Special Issue

The Use of Evolutionary Algorithms in Robotics

Message from the Guest Editors

This study explores evolutionary algorithms (EAs) within the field of robotics, addressing aspects such as robot design optimization, control mechanisms, path navigation, and swarm behavior. EAs like genetic algorithms (GAs), genetic programming (GP), and evolutionary strategies (ESs) emulate biological evolution via techniques of the selection, mutation, and recombination of solutions. Due to their capability to search extensive solution spaces, they are particularly well suited for use in robotics, where manual adjustments may be challenging. The significance of the research area includes adaptability, design innovation, efficiency, and scalability.

Guest Editors

Dr. Rui Araújo

Institute of Systems and Robotics (ISR-UC), Department of Electrical and Computer Engineering (DEEC-UC), University of Coimbra, Pólo II, PT-3030-290 Coimbra, Portugal

Dr. Roland Szabó

Faculty of Electronics, Telecommunications and Information Technologies, Politehnica University Timisoara, Timisoara, Romania

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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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