Special Issue

Design, Optimization and Performance Analysis of Soft Robots

Message from the Guest Editor

Soft robotic systems are the target of much research effort worldwide, not only showing their enormous potential in applications such as cooperative human assistance and use in unpredictable terrain, but also with the aim to make them fit for real-world use. The goal of soft robotics is to transfer the basic principles of animal and human behavior to develop systems that can deal with unpredictable situations due to their biomimetic nature. One approach is the integration of sensors and actuators into the structure or the development of new learning algorithms to cope with such tasks. However, many challenges remain to be overcome to develop soft robots with specific capabilities and to predict their performance through numerical analysis. This Special Issue aims to present the current state of research in the field of the design, experimental and numerical characterization, and optimization of soft robotics, to build a bridge between purely knowledge-based research and application.

Guest Editor

Prof. Dr. Kristin Payrebrune

Lehrstuhl Computational Physics in Engineering, TU Kaiserslautern, 67663 Kaiserslautern, Germany

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

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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

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