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Design and Application of Wearable and Rehabilitation Robotics

Guest Editors:

Dr. Arash Arami

Mechanical and Mechatronics Engineering, University of Waterloo, University Avenue West, Waterloo, ON N2L 3G1, Canada

Prof. Dr. Katja Mombaur

Department of Systems Design Engineering, University of Waterloo, University Avenue West, Waterloo, ON N2L 3G1, Canada

Prof. Dr. John McPhee

Department of Systems Design Engineering, University of Waterloo, University Avenue West, Waterloo, ON N2L 3G1, Canada

Message from the Guest Editors

Each year millions of people lose their ability to move due to stroke, amputation, aging, and debilitating neurological conditions such as spinal cord injury, cerebral palsy, multiple sclerosis, and Parkinson's disease. Recent advancements in robotics have provided new solutions in the form of robotic upper and lower limb rehabilitation systems, limb prosthetics, exoskeletons, and exosuits. Such robotic systems significantly impact the rehabilitation field by delivering high-dose exercises to those with movement deficits. In addition, wearable robots enable many users to increase their mobility and effectively perform activities of daily living. Despite several challenges facing wearable and rehabilitation robotics, recent advances in artificial intelligence (AI), sensors and actuators, the development of lightweight materials, and our improved understanding of neuromechanics of movement have opened new pathways that can address those challenges, e.g. optimizing human-robot interactions when using wearable and rehabilitation robotics.

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Special Issue



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Editor-in-Chief

Prof. Dr. Vittorio M. N. Passaro

Dipartimento di Ingegneria
Elettrica e dell'Informazione
(Department of Electrical and
Information Engineering),
Politecnico di Bari, Via Edoardo
Orabona n. 4, 70125 Bari, Italy

Message from the Editor-in-Chief

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Sensors Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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