
ADVANCED ROBOTICS **Call for Papers**

Special Issue on Neuro-Robotics: From Brain Machine Interfaces to Rehabilitation Robotics

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Neuro-robotics is one of the most multidisciplinary fields between Neuroscience and Robotics of the last decades, fusing information and knowledge from neuroscience, engineering and computer science. The special issue focuses on the key topics of neuro-robotics from human-machine interfaces to rehabilitation robotics for performance augmentation/repair, which can be seen as augmentation of abilities of healthy subjects or assistance in case of the mobility impaired, and the inverse problem, i.e. how we can use robotic devices that physically interact with the human body, in order (a) to understand human motor control and (b) to provide therapy to neurologically impaired people or people with disabilities. The researchers from different backgrounds (such as robotics, computer science, neuroscience and psychology) are welcome to share their methodologies, computational models and technologies to enhance the functionalities and intelligence of next generation robot systems for better interaction performance.

The topic of the special issue includes, but are not limited to

- Rehabilitation robot, assistive robotics, medical healthcare robot, general neuro-robotics, etc.
- Biological systems modeling
- Multi-sensor multi-modal analysis, fusion and features extraction in bio-mechatronics/robot systems
- BCI interface design
- Smart sensor technologies, signal processing techniques
- Real-life brain function monitoring, neuro-feedback system, optimization, modeling and simulation
- Augmented robot cognition and adaptive aiding
- Computational intelligence methods and robotic applications.
- Brain-computing-based systems
- Bio-mechatronics systems engineering
- Biologically-inspired systems and applications
- Adaptable bio-robotics systems
- Technology Assessment, Ethical and Social Implications of Bio-robotics and Bio-mechatronics

Submission: The full-length manuscript (either PDF file or MS word file) should be sent by **Oct. 31, 2019** to ScholarOne Manuscript System <https://mc.manuscriptcentral.com/tadr>. Sample form of the manuscript as well as the Instruction for Authors is available at <https://www.tandfonline.com/action/authorSubmission?journalCode=tadr20&page=instructions>.