

Special Issue

Secure IoT: Cryptographic Solutions for Sensor Networks

Message from the Guest Editor

The Internet of Things (IoT) is rapidly expanding, embedding billions of sensor nodes into healthcare, industry, transportation, and environmental monitoring. While delivering real-time intelligence, their deployment in open and adversarial environments raises critical security and privacy concerns. Traditional cryptographic methods, built for resource-rich systems, are unsuitable for constrained devices with limited power, memory, and energy. To address this, researchers are developing lightweight and energy-aware schemes, post-quantum algorithms, and hardware-assisted primitives to ensure confidentiality, integrity, and authentication. Emerging paradigms such as blockchain-based trust, federated learning, and privacy-preserving protocols strengthen resilience against threats including ransomware, supply chain risks, and quantum adversaries. This Special Issue highlights cryptographic innovations for IoT sensor networks, emphasizing efficiency, scalability, and long-term security, in line with *Sensors*' mission to advance trustworthy intelligent systems.

Guest Editor

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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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