



Sustainable Communications for Renaissance

Call for Papers

Symposium on Selected Areas in Communications: Satellite and Space Communications Track

Track Chair

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Scope and Motivation

The recent advances of satellite communication technology have witnessed an unprecedented increase of services possibly distributed according to anywhere-anytime paradigm. To this regard, the appearance of new standards, such as 5G, B5G and 6G, and the simultaneous integration with terrestrial infrastructure has introduced new technical challenges to be faced by the scientific community. In particular, the integration of satellite with future aerial or terrestrial networks - including the employment of drones, High Altitude Platforms, balloons – as well as the recent growth of the development of mega constellations with micro- and nano-satellites have further motivated the study of new communication, networking and computation paradigms - also related to Artificial Intelligence (AI) applications - and attracted significant interest from both academic and industrial communities.

The Satellite and Space Communications track solicits original and unpublished work not currently under review by any other conference or journal. The focus of this track is on exploring and discussing new technical breakthroughs and applications focusing on all aspects of satellite and space communications.

Topics of Interest

The Satellite and Space Communications Track seeks original contributions in the following topical areas, plus others that are not explicitly listed but are closely related to:

- Satellite and space communications and networking
- Near-Earth satellite communications
- Antennas for Satellite Communications
- MIMO satellite communications
- Hybrid satellite/terrestrial networks
- 5G/Satellite integration
- Coding, modulation and synchronization schemes for satellite communications
- Channel models for satellite 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 Satellite
- Cognitive satellite networks
- Delay Tolerant Networking for satellite networks
- QoS and performance for satellite networks
- On-board switching and processing technologies
- Interference and Fade mitigation techniques over satellite channels
- Micro- Nano-satellites communications
- Mega-constellations design
- M2M over satellite applications
- New standard in navigation systems: Galileo, GPS, SBAS (EGNOS, WAAS...), GBAS.
- 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
- Next-generation channel coding for deep-space communications
- Telemetry/telecommand space protocol evolutions
- Internet of Remote Things
- AI applications to Satellite and Space communications and networking

Important Dates

Paper Submission: 11 October 2022

Notification: 18 January 2023

Camera Ready and Registration: 15 February 2023

Important Note

The authors of selected papers from this symposium will be invited to submit an extended version of their work for fast-track review and possible publication in the IEEE Open Journal of the Communications Society.

How to Submit a Paper

All papers for technical symposium should be submitted via EDAS through the following link: <https://edas.info/newPaper.php?c=29499&track=111338>. Full instructions on how to submit papers are provided on the IEEE ICC 2023 website: <https://icc2023.ieee-icc.org/>