

Special Issue

Applied Mathematics in Robotics: Theory, Methods and Applications

Message from the Guest Editors

Robotics is the study and application of intelligent systems that can sense, think, and act. It has broad and promising applications in various fields, such as industry, the military, education, and entertainment. It also depends on the theories and methods of applied mathematics, such as optimization, statistics, probability, logic, graph theory, complex networks, and machine learning. Applied mathematics gives robotics a solid mathematical foundation and also provides tools and ideas for innovation and improvement. This Special Issue collects and showcases the latest advances of applied mathematics in robotics, in terms of theory, methods, and applications. We invite research on different types of robots, such as manipulators, walking robots, soft robots, haptic robots, microrobots, and swarm robots, and on different tasks, such as grasping, manipulation, motion, navigation, collaboration, and interaction. The goal of this Special Issue is to enhance the communication and collaboration between applied mathematics and robotics and to foster the development and application of robotic technology.

Guest Editors

Dr. Chengxi Zhang

Dr. Weisong Wen

Prof. Dr. Jin Wu

Deadline for manuscript submissions

closed (31 December 2024)



AppliedMath

an Open Access Journal
by MDPI

Impact Factor 0.7
CiteScore 1.1



mdpi.com/si/198534

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

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





AppliedMath

an Open Access Journal
by MDPI

Impact Factor 0.7
CiteScore 1.1



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



About the Journal

Message from the Editor-in-Chief

Mathematics permeates all kinds of academic worlds and is a fountain flowing with innovative development. The journal *AppliedMath*, publishing high-quality refereed papers discussing various aspects of applied mathematics, is dedicated to promoting the integration of mathematics with applied disciplines to cultivate a profitable frontier of mathematics. The journal highlights articles devoted to the mathematical treatment of questions and phenomena arising in physics, chemistry, biology, medicine, pharmacy, engineering, information science, social sciences, and humanities. One of the missions of this journal is to serve scientists by quickly announcing the seeds of significant mathematical breakthroughs in science and technology.

Editor-in-Chief

Prof. Dr. Takayuki Hibi

Department of Pure and Applied Mathematics, Graduate School of Information Science and Technology, Osaka University, 1-5 Yamadaoka, Suita 565-0871, Osaka, Japan

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within ESCI (Web of Science), Scopus, EBSCO, and other databases.

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 20.6 days after submission; acceptance to publication is undertaken in 8.6 days (median values for papers published in this journal in the second half of 2025).