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ASME's Guide for Journal Authors

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ASME *Journal of Biomechanical Engineering*

Special Issue on Data-Driven Methods in Biomechanics

The new advent in machine learning and data-driven methods has spread across engineering applications, including biomechanics, for constitutive modeling of soft tissue, physics solver replacement or acceleration, and analysis of imaging data to extract features that would be impossible to detect with traditional methods. At the same time, machine learning and artificial intelligence algorithms have most likely evolved in different contexts other than biomechanics. Biomechanical engineering systems have different features from the traditional domains of machine learning, and thus require unique data-driven approaches. Recent efforts at this intersection are physics informed neural networks, and homogenization of micromechanics models with deep neural networks or Gaussian processes, to name only a couple of examples.

The Special Issue will foster the integration of engineering fields and machine learning by focusing on the unique intersection of data-driven methods and biomechanics.

Topic Areas
The journal seeks contributions of new data-driven or machine learning methods and/or novel applications of data-driven methods to biomechanics problems, including but not limited to:
- Constitutive models of tissues
- Image segmentation and registration
- Physics solver acceleration
- Physics informed machine learning

Publication Target Dates
Abstract (optional)	**December 15, 2021**
Manuscript submission	**February 28, 2022**
Author notification	**April 30, 2022**
Revised submission	**June 30, 2022**
Author notification	**July 31, 2022**
Final submission	**August 31, 2022**

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 Biomechanical Engineering*** and then select the Special Issue **Data-Driven Methods in Biomechanics.**

Authors are encouraged to submit an abstract to one of the Guest Editors before the formal submission of the manuscript to gauge fitness to the Special Issue.

Guest Editors
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