

Special Issue

Machine Learning in Biomedical Signal Processing

Message from the Guest Editor

The focus of this Special Issue will be on novel machine learning methodologies and their applications in biomedical signal processing, with a particular emphasis on the interplay between algorithms and sensing technologies. Topics of interest include (but are not limited to) the following:

- The integration of multimodal biomedical signals and sensor data through machine learning models;
- Preprocessing and denoising strategies tailored to machine learning pipelines;
- Feature engineering and representation learning from multimodal biomedical sensor data;
- Deep learning and advanced neural network architectures (CNNs, RNNs, transformers, graph neural networks) for biomedical signal analysis;
- Explainable and interpretable machine learning models for biomedical signal analysis;
- Transfer learning, domain adaptation, and federated learning across heterogeneous sensing environments;
- Machine learning applications for real-time monitoring, diagnosis, prognosis, and decision support.

Application areas may include (but are not limited to): cardiology, neurology, rehabilitation, mental health, telemedicine, ambient assisted living, and human-computer interaction.

Guest Editor

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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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