



JOURNAL OF MECHANISMS AND ROBOTICS

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Special Issue on MicroScale Mechanisms and Robots

The idea of microrobots with capabilities similar to their insect counterparts has excited the robotics and microsystems communities for over two decades. Survivors after an earthquake could be found faster if robotic bugs could target the efforts of first responders. Robotic surgery can be enhanced by injected robots or robotic systems at the end of a catheter. Ants and termites build impressive structures and microrobots could be used to manufacture large structures in a similar fashion. Building microrobots is a long-term challenge that will require a number of scientific and technical advances. For example, micro-scale mechanisms are required to interface with the world, microactuators might be required to drive these mechanisms, and micro-scale sensors and controllers will be necessary depending on the application. Impressive demonstrations to date include flying robots the size of bee, microscale magnetic manipulation for medical applications, compliant mechanism design at small scales, and terrestrial robots the size of ants. However, there is still much work to be done to solve these numerous challenges.

This Special Issue seeks a collection of papers that address the challenges inherent in the mechanics, design, fabrication, and application of microM scale mechanisms and microrobots. Approaches can focus on microM scale mechanisms, including design, fabrication, novel materials, and modeling. Papers can also focus on relevant (subcomponents) of a microrobotic system, but should address some aspect of the mechanics or design of these subcomponents. Finally, papers are welcome that address integration of these components into mechanical systems at small scales. Lessons learned in both modeling and/or application are relevant

Submission Guidelines

Papers should be submitted electronically at <http://journaltool.asme.org> by selecting “Mechanisms and Robotics” then “Micro Scale Mechanisms and Robots” in the special-issue dropdown menu. Information about the *Journal of Mechanisms & Robotics* can be found at <http://mechanismsrobotics.asmedigitalcollection.asme.org/journal.aspx>.

Projected Timelines

January 16, 2017 – First call for papers released
April 10, 2017 – Submission deadline (12 weeks)
April 17, 2017 – Reviewers assigned (1 weeks)
May 8, 2017 – Reviews completed (4 weeks)
May 15, 2017 – Decisions and author notification (1 weeks)
June 12, 2017 – Revisions completed (3 weeks)
June 19, 2017 – Final decisions made (1 week)
July 10, 2017 – Final drafts due (3 weeks)
Total elapsed time: 25 weeks

These papers will be published online as soon as the **entire issue is ready** but in print in the October 2017 issue.

Guest Editors

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