



Advances and Challenges in Wearable Robotics for Dynamic and Varied Tasks

Guest Editors:

Dr. Tommaso Proietti

Scuola Superiore Sant'Anna,
Pisa, Italy

Dr. Richard Nuckols

Department of Systems Design
Engineering, University of
Waterloo, Waterloo, ON, Canada

Deadline for manuscript
submissions:

30 June 2024

Message from the Guest Editors

Research on wearable robots is taking place in many application areas, including the assistance of movement, rehabilitation after injury or disease, injury prevention in demanding occupational tasks, and monitoring of movement for the early diagnosis of diseases. There are many promising results in each of these spaces, yet there are still challenges to making these devices ready for effective real-world use.

In this Special Issue, we aim to investigate the challenges and state-of-the-art solutions of wearable robotics that can operate successfully in everyday activities. The field of wearable robotics is broad, and we are looking for an opportunity to share the best solutions from across areas of the field, e.g.,

- Type of device—exoskeleton, exosuit, prosthetic;
- Location of assistance—upper limb, lower limb, lower back;
- Actuation design—active, passive, SEA;
- Mechanism of actuation—pneumatic, direct torque, shape-memory alloy;
- Control—phase-based, time-based, passive;
- Sensing—environment, human intent.

Research on simulations, experiments, and engineering applications is welcome.





an Open Access Journal by MDPI

Editor-in-Chief

**Prof. Dr. Antonio J. Marques
Cardoso**

CISE—Electromechatronic
Systems Research Centre,
University of Beira Interior,
Calçada Fonte do Lameiro, P -
6201-001 Covilhã, Portugal

Message from the Editor-in-Chief

Machines is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications.

Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided.

There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

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)*, *Inspec*, and other databases.

Journal Rank: JCR - Q2 (*Engineering, Mechanical*)

Contact Us

Machines Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/machines
machines@mdpi.com
X@Machines_MDPI