

Non-Terrestrial Network Technologies Special Session

Organizers:

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Call for Papers

Non-Terrestrial Networks (NTN) have gained significant momentum in the wireless communication industry with the availability of direct call services via satellite. Today, many NTN operators provide broadband services through VSAT and parabolic antennas. Particularly, Low Earth Orbit (LEO) and Geostationary Earth Orbit (GEO) satellites are widely used to provide coverage in hard-to-reach areas.

As standardization efforts for NTN technologies rapidly progress worldwide, LEO satellites, unmanned aerial vehicles (UAVs), drones, and High-Altitude Platform Stations (HAPS) are considered fundamental components of future communication infrastructures. NTN is a rapidly evolving research and application field that involves critical topics such as integration with terrestrial networks, timing, synchronization, and user mobility.

While not limited to the following, paper submissions for the special session are expected to focus on:

- Integrated operation and interoperability of NTN and terrestrial networks,
- Radio access networks and network management for NTN,
- UAV, satellite, and HAPS-based communication solutions,
- User mobility, timing, and synchronization challenges,
- NTN standardization processes post-3GPP Release 15,
- Integration of NTN technologies into 6G and future applications,
- Large-scale coverage solutions through satellite and airborne platforms,
- Assessment of NTN for low-cost, high-efficiency communication infrastructures,
- IoT NTN solutions and integration,
- Mobility management and enhancements,
- NR (New Radio) NTN developments and optimizations.

We warmly welcome all researchers and experts interested in or directly working on these topics to participate in our special session.