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ASME's Guide for Journal Authors

CALL FOR PAPERS

ASME *Journal of Mechanisms and Robotics*

Focused Section on Reconfigurable Parallel Mechanisms

This Focused Section is intended to provide a platform for sharing and presenting new research and solutions for Reconfigurable Parallel Mechanisms (RPMs) in theory, development, and applications.

Over the past twenty years, reconfigurable mechanisms have generated great interest worldwide and attracted many researchers. As a field of study, mechanisms have evolved from a conventional mechanism philosophy with a fixed topology and fixed structure to encompass a class of mechanisms that vary in topology, structure, and mobility. This evolution has resulted in the development of RPMs with variable degrees of freedom that are mechanically intelligent and capable of adapting to constantly changing conditions. In their various forms, these RPMs meet the growing requirements of healthcare, industries, domestic automation, search, rescue and disaster relief, and planetary exploration.

In order to effectively operate in their reconfigurable states, and in working environments, challenges in theoretical kinematics and in design need to be tackled and addressed. These include the design theory, bifurcation, singularity, calibration, morphing, kinetostatics, trajectory and homotopy continuation. The use of the reconfigurable parallel mechanisms can be seen in tensegrity, inflatable actuators, climbing robots, and transformable mobile robots. The actuation of the reconfigurable parallel mechanisms can be seen in using shape memory alloy and various actuation approaches.

With these developments, the *4th International Conference on Fundamental Issues, Applications and Future Research Directions for Parallel Mechanisms / Manipulators / Machines* (World Parallel 2020) was held September 9-11, 2020. This prestigious conference, hosted jointly by Queen's University Belfast and King's College London, is held once every six years and provides the basis for this Call for Papers.

With the presentations in this Conference, we also note that extended manuscripts of conference papers published elsewhere (including other ASME Conferences) that fit the scope of this Focused Section are also welcome. We are also open to new submissions in responding to this Call for Papers.

Topic Areas

Focused Section paper submissions are welcome on topics related to aspects of theory, design, and application, including but not limited to:

- Kinematics
- Bifurcation
- Morphology
- Ways of reconfiguration
- Singularity
- Kinetostatics
- Service robots and unconventional applications
- Mobile manipulation
- Manufacturing

Publication Target Dates

Submission window open	**November 1-25, 2020**
Review process	**December 2020 - March 2021**
Final papers due	**April 2021 for publication online starting May 2021**
Print publication	**August 2021 issue**

Submission Instructions

Papers should be submitted electronically to the journal at journaltool.asme.org. If you already have an account, log in as author and select **Submit Paper** at the bottom of the page. If you do not have an account, select **Submissions** and follow the steps. In either case, at the **Paper Submittal** page, select the ASME *Journal of Mechanisms and Robotics* and then select the Focused Section **Reconfigurable Parallel Mechanisms**. Papers that do not complete the review process within this timeframe or that are outside the scope of the Focused Section may be considered for publication in a regular issue of the journal.

Focused Section Editors

Jian S. Dai, Department of Mechanical Engineering / Faculty of Natural and Mathematical Sciences, King's College London, UK, jian.dai@kcl.ac.uk
Yan Jin, School of Mechanical and Aerospace Engineering, Queen's University Belfast, UK, y.jin@qub.ac.uk
Clement Gosselin, Department of Mechanical Engineering, Laval University, Quebec, Canada, clement.gosselin@gmc.ulaval.ca