

Topic

Intelligent Biomedical Instrumentation: Signal Processing, Sensor Fusion, and AI-Driven Optimization

Dear Colleagues,

We invite submissions on intelligent biomedical instrumentation integrating signal processing, sensor fusion, and AI-driven optimization for healthcare. Research areas include, but are not limited to, the following:

Biomedical Signal Processing and AI-Driven Optimization

- Biomedical signal and image analysis
- Machine learning and deep learning
- Feature extraction, denoising, and pattern recognition
- Explainable AI and intelligent decision support

Intelligent Sensors and Biomedical Instrumentation

- Smart biomedical sensors and wearable devices
- Multimodal sensor fusion
- Embedded intelligence and edge computing
- Internet of Medical Things (IoMT)

Medical Devices and Intelligent Healthcare Systems

- Real-time patient monitoring
- Smart diagnostic and therapeutic systems
- Hardware–software co-design
- Intelligent medical instrumentation and digital health technologies

Advanced Biomedical Engineering Technologies

- Additive manufacturing and 3D printing of medical devices
- Flexible and printed electronics
- Microfabrication and MEMS-based biomedical systems
- Novel biomaterials for intelligent biomedical applications

Topic Editors

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Deadline

Abstract Submission: 30 July 2027

Manuscript Submission: 30 September 2027

Participating Journals

Applied Sciences

Bioengineering

Electronics

Sensors

Signals



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