Special Issue

Smart Sensor and Actuator Technology in Biomedical Systems

Message from the Guest Editors

The Special Issue aims to show the latest advancements and research in the integration of smart sensors and actuators in biomedical applications. The main focus is on innovative technologies and solutions that enhance the functionality, efficiency, and reliability of biomedical systems. Given the breadth of applications of this topic, this Special Issue includes the development and application of cutting-edge sensors and actuators that improve diagnostic, therapeutic, and rehabilitation processes. The integration of TinyML can enhance the capabilities of these devices, making it possible to explore how miniature machine learning algorithms can be embedded in sensors and actuators for on-device data processing, enabling real-time health monitoring and decision-making without the need for extensive hardware. This Special Issue will present interdisciplinary approaches that combine elements of engineering, electronics, and bioinformatics to improve medical technology. Contributions may cover, but are not limited to, the following:

- Biosensors for health monitoring;
- Wearable technology for patient care;
- TinyML integration on sensors;
- Sensors for deasese screening.

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Deadline for manuscript submissions

closed (20 July 2025)

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/204907

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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