

Special Issue

Advanced Industrial Internet of Things (IIoT): Network Architectures and Distributed Applications

Message from the Guest Editors

Industrial Internet of Things (IIoT) devices are increasingly mobile and geographically distributed across wide operational areas, making the design of effective internetworking strategies a critical challenge. In this context, the integration of 5G, hybrid 5G/6G, or fully 6G infrastructures and technologies offers transformative potential. These advancements promise unprecedented flexibility and scalability, facilitating the creation of an extensive, intelligent, and interconnected industrial ecosystem. At its core, this Special Issue emphasizes network architecture and communication protocol design in smart industrial environments, particularly those supporting distributed and cooperative sensing/processing services aligned with the IoT-as-a-Service model. Central to this evolution is the strategic integration of explainable artificial intelligence (AI) and machine learning (ML) into network frameworks. We cordially invite you to contribute original research addressing these themes.

- industrial Internet of Things
- industrial web of things
- 6G
- cellular IoT architectures and protocols
- distributed machine learning
- security and privacy

Guest Editors

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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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