Special Issue

Advances in Robot Kinematics and Dynamics: Innovations, Control Strategies, and Practical Applications

Message from the Guest Editors

Recent advancements in mechanisms, sensors, and control have driven significant progress in robotic applications. However, core technologies like compliance control for industrial robots during hard contact tasks, disturbance compensation for large haptic devices, and multi-arm manipulation for complex assembly still face challenges. Additionally, while industrial exoskeletons are gaining popularity, developing comfortable human interfaces with embedded sensors remains difficult. This topic invites researchers to share insights and innovations in key areas to advance practical robotics applications. Topics include, but are not limited to:

- Robust compliant control for assembly
- Human-robot interfaces in exoskeletons
- Control for dual arm manipulation
- Transparency for haptic applications
- Contact dynamic modeling and simulation
- Singularity and self-motion manifolds
- Hardware-in-the-loop simulation
- Parallel mechanisms and other novel devices

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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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