Special Issue

Cutting-Edge Research on Motion Control and Planning of Nonlinear Systems

Message from the Guest Editors

Nonlinear systems are ubiquitous in modern engineering, spanning advanced robotics, autonomous vehicles, aerospace systems and smart manufacturing. As industrial machinery demands higher precision, faster response times and greater autonomy, traditional linear control methods often fall short. Controlling and planning for these systems presents significant challenges due to inherent nonlinearities, dynamic uncertainties and strict operational constraints. This Special Issue focuses on bridging the gap between advanced control theories and real-world engineering applications. We welcome contributions that explore novel nonlinear control strategies, adaptive learning mechanisms and robust motion-planning algorithms designed to enhance the stability, tracking accuracy and efficiency of complex machinery. By gathering high-quality research, this issue aims to advance the state of the art in intelligent machines, robotics and automated systems, directly aligning with the core scope of *Machines*.

Guest Editors

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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.

Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.9 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the first half of 2026).