

Special Issue

Next-Generation UAV Base Stations: Enabling Integrated Sensing, Communications, and the Low-Altitude Economy

Message from the Guest Editors

We welcome original research articles, short communications, and comprehensive review papers. Areas of interest include, but are not limited to:

- Integrated Sensing and Communications (ISAC) in UAV-BS operations
- Digital Twin models for UAV-based network planning, control, and simulation
- Open RAN (O-RAN) with aerial or semi-autonomous base station components
- UAV-BSs in the context of the Low-Altitude Economy (e.g., logistics, inspection, urban air mobility)
- AI-driven optimization for UAV-BS trajectory, load balancing, and resource management
- Swarm intelligence and multi-agent coordination in aerial networks
- Energy efficiency, battery-aware design, and wireless charging strategies
- Edge intelligence and federated learning for in-flight decision-making
- Channel modelling and propagation in air-to-ground and air-to-air scenarios
- 6G technologies for UAVs: THz, RIS (Reconfigurable Intelligent Surfaces), NOMA
- High Altitude Platforms (HAPs) and LEO satellite integration with UAV-BSs
- Space-Air-Ground Integrated Networks (SAGIN) and their implications for UAV-BSs
- Simulation testbeds, regulatory frameworks, and real-world field trials
- Security, privacy, and trust in aerial and non-terrestrial network system

Guest Editors

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About the Journal

Message from the Editor-in-Chief

Drones is the only international open-access journal about the science, policy and technology of drones and its applications. Nowadays, the proliferation of drones is a reality for local policy makers, regulatory bodies, mapping authorities, startups and consolidated companies. There are many uses and benefits of drones: from the emergence of new sensors and the evolution of new platforms; to the development of specific software and the emergence of new applications. *Drones* publishes reviews, regular research papers, communications and short notes, without restriction on the length of papers. *Drones* seeks to provide a central forum for scholars engaged in drones' research and applications.

There is a need for high quality papers in this area and the *Drones* Editorial Board are widely recognized international leaders. *Drones* journal guarantees a serious peer review and a rapid publication across the whole discipline of drones.

Editor-in-Chief

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