

Special Issue

Novel Sensing Methods in Advanced Manufacturing Systems

Message from the Guest Editors

As manufacturing systems transition toward Industry 4.0 and 5.0 paradigms, sensors play an increasingly pivotal role in enabling cyber–physical systems, digital twins, and predictive maintenance frameworks. This Special Issue focuses on novel sensing methods and smart sensor integration in advanced manufacturing systems, including both hardware innovations and intelligent data-driven approaches. Topics of interest include developments in sensor design, data acquisition, signal processing, and the application of artificial intelligence for real-time monitoring, fault detection, and process optimization. We welcome original research and comprehensive reviews that explore emerging sensing techniques, multi-sensor fusion, industrial IoT implementations, and sustainable sensing technologies for automated and adaptive manufacturing. By addressing current challenges and presenting forward-looking perspectives, this collection aims to advance the understanding and application of sensing technologies that empower the next generation of intelligent manufacturing systems.

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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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