

Special Issue

Next-Generation Avionics Communication, Navigation and Surveillance (ACNS) Using LEO Opportunistic Signals

Message from the Guest Editors

Interest in LEO opportunistic signals for positioning, navigation, and timing (PNT) is growing rapidly. As an alternative to GNSS, these signals open new possibilities for aviation and avionics-based systems, shaping the future of **Next-GEN Avionics Communication, Navigation, and Surveillance**. With existing and upcoming LEO constellations, integrating LEO-PNT into avionics faces significant challenges but also tremendous opportunities. LEO-based solutions are driving innovation in embedded technology for future airlines, UAVs, and UAMs. This **Special Issue** will present original research and reviews on the latest advances, applications, and challenges in **LEO-PNT for Next-GEN Avionics**. Topics include:

- **Next-GEN communication, navigation, and surveillance**
- **Hybrid LEO/GNSS architectures**
- **LEO-PNT signal processing and data fusion**
- **Doppler-based positioning and Kalman filtering**
- **Miniaturization and hardware constraints in avionics**

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Message from the Editor-in-Chief

Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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