

Kinematics and Robot Design VI, KaRD2023

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Special Issue Editor



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Interests: kinematics; dynamics; mechanism and machine theory; parallel manipulators; robot mechanics; biomechanics; vehicle mechanics; robotics

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Special Issue Information

Dear Colleagues,

KaRD2023 is the 6th issue of the KaRD series, hosted by MDPI's *Robotics*. The KaRD series of open-access Special Issues is characterized by a low publication cost (400 CHF/paper is the article-processing fee (APC) for each published paper), which is comparable with the registration fee of a small international congress.

The KaRD series started in 2018 and publishes one issue yearly. The websites are open environments where researchers can present their works and discuss all the topics on the many aspects of kinematics in the design of robotic/automatic systems by also using supplementary multimedia materials uploadable during the submission. A “Scientific Committee”, which collects researchers coming from all over the world, supports and supervises the Guest Editor activity.

All the papers are peer-reviewed as soon as they are submitted and, if accepted, are immediately published in MDPI's *Robotics* and appear on the website of the KaRD issue. The papers of each KaRD issue are also collected into freely downloadable e-books, whose printed copies can also be ordered at a price that covers the printing costs.

Kinematics is central to nearly all the design aspects of robotic/automatic systems. Topics like analysis and synthesis of mechanisms, robot modeling and simulation, robot control, mobility and singularity analysis, performance measures, accuracy analysis, path planning and obstacle avoidance, collaborative robotics, novel manipulator architectures, metamorphic mechanisms, compliant mechanism analysis and synthesis, micro/nano-manipulator design, origami-based robotics, medical and rehabilitation robotics, bioinspired robotics, etc., deal with kinematics. All these topics have a deep social impact and, somehow, delineate future perspectives of human welfare, which makes kinematics an alive research field hosting theoretical and applicative subjects.

KaRD2023 provides a good opportunity to present research results that are immediately readable and usable by other researchers. In particular, submitting authors:

- Are able to also submit accompanying multimedia material;
- Can request the “Open Peer Review” during the submission;
- Are immediately able to upload, as a preprint on <https://www.preprints.org/>, the paper version submitted for review, where it will receive a DOI and will be readable/citable by other researchers;
- Are able to upload their published paper on many social networks for researchers (e.g., ResearchGate.net), where they can publicly or privately interact with other researchers to start a discussion on the published results.
- Can receive comments and reply to them directly on the website of their published papers, where the same authors can add comments to their papers, which integrate them and are jointly visible with them.

In short, the KaRD series is an “agora”, where researchers efficiently exchange their experiences.

The Special Issue aims at collecting recent research on the following topics. Nevertheless, review papers are welcome, too. Topics of interest include (but are not limited to):

- synthesis of mechanisms
- theoretical and computational kinematics
- robot modeling and simulation
- kinematics in robot control
- position analysis
- mobility and singularity analysis
- performance measures
- accuracy analysis
- path planning and obstacle avoidance
- novel manipulator architectures
- metamorphic mechanisms
- compliant mechanism analysis and synthesis
- micro/nanomanipulator design
- origami-based robotics
- medical and rehabilitation robotics
- kinematics in biological systems, humanoid robots, and humanoid subsystems
- education in robotics

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Guest Editor

Manuscript Submission Information

Manuscripts should be submitted online at www.mdpi.com by [registering](#) and [logging in to this website](#). Once you are registered, [click here to go to the submission form](#). Manuscripts can be submitted until the deadline. All papers will be peer-reviewed. Accepted papers will be published continuously in the journal (as soon as accepted) and will be listed together on the special issue website. Research articles, review articles as well as short communications are invited. For planned papers, a title and short abstract (about 100 words) can be sent to the Editorial Office for announcement on this website.

Submitted manuscripts should not have been published previously, nor be under consideration for publication elsewhere (except conference proceedings papers). All manuscripts are thoroughly refereed through a single-blind peer-review process. A guide for authors and other relevant information for submission of manuscripts is available on the [Instructions for Authors](#) page. *Robotics* is an international peer-reviewed open access quarterly journal published by MDPI.

Please visit the [Instructions for Authors](#) page before submitting a manuscript. The [Article Processing Charge \(APC\)](#) for publication in this [open access](#) journal is 1600 CHF (Swiss Francs), but it is reduced to **400 CHF** for the submission to this special issue. Submitted papers should be well formatted and use good English. Authors may use MDPI's [English editing service](#) prior to publication or during author revisions.

Keywords

- mechanism synthesis
- kinematic analysis
- robot modeling and simulation
- robot control
- singularity analysis
- performance measures
- accuracy analysis
- path planning
- parallel manipulator
- serial manipulator
- robot design
- compliant mechanism
- micro/nanomanipulator
- origami
- medical and rehabilitation robotics
- biomechanics