Special Issue

Optimization and Design of Compliant Mechanisms

Message from the Guest Editors

Compliant mechanisms are rationally designed structures of precision geometrical shape, leading to ultra-precision motion and special force displacement chracteristics. Unlike conventional rigid-link mechanisms, the motion of compliant mechanisms is realized via using flexible elements whereby deformation requires no lubrication while achieving high movement accuracy without friction. As compliant mechanisms differ significantly from traditional rigid mechanisms, the recent research focus has been on investigating various technologies and approaches to address challenges in their design and synthesis, optimization, analysis, materials, fabrication methods, and actuation. Applications of these structures include micro manipulation, precision manufacturing, vibration isolation, medical robots, and so on. The focus of this Special Issue is the design, optimization, control, and applications of compliant mechanisms. Keywords

- compliant mechanism
- constant force mechanism
- optimization
- micro-positioner
- robotics

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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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