

## Special Issue

# Computational Modeling and AI Applications in Injury Biomechanics and Rehabilitation

### Message from the Guest Editors

This Special Issue aims to bring together innovative research at the intersection of computational biomechanics, musculoskeletal modeling, biomedical image processing, and machine learning to improve our understanding of injury mechanisms and develop effective rehabilitation strategies. We welcome studies focusing on the development and application of subject-specific musculoskeletal models, finite element simulations, or AI-driven medical image analysis to study human movement, tissue mechanics, injury risk, treatment outcomes, and rehabilitation planning. Putative topics include, but are not limited to: injury biomechanics and tissue modeling; computational models of musculoskeletal injury and repair AI and deep learning in medical image analysis; personalized rehabilitation strategies using simulation-based approaches; predictive modeling for injury risk assessment; the integration of imaging and modeling for subject-specific analysis; and the model-based evaluation of clinical interventions or devices.

### Guest Editors

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### Deadline for manuscript submissions

25 January 2026



## Biomechanics

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## About the Journal

### Message from the Editor-in-Chief

*Biomechanics* (ISSN 2673-7078) is an international, peer-reviewed, and open access journal devoted to the fast publication of the latest achievements of scientific research in the area of biomechanics. Both experimental and theoretical papers are published. We hope that the submission guidelines and submission template will assist you in your submission of your research to this journal, and that you will enjoy reading the articles in *Biomechanics*.

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### Editor-in-Chief

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