

Call for Papers

Satellite Communications and Networking Symposium

The 21st International Conference on Wireless Communications and Mobile Computing

Website: <http://iwcmc.org/2025/>

Submission Link: <https://edas.info/newPaper.php?c=32919>

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Scope

Satellite communications and networking technologies have advanced rapidly, enabling seamless, anytime-anywhere connectivity and revolutionizing the distribution of digital services. Recent developments, such as on-board satellite computing and direct satellite-to-mobile phone communication, have expanded the scope of satellite applications. These advancements have introduced new technical challenges, particularly with the emergence of standards like 5G, B5G, and 6G, and the integration of satellite systems with terrestrial and aerial networks. High Altitude Platforms (HAPs) and Low Altitude Platforms (LAPs), such as drones, balloons, and airships, play a key role in this integration. Moreover, the deployment of mega-constellations composed of nano- and micro-satellites has further driven the need for innovative solutions. Additionally, the increasing application of Artificial Intelligence (AI) and Machine Learning (ML) in satellite communication systems highlights the importance of novel communication, networking, and computing paradigms. The aim is to address the complex dynamics and heterogeneity of integrated networks, spurring significant interest from both academic and industrial communities. Satellite and space communications are at the forefront of these challenges, and the call for original, high-quality research that explores technical breakthroughs, emerging applications, and innovative paradigms in this field is becoming more urgent.

Topics

Accepted papers will be published in the IEEE IWCMC 2025 proceedings and will be submitted to the IEEE digital library (IEEE Xplore). Authors are welcome to submit original papers (not published before and/or simultaneously to another venue) with topics that include but are not limited to:

- Satellite communications and networking
- AI/ML applications for satellite and space communications and networking
- M2M over satellite applications
- Direct satellite-to-mobile phone communication
- On-board switching and processing technologies
- Intelligent on-board computing
- Antennas for Satellite Communications
- MIMO satellite communications
- Near-Earth satellite communications
- HAPS/LAPS-assisted space communications
- Hybrid satellite/terrestrial networks
- Satellite integration with 5G
- Coding, modulation and synchronization schemes for satellite communications
- Channel models for satellite communications

- Next-generation channel coding for deep-space communications
- Transport protocol performance over satellite
- Security, privacy, and trust in satellite networks
- Radio resource management in satellite networks
- Emerging standards: DVB-Sx, DVB-SH, DVB-RCS2, IP over Satellites
- Cognitive satellite networks
- Delay-tolerant networking for satellite networks
- QoS and performance for satellite networks
- Interference and fade mitigation techniques over satellite channels
- Micro- and nano-satellites communications
- Mega-constellations design
- Signal detection and estimation for satellite communications
- Statistical and adaptive signal processing for satellite systems
- Satellite communications for maritime applications (e.g., AIS)
- Satellite-based disaster recovery
- Satellite-based remote e-Health
- Satellite-based solutions for aeronautical applications
- Interplanetary communications
- Telemetry/telecommand space protocol evolutions
- Internet of Remote Things

Submitted papers are encouraged to address novel technical challenges or industrial and standard aspects of the key technologies related to the conference theme(s).

Important Dates

Deadlines are the same as those of the main conference.

Note: Within this Symposium, there will be one Best Paper Award.