

Special Issue

Innovative Sensors and Processes for Intrusion and Anomaly Detection in IoT

Message from the Guest Editors

The proliferation of IoT devices and the increasing integration of cyber–physical systems (CPS) across diverse domains—from smart homes and industrial automation to healthcare and critical infrastructure—have created unprecedented vulnerabilities. Traditional security mechanisms often fall short in detecting subtle anomalies or sophisticated intrusions in these dynamic environments. This Special Issue aims to showcase cutting-edge research on sensors, methodologies, and processes that enhance intrusion and anomaly detection within IoT and CPS ecosystems. We welcome original contributions focusing on sensor design, data fusion, edge AI for threat detection, anomaly detection using machine learning, privacy-preserving sensing systems, behavior-based anomaly detection, hybrid threat detection, context-aware sensing, secure sensor fusion, and data-driven predictive models for real-time protection. Contributions may include both theoretical developments and real-world applications. This Special Issue also encourages interdisciplinary work intersecting networking, cybersecurity, and embedded sensing.

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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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