

# Special Issue

## Swarm Robotics

### Message from the Guest Editor

Swarm robotics is a new approach to coordinate the behaviors of large numbers of relatively simple robots in a decentralized manner. It is based on the use of local rules and robots that are simple in comparison to the complexity of the task to achieve, and is inspired by social insects. Large numbers of simple robots can perform complex tasks in a more efficient way than a single robot, giving robustness and flexibility to the group. Robotic systems built on swarm intelligence show high efficiency, parallelism, scalability and robustness. The area of swarm robotics will also benefit from the Internet of Things (IoT). The potential applications of swarm robotics include tasks that demand miniaturization, like distributed sensing tasks in micro machinery or the human body. On the other hand, swarm robotics may be suited to the tasks that demand cheap designs, such as mining or agricultural foraging. Swarm robotics can be also involved in tasks that require large space and time costs and are dangerous to human beings or the robots themselves, such as post-disaster relief, target searching, or military applications.

---

### Guest Editor

Dr. Giandomenico Spezzano

National Research Council of Italy (CNR), Institute for High Performance Computing and Networking (ICAR), Via Pietro Bucci, 8-9C, 87036 Rende, CS, Italy

---

### Deadline for manuscript submissions

closed (31 August 2018)



## Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/si/10272](https://mdpi.com/si/10272)

*Applied Sciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[appls@mdpi.com](mailto:appls@mdpi.com)

[mdpi.com/journal/  
appls](https://mdpi.com/journal/appls)





# Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/journal/  
applsci](https://mdpi.com/journal/applsci)



## 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 )