

# Special Issue

## Advanced Motion Control of Multiple Robots

### Message from the Guest Editors

This Special Issue is dedicated to presenting research works where several robots have a global objective (task) and algorithmic solutions are proposed to control the motion of each robot such that a desired collaborative behavior is generated, mainly using local information that is shared among the robots. We aim to provide a broad sampling of the research that is currently ongoing in the field of the motion control of multiple robots, for wheeled, underwater, aerial and humanoid robots in homogeneous or heterogeneous groups. In this Special Issue, original research articles and reviews are welcome. Research areas in the context of the control of multiple robots may include (but are not limited to) the following:

- Control architectures and scalability.
- Control of robots with motion constraints.
- Advanced control design.
- Optimal and optimization-based control.
- Cooperative motion planning.
- Formation control with collision avoidance.
- Collaborative navigation.
- Synchronization of AGVS.
- Exploration with multiple robots.
- Control of multiple robots for novel applications.

We look forward to receiving your contributions.

### Guest Editors

Dr. Hector M. Becerra

Dr. David Gómez-Gutiérrez

Prof. Dr. America Morales

### Deadline for manuscript submissions

closed (31 July 2023)



## Machines

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## About the Journal

### 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.

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### Editor-in-Chief

Prof. Dr. Antonio J. Marques Cardoso  
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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.9 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).