

IEEE GLOBAL COMMUNICATIONS CONFERENCE

7–11 December 2026 // Macau, China

Communications, Innovation, Inspiration, Intelligence

CALL FOR PAPERS



6G-SAGA: AI-Native Algorithms and Digital-Twin Intelligence for Multi-Orbit NTN in 6G

The 4th International Workshop on Intelligent Aerial and Spaceborne Systems for 6G (**6G-SAGA**) focuses on **AI-native algorithms**, **digital-twin-enabled intelligence**, and **multi-orbit decision-making** for emerging Non-Terrestrial Networks (NTN) in 6G. As NTNs integrate **LEO/MEO/GEO satellites**, **HAPS/UAV platforms**, and terrestrial infrastructure, new system-level challenges arise in predictive control, QoE/QoO aware orchestration, mobility continuity, spectrum coexistence, and service resilience. The above PHY topics fall outside the scope of the main IEEE GLOBECOM 2026 symposia, which emphasise PHY/MAC, MIMO, Reconfigurable Intelligent Surfaces (**RIS**), Integrated Sensing and Communications (**ISAC**), and satellite physical-layer techniques. This workshop invites contributions on **learning-based routing**, **scheduling**, **mobility prediction**, **TN–NTN resource brokering**, **D2D (Direct to Device) NTN access**, and digital twin-driven closed-loop optimisation. By bringing together researchers from academia, industry, and national labs, 6G-SAGA provides a timely venue for advancing intelligent, scalable, and efficient multi-orbit NTN solutions for 6G.

TOPICS

- AI-native multi-orbit resource allocation incorporating QoE and QoO decision metrics
- Learning-based scheduling and Doppler/latency prediction for highly dynamic NTN links
- RL and multi-agent RL algorithms for routing and mobility management in dense LEO constellations
- AI-enabled prediction and mitigation of LEO handover bursts for continuous user-perceived QoE
- QoO-optimized multi-orbit path selection and routing across LEO–MEO–GEO/HAPS systems
- ML models for feeder-link congestion forecasting and proactive load balancing
- DT modeling of traffic, mobility, and constellation dynamics for predictive NTN analysis
- Closed-loop optimization frameworks for real-time NTN orchestration
- Integrated TN–NTN DT environments for QoE-driven multi-access selection and coordination
- AI-native TN–NTN resource brokering, slicing, and service orchestration guided by QoE/QoO objectives
- Learning-driven spectrum sharing and interference coordination for TN–NTN coexistence (above PHY)
- AI-enhanced MAC-level access and session continuity for D2D NTN services
- AI-enabled anomaly detection, resilience, and self-healing mechanisms for robust multi-orbit NTN operations

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IMPORTANT DATES

Paper Submission

12 August 2026

Acceptance Notification

20 September 2026

Camera-Ready

30 September 2026

Workshop Date

7 or 11 December 2026

Full details of submission procedures are available at
globecom2026.ieee-globecom.org.

Submission link: <https://edas.info/N35355>