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SPECIAL
SESSION

08

AI-Driven Security and Intelligent Optimization in Next-Generation Communication Systems

The rapid evolution of communication technologies, including the deep integration of communication and computing, the proliferation of IoT ecosystems, and the rise of cloud-edge-device collaborative architectures, has introduced unprecedented challenges and opportunities in network security and system optimization. This special session aims to showcase innovative research and practical advancements in AI-driven security defense mechanisms, intelligent resource management, and cross-domain reliability assurance for next-generation communication systems. We invite researchers and industry experts to explore transformative solutions that address the complexity of modern heterogeneous networks, focusing on scalable, real-time, and adaptive approaches.

Topics of the Special Session

- AI-driven offensive and defensive cybersecurity technologies
- Intelligent optimization for large-scale IoT systems
- Reliability verification for integrated communication-computing systems
- Real-time big data analytics and intelligent decision-making in networks
- Multi-modal data transmission and processing technologies
- Challenges in AI deployment for cloud-edge-device collaboration
- Communication data governance and value extraction strategies
- Dynamic threat detection and mitigation using machine learning
- Energy-efficient AI algorithms for distributed networks
- Privacy-preserving techniques in cross-domain data sharing
- Intelligent resource orchestration in converged networks
- Trustworthy AI frameworks for mission-critical communication systems

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Planned Contributions ▶▶▶▶

Coming soon.

Submission

Submission Deadline : **March 31, 2025.**

Submission Link: <https://edas.info/newPaper.php?c=33162&track=130489>

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