Special Issue

Intelligent Sensor Fusion and AI Applications in Wireless Communication Networks

Message from the Guest Editor

As wireless networks become more complex and demand increases, integrating intelligent sensor fusion and AI is critical for optimizing performance, efficiency, and reliability. This issue delves into innovative methodologies and applications, highlighting how AI algorithms can process and analyze vast amounts of data from diverse sensors to improve network management, fault detection, and resource allocation. Key topics include the development of AI-driven models for real-time data fusion, advancements in machine learning techniques for predictive maintenance, and the implementation of intelligent systems for adaptive communication protocols. Additionally, the issue examines the role of sensor fusion in enhancing network security and enabling the Internet of Things (IoT) through seamless connectivity and interoperability. By showcasing cutting-edge research and practical applications, this Special Issue aims to sit at the frontier of the transformative impact of AI and sensor fusion on the future of wireless communication networks, paving the way for more resilient, efficient, and intelligent network infrastructures.

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Deadline for manuscript submissions

closed (31 May 2025)

Sensors

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed

mdpi.com/si/211374

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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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