Kinematics and Robot Design III, KaRD2020

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Special Issue Information

Dear Colleagues,

KaRD2020 is the third issue of the KaRD series, hosted by MDPI *Robotics*. The KaRD series of open-source Special Issues is characterized by cheap publication costs (350 EUR/paper of APC), which are comparable with the registration fee of a small international congress, and tries to implement the "virtual conference" concept in the field of "Kinematics and Robot Design". As an international conference, starting from this year, a scientific committee, composed of researchers coming from all over the world, will support and supervise the guest editor's activity.

Kinematics enters in many aspects of robot design. Type synthesis, dimensional synthesis, kinematic analysis, singularity analysis, workspace determination, performance measures, accuracy analysis, path planning, and obstacle avoidance are only some of these. Moreover, it is central when building dynamic models for simulation purposes.

Robotics is pervading many fields of social interest. For instance, healthcare with robotized medical devices and rehabilitation devices needs studies on both human biomechanics and on mechanism synthesis, which involve kinematics.

KaRD2020 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 publicly or privately interact with other researchers to start a discussion on the published results.

In short, the KaRD series is a virtual agora, where researchers present and discuss their results and wishes to become a reference point for the scientific community.

The Special Issue aims at collecting recent researches on all of the below-listed topics. Nevertheless, review papers are welcome, too.

Topics of interest include (but are not limited to) the following:

- 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 1000 CHF (Swiss Francs), but it is reduced to **350 EUR** 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