# Special Issue

# Intelligent Sensor-Integrated Antenna Arrays for 5G and 6G Applications

## Message from the Guest Editors

The rapid evolution of wireless communication systems, notably the advent of 5G and 6G networks, has transformed our lifestyle and work dynamics. Intelligent sensors, particularly large-scale antenna arrays capable of efficiently transmitting and receiving electromagnetic waves in complex propagation environments, have emerged as a pivotal component of these wireless systems. The integration of intelligent sensors into antenna arrays for 5G and 6G applications has become a significant research area within mobile communication and radar systems. However, designing these intelligent antenna arrays poses several challenges, including the development of new mounting structures, handling multiple frequency bands, managing multibeam cooperation, miniaturization, cost-effectiveness, high efficiency, seamless integration, and quick measurements. This Special Issue aims to delve into the advanced intelligent antenna arrays for 5G and 6G applications, with a primary focus on innovative array architecture, reconfigurable intelligence surfaces, integrated sensing and communication, and array pattern optimization in conjunction with intelligent sensor technologies.

## Guest Editors

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## Deadline for manuscript submissions

closed (30 September 2025)

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*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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