The 34th Wireless and Optical Communications Conference

IEEE WOCC 2025

SPECIAL SESSION 04

Artificial Intelligence for Next-Generation Wireless Communication and Networking

The sixth generation (6G) networks will need to support increasingly heterogeneous devices, adapt to dynamic network environments, and provide diverse intelligent services. These requirements call for unprecedented levels of network intelligence, automation, and adaptability. Artificial intelligence (AI) has emerged as a promising solution and is expected to be pervasively integrated into networks, from end users to network edge and cloud. This special session aims to explore AI-based innovative technologies for wireless communication and networking, which can revolutionize network architecture, enable intelligent radio resource management, enhance spectrum utilization, ensure edge data integrity, and so on. The session will bring together researchers, engineers, and practitioners to discuss the latest innovations, such as AI-enabled network optimization, AI for physical layer communications, intelligent network slicing solutions, and edge data integrity verification. Prospective authors are invited to present their cutting-edge research and developments that contribute to AI-based wireless communication and networking.

Topics of the Special Session

- AI-enabled network optimization
- AI for physical layer communications
- Network slicing for AI services
- Edge data integrity verification and trust management
- Semantic communications
- AI-enabled channel estimation, resource allocation, and link prediction
- Federated learning for wireless networks
- AI-powered energy-efficient networking
- Intelligent radio resource management

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Planned Contributions ▶▶▶▶

Coming soon.

Submission

Submission Deadline : **March 1, 2025**.

Submission Link: https://edas.info/newPaper.php?c=33162&track=129991

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Further information can be found on the conference website at: 🌐 **https://www.wocc.org**