Distributed Machine Learning Systems under Realistic Network Impairments**
Asaad Althoubi, Broderick Mains

6:30 or 7:00 – 8:30 Conference Reception

July 28, 2026, Tue (Day 2): (local times) Conference

8:00 Registration open

8:30 – 9:30 **Keynote #2** (Kou Ballroom): **Dr. Hang Liu;**

9:30 – 10:00 Coffee break

10:00 – 12:00 Technical Sessions

Session 11 (Invited 3) - **Secure Storage, Intelligent Sensing, and Scalable Systems**

Session Chair: Laurent Njilla

- **Feistel-based Shuffling for Enhancing Security in LSM Storage Systems**
Tieming Geng and Chin-Tser Huang
- **Optimal Architecture for Reliable Large-Scale File Transfers: Analysis and Numerical Evaluation**
Arash Sarabi, Prateek Jain, Ethan Frink, Violet R. Syrotiuk and Abraham Matta
- **Autonomous mmWave Radar UAV Sensing System for Object Reconstruction in Low-Visibility Environment**
Haoran Yang, Sumukh Veeramalla, Honggang Zhang, Xiaohui Liang and Zhehan Xu
- **WaSma: Workflow-Aware Scheduling for Multi-Agent LLM Systems**
Uttam Rao, Ali Zafar Sadiq, Haiying Shen, Yuqing Yang, Elijah-Amir Randall Hodges and Marcus Muntean

Session 12 (Regular) - **Caching, Offloading & Data Management**

Session Chair: Genya Ishigaki

- **An Intelligent Content Caching for NDN with Communication-Efficient State Sharing**
Deep Pradipbhai Shah, Sai Sameer Yanamandra, Siva Girish Ramesh, Genya Ishigaki
- **Inferring Causal Relationships to Improve Caching for Clients with Correlated Requests: Applications to VR**
Agrim Bari, Yuqi Zhou, Gustavo de Veciana
- **Making the Most of Predictions: Data Offloading for Autonomous Driving**
Lucas Bréhon-Grataloup, Rahim Kacimi
- **FlowGuard: Slack-Aware Overload Control for Multi-Agent LLM Serving**
Ali Zafar Sadiq, Haiying Shen

Session 13 (Regular) - **Privacy, Trust & Secure Computation**

Session Chair: Qi Li

- **Analytical Evaluation of Unavailability in Middleboxes under Shared Protection with Multiple Backup Servers of Arbitrary Recovery Capacity**
Kira Imamura, Eiji Oki
- **IMUWhisper: Keyword Inference from Ambient Speech Through Zero-Permission Inertial Sensors**
Caiyue Chen, Qi Li, Keyang Yu
- **Multi-Objective Privacy-Preserving Function Placement in an Edge-Cloud FaaS Marketplace**
Francesco Tusa, David Griffin, Tamas Kiss, Miguel Rio
- **Privacy-Aware 5G Traffic Classification: A Few-Shot RAN Telemetry Framework**
Muhammad Enayetur Rahman, Sachin Shetty, Safdar Hussain Bouk, Kimberly Gold
- **X-NegoBox: An Explainable Privacy-Budget Negotiation Framework for Secure Peer-to-Peer Energy Data Exchange**
Poushali Sengupta, Sabita Maharjan, Frank Eliassen, Yan Zhang

Session 14 (Regular) - Mixed Reality, Resiliency and Large-Scale Networks

Session Chair: Yonghao Wang

- **Actuator Transition Dependency Aware Deep Learning Approach for Actuator State Prediction**
Fahim Irfan, Razib Iqbal, Sarah Olson
- **NetCause: Counterfactual Learning for Root Cause Analysis in Large-Scale Networks**
Fabien Chraim, Jian Zhang, Dominik Janzig, Xiang Song, Christos Faloutsos, John Evans
- **PERFECT: Personalized Federated Learning for CBRS Radar Detection**
Shafi Ullah Khan Khan, Madan Baduwal, Vini Chaudhary, Debashri Roy
- **Towards Designing an Execution Control System with Metastability Resilience**
Aleksy Charapko, Murat Demirbas, Matt Broadstone, Daniel Gomez Ferro, Akshat Vig

Session 15 (Regular/Short) - Quantum Networking, Quantum Systems & Entanglement

Session Chair: Claudio Cicconetti

- **HOPPER: A Hop-by-hop Entanglement Distribution Protocol for Asynchronous Quantum Networks**
Claudio Cicconetti
- **Who Ran My Circuit: Calibration Data-Based Fingerprinting of Quantum Cloud Hardware**
Wilson Patterson, Madan Baduwal, Vini Chaudhary
- **Logical-to-Physical Compilation for Reducing Depth in Distributed Quantum Systems**
Folkert de Ronde, Stephan Wong, Sebastian Feld
- **Multipartite Entanglement Routing in the Integrated Ground-Satellite Quantum Networks**
Xiangxing Guo, Yu Zhang, Lei Fan, Yu Wang, Zhu Han, Yanmin Gong, Yuanxiong Guo
- **On the Spatiotemporal Generalization Limits of Website Fingerprinting on Tor v3 Onion Services**
Kyungtae Kim, Doosung Hwang, Donghoon Kim

12:00 – 1:30 Lunch (on your own)

1:30 – 3:00 Panel #2 (Kou Ballroom) on “Emerging Technologies for NextG Networks.”

3:00 – 3:30 Coffee break

3:30 – 5:30 Technical Sessions

Session 16 (Invited 4)

Session 17 (Short) - High-Performance Networking & Network Telemetry

Session Chair: Joaquin Chung

- **Optimal Bandwidth Reservation Scheduling in High-Performance Networks under Time-Dependent Edge Costs**
Liudong Zuo, Pan Lai, Daqing Yun, Michelle Zhu, Chase Wu
- **Deterministic Delay Analysis of Periodic Credit-Based Input-Queued Switches under Bounded Arrival Jitter**
Takuto Kubo, Shingo Okada, Eiji Oki
- **Network Telemetry System for Monitoring Data Flow Paths in VXLAN/EVPN-based Software-Defined Networks**
Ronal Kumar, Jun Liu
- **Empirical Analysis of Cloud-Edge Infrastructure Complexity: Practitioner Pain Points and Architectural Directions**
Pawissanutt Lertpongjukorn, Hai Nguyen, Mohsen Amini Salehi
- **In-Transit Payload Fingerprinting for High-Throughput Data Streams**
Ganesh C. Sankaran, Ivan Torres, Seena Vazifedunn, Cong Wang, Rajkumar Kettimuthu, Joaquin Chung

Session 18 (Short) - Wireless, WiFi, and Multimedia Networking

Session Chair: Riti Gour

- **If You Build It, Will They Connect? 6 GHz WiFi in a Stadium**
Ethan Sorensen, Doug Hales, Christopher Kitras, Jamison Lofthouse, Joshua Montierth, Philip Lundrigan
- **Leveraging Wi-Fi Signals for Monitoring Seasonal Changes**
Saeid Mehrdad, Alamin Mohammed, Aaron Striegel
- **Robust Multi-User 360° Virtual Reality Video Delivery**
Jean Abou Rahal, Gustavo de Veciana
- **OrbitStream: Training-Free Adaptive 360° Video Streaming via Semantic Potential Fields**
Aizierjiang Aiersilan, Feiyang Zhang
- **Adaptive Application and Offloading for Video Object Detection**
Gahana Majumdar, Hang Liu, Qi Zhao, Genshe Chen

Session 19 (Short) - Edge/Cloud Computing, Offloading & Serverless Systems

Session Chair: Vaji Farhadi

- **Scheduling Real-Time Serverless Smart Grid Workflows with Chain-Aware DRL**
Vajiheh Farhadi
- **SERN: Bandwidth-Adaptive Cross-Reality Synchronization for Simulation-Enhanced Robot Navigation**
Jumman Hossain, Emon Dey, Snehalraj Chugh, Masud Ahmed, Ms Anwar, Abu-Zaher Faridee, Jason Hoppes, Theron Trout, Anjon Basak, Rafidh Chowdhury, Rishabh Mistry, Hyun Kim, Jade Freeman, Niranjana Suri, Adrienne Raglin, Carl Busart, Anuradha Ravi, Nirmalya Roy
- **AsyncTrader: Asynchronous Multi-Agent Reinforcement Learning for P2P Energy Trading**
Anany Pratap Gupta, Ye Zhou, Qi Li
- **LORE: Lyapunov-Optimized Heterogeneous Task Offloading and Resource Allocation in Highway Vehicular Networks**
Yongmin Zhang, Yijia Tao, Xiaoxiao Rong
- **Dependency-Aware Task Offloading via Quantum Graph Attention Network-based Deep Reinforcement Learning in Collaborative Edge-Cloud Systems**
Yuhui Wang, Xingqi Wu, Junaid Farooq, Samuel Yen-Chi Chen, Juntao Chen

Session 20 (Short) - Security, Privacy & Anomaly Detection

Session Chair:

- **BEAR: BGP Event Analysis and Reporting**
Hanqing Li, Melania Fedeli, Vinay Kolar, Diego Klabjan
- **Inferring Device-Level Activity from VPN-Encrypted Smart-Home Traffic**
Ye Zhou, Anany Pratap Gupta, Keyang Yu, Qi Li
- **Adaptive Log Anomaly Detection for Networked System in Cold-Start Extreme Verification Latency**
Qinxuan Shi, Zhanglong Yang, Sicong Shao
- **Key-HIT: Hash-Induced Transformation for Keystroke Dynamics-Based Private Continuous Authentication**
Yatish Dubasi, Qinghua Li

7:00 – 9:00 Conference Dinner Banquet

July 29, 2026, Wed (Day 3): (local times) conference + workshops

8:00 Registration open

8:30 – 9:30 **Keynote #3** (Kou Ballroom): **Dr. Nageswara (Nagi) Rao.**

9:30 – 10:00 Coffee break

10:00 – 12:00 Technical Sessions - Conference

Session 21 (Invited 5)

Session 22 (Short) - AI/ML for Networking, Caching & Detection

Session Chair: Avinash Kumar

- **Semantic Caching of Contextual Summaries for Efficient Question-Answering with Language Models**
Camille Couturier, Spyridon Mastorakis, Haiying Shen, Saravan Rajmohan, Victor Rühle
- **Latent Sculpting for Zero-Shot Generalization: A Manifold Learning Approach to Out-of-Distribution Anomaly Detection**
Rajeeb Thapa Chhetri, Saurab Thapa, Avinash Kumar, Zhixiong Chen
- **Multi-View GAN-Based Intrusion Detection with Temporal Reconstruction and Class-Aware Feature Balancing**
Ishfaq Bashir Sofi, Mohammed Hamza, Anjali Agarwal, Kuljeet Kaur
- **The Consistency Optimizer Family: Modulating Parameter Updates via Local Trajectory Alignment**
Rajeeb Thapa Chhetri, Saurab Thapa, Zhixiong Chen, Avinash Kumar
- **SNR-Guided Model Sizing for Differentially Private Federated Learning with LiRA Privacy Auditing**
Mohammed Hamza, Ishfaq Bashir Sofi, Kuljeet Kaur, Anjali Agarwal

Session 23 (Short) - Network Applications, IoT, Benchmarks & Digital Twins

Session Chair: Khem Poudel

- **Smart Blockchain-Based Access Control for the Internet of Things**
Mahdi Manavi, Yunpeng Zhang, Guoning Chen
- **CAN-QA: A Question-Answering Benchmark for Reasoning over In-Vehicle CAN Traffic**
Jing Chen, Abhijay Deevi, Onat Gungor, Tajana Rosing
- **NetAgentBench: A State-Centric Benchmark for Evaluating Agentic Network Configuration**
Ahmed Twabi, Yepeng Ding, Tohru Kondo
- **An LLM-Based Autonomous Agent for Network Diagnosis and Recovery on a Digital Twin**
Hiroki Ikeuchi, Yousuke Takahashi, Hitoshi Shimizu, Hiroaki Matsubayashi

Session 24 (Poster 1) - Intelligent Edge Systems, IoT Applications, and Next-Gen Network Architectures

Session Chair: Kewei Sha

- **Towards Federated Learning-Enabled Multi-NWDAF for Intelligent Network Analytics**
Vinh Tran, Quan Dinh, Diep Pham and Trung Le
- **Multi-Cloud Open Radio Access Network Resource Manager and Orchestrator**
Ramon Carvalho, Fuad Abinader and Thiago Silva
- **Energy Efficient Edge Site Operation for Rural V2X**
Xiaomeng Li, Ming Zhao, Qiang Liu, Mehmet Can Vuran, Li Zhao, Nathan Huynh, Mizan Rahman and Eren Erman Ozguven
- **Edge-Assisted Real-time Rendering of Relightable Gaussian Avatars**
Taehyeon Kim
- **Wearable Sensor-Based Fatigue Monitoring for Construction Workers Using an IoT-Driven Ensemble Learning Approach**
Jeong In Choi and Min Ki Ko
- **Towards an Integrated 5G-TSN Architecture with 5G Non-Cellular DECT NR+**
Stefan Senk, Jan Conrad Schulte, Tobias Scheinert, Hosein Kangavar Nazari, How-Hang Liu and Frank H.P. Fitzek
- **Safeguarding Privacy in Voice Phishing Detection: Evaluating the Efficacy of Synthetic Datasets**
Gyuhyeon Choi and Ho Mook Cho

Session 25 (Poster 2) - Secure, Explainable, and Autonomous Network Intelligence & Optimization

Session Chair: Zhenghua Hu

- **When Good Enough Is Green Enough: A Sustainable Optimizer for Edge LLMOps**
Fatima Rani, Pit Hofmann, Juan Cabrera and Frank H. P. Fitzek

- **An IoT Sensor Implementation to Improve Bus Reliability and Safety**
Sheila Long and Riti Gour
- **Mechanisms for Performance Analysis of an Edge–Cloud Telemedicine System**
Joanna Weissenberg, Marek Michalski and Olgierd Cyls
- **Unified Fog Computing Architecture Integrating O-RAN, MEC, and OneM2M**
Ramon Carvalho, Fuad Abinader and Thiago Silva
- **Enhancing XAI Interpretability in Malicious Network Traffic via Semantic Attribution Aggregation**
Jinhyuk Son; Ho-Mook Cho; Sangryu Park
- **Beyond Siloed Systems: Network State Embeddings for Autonomous Networking**
Sankalpa Timilsina; Manas J. Das; Susmit Shannigrahi

July 29, 2026, Wed (Day 3): (local times) workshops

12:00 – 1:30 Lunch (on your own)

1:30 – 2:30 **Keynote #4** (Kou Ballroom): **Dr. Dr. Shivakant Mishra.**

2:30 – 3:00 Coffee break

3:00 – 5:00 Workshop Technical Sessions

Session 26: EAI-IoT

Session Chair: Chenyu Wang

- **A Paradigm For Collaborative Pervasive Fog Computing Ecosystems at the Network Edge**
Abde Mtibaa (UMSL)
- **Stateless Execution Gating Through Capability Artifacts for Distributed Edge Systems**
Kaushik Katta
- **MOTPS: Multi-Objective Optimization and Trajectory Prediction for Task Offloading in SDN-Based Vehicular Edge Networks**
Syed Aizaz Ul Haq (COMSATS University Islamabad, Wah Campus, Pakistan), Mohammad S. Khan (East Tennessee State University), Muhammad Farhan (Dalian University of Technology), Nadir Shah (COMSATS University Islamabad, Wah Campus, Pakistan), Gabriel-Miro Muntean (Dublin City University, Ireland)
- **Towards Achieving Room-Level Localization Fusing Depth-Based and Spectrographic Modalities**
Gabriel Morales (The University of Texas at San Antonio), Khoa Nguyen (The University of Texas at San Antonio), Rocky Slavin (The University of Texas at San Antonio)
- **Multi-Password Authentication with Role-Differentiated Privileges: Applications in IoT and Secure Systems**
Baker Al Smadi (Grambling State University, Grambling, LA, USA), Dileon Saint-Jean (American Public University System, Charles Town, WV, USA), Majd Z. Tahat (Louisiana Tech University, Ruston, LA, USA), Baker Al Smadi (University of North Carolina Wilmington, Wilmington, NC, USA)
- **Programmable B5G Infrastructure for Vertical-Aware Slice Orchestration: Teleoperation in Dynamic 5G Environments**
Vincent Charpentier (University of Antwerp - imec, IDLab), Andreas Gavrielides (University of Antwerp - imec, IDLab), Miguel Camelo (University of Antwerp - imec, IDLab), Johann M. Marquez-Barja (University of Antwerp - imec, IDLab), Nina Slamnik-Kriještorac (University of Antwerp - imec, IDLab)

Session 27: BDMLN

Session Chair: Genya Ishigaki

- **Metadata Clustering-Driven Federated Learning for Multi-Domain Virtual Network Function Scaling**
Runyu Wang, Eiji Oki (Kyoto University)

- **Characterizing Synchronization Overhead in Hybrid Parallel Training of Clinical Prediction Models on Multilevel Architectures**
Shaili Balampaki, Satish Wagle, Khem Poudel (Middle Tennessee State University)
- **RUBICONE: Wireless RAFT-Unified Behaviors for Intervehicular Cooperative Operations and Negotiations**
Zhenghua Hu, Tairan Dan, Zeyu Tao, Jiacheng Qian, Amedeo Morat, Lorenzo Romano, Alessandro Massafra, Hao Xu (Tongji University)
- **From Zero-Shot to Efficient Fine-Tuning: LLM-Based Early-Warning of Video Injection in RTP Surveillance Streams**
Mudassir Malik, Abdullatif Albaseer, Mohamed Abdallah (Division of ICT, College of Science and Engineering, HBKU, Doha, Qatar)
- **CogniTensor: Adaptive Multi-Sensor Transmission for V2X Collective Perception via Uncertainty and Channel Awareness**
Antonio Santos da Silva, Joao Paulo J. da Costa, Alexey Vinel, Paulo Mendes (Karlsruhe Institute of Technology; Hamm-Lippstadt University of Applied Sciences; Airbus), Daniel V. de Lima (University of Brasília), Edison Pignaton de Freitas (Federal University of Rio Grande do Sul)
- **The Illusion of Competence in Generative AI Services: A Formal Framework for Trust Calibration**
Riya Sarnaik, Hardik Ruparel

Session 28: IoTPST

Session Chair: Geetha Thamarasu

- **NETFL: Network Efficient Fully Secure Federated Learning at Scale**
Sahar Ghoflsaz and Elaheh Sadredini (University of California, Riverside)
- **Autoencoder-Based Anomaly Detection on CAN Bus Networks with Surrogate Decision-Tree Interpretability**
Amirmasoud Pourmiri, Ali Eslami and Sergio Salinas Monroy (Wichita State University)
- **SecShield: A Privacy-Preserved Federated Learning Model to Detect Zero-Day Malware Attack**
Damodar Dhital, Sabir Khan, Almustapha Wakili, Saugat Guni and Woosub Jung (Towson University, Old Dominion University)
- **ADSEP: Anomaly Detection using a SHAP-based Pruned Encoder in IoT Network Traffic**
Md Asif Tanvir, Ajay Katangur, Doug McDaniel, Anna Culbertson, Tad Belling and Razib Iqbal. (Missouri State University)
- **LLM Based Static Malware Analysis for Windows Portable Executables**
Timothy Miskell, Yan Luo, Peilong Li and Shin Wei Lim (UMass Lowell, Elizabeth Town College, Intel Corporation)
- **Temporal Deviation Learning via FKAN-Enhanced Self-Supervision for Cyber-Physical Intrusion Detection**
Bowen Wu (Portola High School) and Kewei Sha (University of North Texas)
- **Resource-Constrained CAN Intrusion Detection with Distilled Decision Trees**
Amirmasoud Pourmiri, Ali Eslami and Sergio Salinas Monroy (Wichita State University)

Session 29: ISCC-IoT

Session Chair: Guobin Xu

- **Receiver-Invariant Radio Frequency Fingerprint Identification under Partially Observed IoT Deployments**
Minghe Zhang, Qian Lu, Hanlin Zhang, Zesheng Cheng (Qingdao University)
- **MDCGR: An Efficient Multimodal Dynamic Collaborative Generative Recommendation Model**
Zihui Zhou (Qingdao University), Jun Liu (Qingdao AIMetro Technology Co., Ltd.), Zesheng Cheng (Qingdao University)
- **Cooperative Perception in Connected Vehicles: Integrating Sensing and Communication for IoT-Based Autonomous Driving**
Antonio Santos da Silva (Karlsruher Institut für Technologie: KIT), Rafael F. Pinto Barbosa (Hamm-Lippstadt University of Applied Sciences), Joao Paulo Javidi da Costa (Hamm-Lippstadt University of Applied Sciences), Giovanni A. Santos (Hamm-Lippstadt University of Applied Sciences), Luis O. de Melo (Hamm-Lippstadt

University of Applied Sciences), Paulo Mendes (Airbus), Alexey Vinel (Halmstad University), Daniel A. da Silva (Hamm-Lippstadt University of Applied Sciences), Edison Pignaton de Freitas (Universidade Federal do Rio Grande do Sul)

- **Associating Visual Entities with Mobile Users via Jitter-tolerant Online Causal-structure Inference**
Rui Geng, Daichi Kominami, Hideyuki Shimonishi, Masayuki Murata (The University of Osaka)
- **Task Scheduling for Next-Generation Astronomical Observation Networks**
John Shen, Haiying Shen, Marcus Muntean (University of Virginia), and Eric Murphy (National Radio Astronomy Observatory)
- **Phase-Aware TAS Scheduling for Minimizing TDD-Induced Worst-Case End-to-End Delay in 5G-TSN Integrated Networks**
Keita Kuwayama, Hideo Kawata, Hironao Abe, Takashi Nakanishi, Tatsuya Shimada (Access Network Service Systems Labs., NTT, Inc.)
- **TrustTwinCSI: Trust-Aware Digital Twin Personalization for Wi-Fi CSI-Based Respiratory Monitoring**
Almustapha Wakili, Saugat Guni, Damodar Dhital, Kamorudeen Amuda, Shal Aderonmu, Woosub Jung (Towson University)

Session 30: AIECN

Session Chair: Shuangyao Huang

- **HypCLIP-AD: Hyperbolic Visual Projection for Cross-Domain Zero-Shot Anomaly Detection**
Zhanyuan Ning, Zijun Wang, Hengyan Liu (Xi'an Jiaotong Liverpool University)
- **Wireless Digital Twin Construction Using Multi-Modal Sensory Data**
Kengmin Lin (Arizona State University), Hao Luo (Arizona State University), Nhan Nguyen (University of Oulu), Ahmed Alkhateeb (Arizona State University)
- **Fed-LoRA: Cross-Domain Generative Knowledge Feedback for Few-Shot Medical Anomaly Detection**
Zijun Wang, Zhanyuan Ning, Hengyan Liu (Xi'an Jiaotong Liverpool University)
- **Memory-Enabled Quantum Gene Regulatory Networks for Adaptive Network Slice Embedding**
Kazuki Sekizawa, Masaaki Yamauchi, Daichi Kominami, Hideyuki Shimonishi, Tatsuya Otsoshi, Masayuki Murata (The University of Osaka)
- **Stage-Adaptive Attention in Diffusion Models for Brain MRI Anomaly Detection**
Shengfeng Ye, Yuxuan Zhao, Xiyue Wang (Xi'an Jiaotong Liverpool University)
- **AirNetRL: A Closed-Loop Co-Simulation Framework for DRL-Based Communication-Aware UAV Control**
Md Ruman Islam, Xiaoqian Zhang, Pei-Chi Huang (The University of Nebraska Omaha)
- **An RL-Based Adaptive Parameter Control Particle Swarm Optimization Algorithm for UAV Path Planning**
Mengyao Xin (Xi'an Jiaotong-Liverpool University), Ze Zhang (Xi'an Jiaotong-Liverpool University), Qian Dong (Xi'an Jiaotong-Liverpool University), Bintao Hu (Xi'an Jiaotong-Liverpool University), Gordon Boateng (Xi'an Jiaotong-Liverpool University), Xingzhen Duan (King Mongkut's University of Technology North Bangkok)

July 30, 2026, Thu (Day 4): (local times) Workshops

8:30 – 10:00 Workshop Sessions

Session 31: BDSSN 1

Session Chair: Xing Liu

- **TSA: A Temporal Sequence Alignment Algorithm for No-Ground-Truth Traffic Data Labeling**
Wenchao Sun, Tao Shang, Xiaozheng He, Si-Miao Gao, Qi' Ao Li, Pengcheng Wang (BeiHang University)
- **VOLE-CPSI Meets Paillier Aggregation: Practical Private Intersection Cardinality with Linear-Scale Performance**
Hai Zhang (QINGDAO UNIVERSITY), Yiyun Guo (Qingdao Port International Co., Ltd.), Liyan Shang (Qingdao Preschool Education College), Chao Shi (Qingdao City Construction Investment Group)

Co., Ltd.), Xinliang Li (Changfeng Shuzhi Technology (Shandong) Co., Ltd.), Zesheng Cheng, Hanlin Zhang (QINGDAO UNIVERSITY)

- **Dynamic Graph-Transformer with Self-Supervised Learning for Micro-Expression Recognition**
Kunjiang Teng (Qingdao University), Jun Liu (Qingdao AIMetro Technology Co., Ltd.), Zesheng Cheng (Qingdao University)
- **Wavelength Path Routing Algorithm with Multiple Fibers per Link and Wavelength Convertible Nodes**
Hiroshi Matsuura, Kazuki Shimada, Tatsuya Matsukawa, Masato Ogawara (NTT Network Service Systems Laboratories)
- **Det-TESLA: Integrated Multicast Authentication and Flow Scheduling for Deterministic Networking**
Weiqian Tan (Southeast University), Binwei Wu (Purple Mountain Laboratories), Shuo Wang (Beijing University of Posts and Telecommunications), Hua Lei (Purple Mountain Laboratories), Tao Huang (Southeast University)

Session 32: COHERENT + DICSC + HCDT

Session Chair: Francesco Tusa and Zuobin Xiong

- **Low-Latency Packet-Based Video Compositing for SMPTE ST 2110-20 via Payload Pixel Replacement**
Hiroyuki Kitada, Daiki Fukudome, Kento Noguchi, Takafumi Okuyama, Satoshi Nishimura and Hisayuki Ohmata (Network Service Systems Laboratories, NTT, Inc.)
- **LASPM: A Lightweight and Adaptive Authentication Scheme for Solar-Powered Surveillance UAVs in Military War Zones**
Shabeer Ahmad, Jinling Zhang (Beijing University of Posts and Telecommunications), Aatif Suleman (The University of Lahore), Adil Khan (Xi'an Eurasia University), Muhammad Asghar Khan (Prince Mohammad Bin Fahd University), and Babar Hayat (Xi'an Eurasia University)
- **IP-Native User Plane Control for Decentralized Mobile Systems**
Kaito Sawada (Keio University), Ryo Nakamura (The University of Tokyo), Hiroki Watanabe (Softbank Corp.), Katsuhiko Horiba and Keisuke Uehara (Keio University)
- **One-shot Failure Identification with Feature Selection in Case-based Recovery Framework**
Takaaki Moriya, Takashi Mukai, Manabu Nishio, Ai Tsunoda, Chikako Takasaki, Tomohiro Korikawa and Daisuke Ikegami (NTT, Inc.)
- **A Privacy Aware Digital Twins Framework for Autonomous and Connected Vehicles**
Rahanatu Suleiman; Akshita Maradapu Vera Venkata Sai; Weixian Liao (Towson University)

10:00 – 12:00 Workshop Sessions

Session 33: BDSSN 2

Session Chair: Xing Liu

- **Distributed High-Performance Computing for Accelerating Image Classification Workloads**
Kim Vanexel, Kevin Quintero, Jin Guo, Guobin Xu (Morgan State University), Xing Liu (Sam Houston State University), Lin Deng (Towson University)
- **On the Effect of Post-Processing on QRNG-Based Key Generation for Resource-Constrained IoT**
Oluwole Adetifa, Guobin Xu, Jianzhou Mao, Eric Sakk, Shuangbao Wang (Morgan State University)
- **Aggregate-Only Observability for Privacy--Utility Tradeoffs in Federated Learning**
Clifford Jones, Md Nahid Hasan, Satish Wagle, Ahmeed Yinusa, Khem Poudel (Department of Computer Science, Middle Tennessee State University)
- **Interpretable Policy Transfer via Causal Inference for Efficient Reinforcement Learning in Adversarial Environments**
Jiamin Fan, Thomas Kunz (Department of Systems and Computer Engineering, Carleton University, Ottawa, ON, Canada)

Session 34: QML

Session Chair: Shinjae Yoo

- **FedQPA: Quantum-Inspired Hypernetwork Personalization for Communication-Constrained Federated Wearable IoT Networks**
Hsing-Tzu Ko (National Taiwan University), Yun-Cheng Tsai (National Taiwan Normal University), and Samuel Yen-Chi Chen (Brookhaven National Laboratory)
- **Sample-Efficient Quantum LSTM for Communication-Constrained Edge Fatigue Forecasting**
Yu-Ting Ciou, Yun-Cheng Tsai (National Taiwan Normal University), and Samuel Yen-Chi Chen (Brookhaven National Laboratory)
- **Solving Virtual Backbone Problems with Digitized Cyclic Annealing on Near-Term Quantum Computers**
Maxence Grandadam and Maciej Koch-Janusz (Haiqu, Inc.)
- **Diagonal Adaptive Non-local Observables on Quantum Neural Networks**
Huan-Hsin Tseng (Brookhaven National Laboratory), Yan Li (The Pennsylvania State University), Hsin-Yi Lin and Samuel Yen-Chi Chen (Brookhaven National Laboratory)

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