

Special Issue

Neuro-Bioengineering Innovations: Integrative Approaches for Diagnostics, Implants and Regenerative Therapies

Message from the Guest Editors

This Special Issue aims to showcase recent and emerging interdisciplinary advances in neuro-bioengineering, emphasizing the convergence of neuroscience, biomedical engineering, and translational bioengineering. We welcome original research, reviews that explore innovative diagnostics, smart and implantable devices, tissue regeneration platforms, computational modeling, and bioelectronic solutions designed to support, monitor, or restore nervous system function across diverse biological systems. The central focus of this Special Issue is the integration of neural engineering with musculoskeletal and visceral systems, where neuro-mechanical interactions are essential for both physiological function and therapeutic innovation. We particularly encourage the submissions of papers that explore interactions of the nervous system with peripheral biological structures—including organs, joints, and soft tissues. By showcasing studies conducted at a range of scales—from molecular and cellular mechanisms to system-level models and clinical applications—we seek to promote the development of holistic insights and engineering solutions for treating neurological and neuromechanical disorders.

Guest Editors

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