Special Issue

Hybrid Human-Machine Interfaces for Robot-Aided Rehabilitation and Assistance

Message from the Guest Editors

An extensive body of literature has demonstrated the benefits of using advanced robots for mediating rehabilitation therapy. Following recent attempts to overcome the limitations of Brain-machine interfaces (BMIs), hybrid human-machine interface (h-HMI) technologies have been proposed to provide a more robust input to robotic devices and to extend their use to a wider population of patients. This special issue call seeks original manuscripts describing new research in the field of h-HMIs for the control of rehabilitation or assistive devices. Papers should include at least one (neuro)physiological interface in their hybrid approach. All categories of medical devices—robotic (e.g., end-effector robots, exoskeletons) or non-robotic (e.g., electrical stimulations)—are welcome. Methodological papers, reviews, and theoretical contributions are also welcome. **Keywords:** hybrid human-machine interface; brain-machine interface; electroencephalography; electromyography; electro-oculography; rehabilitation robotics; assistive robotics; neurofeedback; functional electrical stimulation; multimodal classification

Guest Editors

Dr. Luca Tonin

Department of Information Engineering, University of Padova, 35131 Padova, Italy

Dr. Stefano Tortora

Department of Information Engineering, University of Padova, 35131 Padova, Italy

Deadline for manuscript submissions

closed (20 May 2023)

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/125832

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

mdpi.com/journal/applsci

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/journal/applsci

MDPI

About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)