

Special Issue

From Brain Signals to Recovery: Neural Sensing for Functional Restoration

Message from the Guest Editors

Brain–computer interfaces (BCIs), in a broad conceptual sense, are systems that acquire, interpret, and utilize brain signals to control external devices or provide neural feedback. Among the most informative sensing modalities for BCI development are electroencephalography (EEG) and intracranial EEG (iEEG), which offer complementary insights into brain dynamics.

This Special Issue aims to highlight recent advances in neural sensing technologies, neuromodulation, signal processing, neural decoding, and machine learning approaches that leverage electrophysiological signatures for therapeutic and rehabilitative applications. We welcome original research and review articles that focus on the development, validation, and clinical integration of EEG and iEEG systems in neurorehabilitation and neural plasticity—particularly in contexts such as stroke, epilepsy, spinal cord injury, and other neuromotor or neurological disorders. The scope of this Special Issue includes sensor design, neurobiomarker discovery, multimodal data integration, real-time BCI systems, neuromodulation strategies, and translational neuroscience.

Guest Editors

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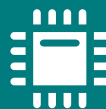
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Message from the Editor-in-Chief

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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