Special Issue

Advanced Design, Control, and Optimization for Parallel Manipulators

Message from the Guest Editor

We invite you to contribute to this Special Issue on "Advanced Design, Control, and Optimization for Parallel Manipulators." Parallel manipulators have gained significant attention in recent years due to their stiffness, load-carrying capacity, and precision advantages, making them ideal for high-performance applications in aerospace, medical robotics, manufacturing, and scientific instrumentation. Despite their potential, the nonlinear kinematics, constrained workspaces, and complex dynamics pose major challenges for widespread deployment. This Special Issue aims to review and advance the state of the art in parallel manipulators' modeling, design, and control. We welcome original contributions and comprehensive reviews addressing recent theoretical developments, novel design methodologies, real-time control strategies, and optimization techniques that enhance these systems' performance, reliability, and adaptability. We encourage multidisciplinary works that bridge mechanical design, artificial intelligence, and control theory to enable next-generation parallel robots.

Guest Editor

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Deadline for manuscript submissions

31 January 2026

Machines

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 4.7

mdpi.com/si/240362

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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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