

Special Issue

Challenges and Future Directions in Integrated Terrestrial-Non-Terrestrial Networks

Message from the Guest Editors

We invite high-quality original research papers on, but not limited to, the following areas:

- Flexible, intelligent, and reconfigurable payloads for NTN;
- Network slicing and orchestration;
- SDN/NFV and network disaggregation for integrated TNs and NTNs;
- Cloud continuum;
- Multiple access schemes;
- Adaptive antennas and MIMO;
- Distributed beamforming for satellite swarms;
- Backscatter communications for integrated TN-NTN networks;
- Mobility and handover management for integrated TN-NTN networks;
- AI for integrated TN-NTN networks;
- Optimized NTN-NTN and TN-NTN radio resource allocation;
- Spectrum management, spectrum sharing and engineering;
- Energy harvesting, wireless information, and power transfer for integrated TN-NTN networks;
- Error control, modulation and waveform design, and MAC layer design;
- The cost- and power-efficient design of integrated TN-NTN networks;
- Sustainability aspects for integrated TN-NTN;
- Quantum satellite communications;
- Satellite communications within 3GPP;
- Positioning with LEO satellites;
- Sensing and communication in NTNs;
- Energy-efficient AI onboard process in NTNs.

Guest Editors

Dr. Carla Amatetti

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Dr. Dorin Panaitopol

Dr. Alessandro Guidotti



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About the Journal

Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

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