

## Special Issue

# Wireless Sensor Networks and Next-Generation Communication Technologies

### Message from the Guest Editor

The Special Issue on Wireless Sensor Networks (WSNs) and Next-Generation Communication Technologies explores the convergence of WSNs with advanced communication systems such as 5G/6G, edge computing, and AI to address challenges in the Internet of Things (IoT) era. Key topics include the following:

1. Architectural Innovations: Integration of low-power WSNs with massive MIMO, millimeter-wave communications, and cognitive radio techniques to enhance scalability and reliability.

2. Intelligent Data Processing: AI-driven approaches for real-time data fusion, edge/fog computing frameworks, and lightweight machine learning models for sensor networks.

3. Energy Efficiency: Optimization strategies for power consumption, dynamic resource allocation, and green communication protocols in heterogeneous networks (e.g., WiFi 6, LoRa, NB-IoT).

4. Security and Privacy: Cryptographic schemes, distributed privacy-preserving mechanisms, and defenses against physical-layer and cyber-attacks in IoT ecosystems.

5. Cross-Domain Applications: End-to-end solutions for smart cities, industrial IoT, healthcare monitoring, environmental sensing, emphasizing reliability, latency, and interoperability.

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### Guest Editor

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### Deadline for manuscript submissions

20 November 2025



## Sensors

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## About the Journal

### 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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### Editor-in-Chief

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