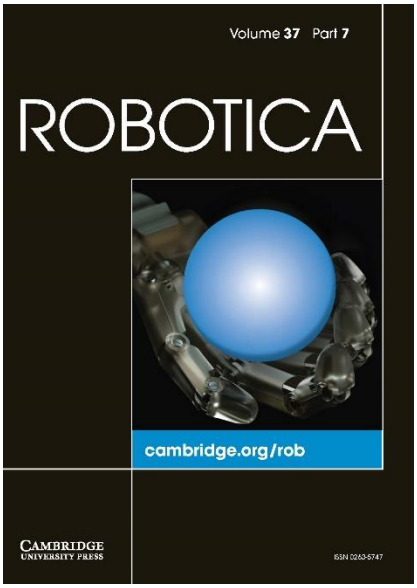
Call for Papers



Robotica

http://cambridge.org/rob

Special Issue:
Computational Robot Design and Fabrication

New advances in digital fabrication have increased our ability to create complex geometric structures with an ever-expanding range of materials (rigid, compliant, conductive, etc.). At the same time, computational design tools offer a tremendous opportunity to facilitate robot design by encoding structural, control, or fabrication constraints during the design cycle, enabling roboticists to navigate the vast design spaces enabled by digital fabrication. The combination of these two promises new robot forms and capabilities to expand the applications and performance of future robots.

Robotica announces a new Special Issue on Computational Robot Design and Fabrication, with the goal of addressing the following two questions:

1) How can computational approaches enhance workflow and facilitate the design and rapid prototyping of robots?
2) How can new materials and manufacturing approaches lead to uniform processes for fabricating robots on-demand?

The topics of the special issue include, but are not limited to:

- Programmable fabrication
  - Novel rapid fabrication methods for intelligent machines
  - Personalized mechanisms and robotics
  - Soft and compliant machines
- Computational design
  - Characterization, modeling, and design of printable structures
  - Hardware/software co-design and optimization
  - Morphological intelligence
- End-to-end systems for robot design and fabrication
  - Interactive robot design systems
  - Programmable matter
  - Fabrication-aware design

Submission Guidelines

Authors interested in contributing should submit manuscripts to the Manuscript Central System via http://mc.manuscriptcentral.com/cup/robotica. All submissions must contain original, unpublished work and adhere to the standard guidelines posted online at https://www.cambridge.org/core/journals/robotica/information/instructions-contributors.

Authors should list “special issue on robot customization” in the keywords for their submission. All submissions will be refereed according to the standard procedures for *Robotica*.

Paper submission: January 15, 2019 (extended from Dec. 15)
Target publication: June 2020

Guest Editors:
Cynthia Sung, University of Pennsylvania
Stelian Coros, ETH Zürich
Robert MacCurdy, University of Colorado, Boulder
Mark Yim, University of Pennsylvania