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Kinematics and Robot Design IV, KaRD2021

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Special Issue Information

Dear Colleagues,

KaRD2021 is the 4th issue of the KaRD series, hosted by MDPI *Robotics*. The KaRD series of open-access special issues is characterized by cheap publication costs (400 CHF/paper of APC), comparable with the registration fee of a small international congress. It started on 2018 and, now, is an open environment where researchers can present their works and discuss all the topics focused on the many aspects that involve kinematics in the design of robotic/automatic systems by using also supplementary multimedia materials uploadable during the submission. A "Scientific Committee", composed by 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, immediately published on MDPI Robotics and appear on the website of the KaRD issue. Starting with this year, the papers of each KaRD issue are also collected into freely downloadable e-books, whose printed copy can also be ordered at a price that covers the printing costs.

Kinematics is intimately related to nearly all the design aspects of robotic/automatic systems. Topics like analysis and synthesis of mechanisms, robot modelling 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 attract big economic interests

KaRD2021 provides a good opportunity for presenting research results that are immediately readable and usable by other researchers. In particular, submitting authors
- are able to submit also 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;
- after the possible paper acceptance and the publication on *Robotics*, are able to upload their published paper on many social networks for researchers (e.g., ResearchGate.net), where they can publically or privately interact with other researchers to start a discussion on the published results.

In short, KaRD series is an "agora", where researchers efficiently exchange their experiences.

The special issue aims at collecting recent researches on all the below-listed 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

Raffaele Di Gregorio
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 1400 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