

Special Issue

Advancements and Future Prospects of Sensing Technologies for Health Monitoring and Sports Performance

Message from the Guest Editors

Sensing technologies are undergoing transformative advancements, revolutionizing approaches to personalized health monitoring and athletic performance optimization by enabling continuous, non-invasive capture of intricate physiological and biomechanical data. Modern wearable biosensors, found in smartwatches, fitness bands, and smart textiles, track vital parameters such as heart rate and SpO₂. Using wireless connectivity and cloud analytics, they enable real-time data sharing and personalized feedback. Innovations include flexible electronics for comfort and novel non-invasive modalities like sweat biomarker analysis. Artificial Intelligence (AI) and Machine Learning (ML) algorithms are essential for interpreting complex datasets for early anomaly detection and performance optimization. The Special Issue involves wearable, biomedical, and chemical sensors, exploring non-invasive modalities and the critical role of AI/ML in signal processing and data fusion. We provide a comprehensive platform for research on sensor technologies, their materials, signal processing, and applications, fitting the multidisciplinary aims of Sensors.

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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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