

## Special Issue

# Cutting-Edge Biomechanics: Unlocking the Future of Biomedical Engineering

### Message from the Guest Editor

- **Computational Biomechanics and Modeling:** Finite element analysis, multiscale and patient-specific modeling.
- **Experimental Biomechanics:** Innovative in vitro/in vivo methods, dynamic mechanical testing, imaging-based characterization.
- **Cellular and Molecular Biomechanics:** Mechanotransduction, cell–matrix mechanics, mechanobiology of disease.
- **Tissue Biomechanics and Regenerative Engineering:** Tissue remodeling, mechanobiology of development and repair, bioinspired scaffold design.
- **Cardiovascular Biomechanics:** Hemodynamics, arterial wall mechanics, heart valve function, device–tissue interactions.
- **Musculoskeletal Biomechanics:** Joint mechanics, bone adaptation, orthopedic implants, neuromuscular rehabilitation.
- **Sports and Injury Biomechanics:** Impact analysis, injury risk prediction, performance optimization.
- **Biomaterials and Medical Device Innovation:** Mechanical evaluation of biomaterials, prosthetic design, functional testing.
- **Medical Robotics and Haptics:** Surgical simulation, sensor-integrated rehabilitation devices, human–machine interfaces.
- **AI and Machine Learning in Biomechanics:** Data-driven modeling, real-time analytics, image processing and classification.

### Guest Editor

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### Deadline for manuscript submissions

30 April 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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