Special Issue

Free Space Optics-Based 6G Non-terrestrial Networks

Message from the Guest Editors

This Special Issue will cover advances in state-of-the-art mobile FSO systems for 6G fronthaul/backhaul connectivity. Authors are encouraged to submit theoretical contributions (new techniques, concepts, surveys, and tutorials), mathematical modeling and numerical simulations, and practical contributions (lab and field experiments, prototypes, and new applications) on FSO-based 6G NTN with UAVs, HAPs, balloons, and satellites. Topics of interest include but are not limited to the following:

- FSO-based vertical backhaul/fronthaul 6G architecture;
- Applications of ML/DL in mobile FSO systems;
- New robust acquisition, tracking, and pointing (ATP) mechanisms for flying FSO platforms;
- High data rate modulating retroreflector (MRR)-aided mobile FSO systems;
- Energy consumption models and energy harvesting techniques for flying FSO platforms;
- Miniature FSO transceiver design based on photonic integrated circuit (PIC);
- Quantum key distribution (QKD) and orbital angular momentum (OAM) in mobile FSO;
- All-optical networking;
- Propagation channel modeling for non-terrestrial FSO systems;
- Intelligent swarm and connectivity between aerial platforms.

Guest Editors

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Deadline for manuscript submissions

closed (20 June 2023)

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Message from the Editor-in-Chief

Editor-in-Chief

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