

## Special Issue

# Advances in Biomechanics and Biomachines: From Fundamentals to Applications

### Message from the Guest Editors

We welcome contributions that explore advancements in biomechanical testing methods, innovative biomachinery designs, and the integration of biotechnology with machine learning and multiscale simulations. Research topics can include the characterization of biological materials, damage and repair mechanisms in biological tissues, and the use of biomachinery for cutting-edge applications in healthcare, robotics, and energy systems. Review articles that discuss current trends and future challenges in biomechanics and biomachinery are also encouraged. **Potential topics include, but are not limited to, the following:**

- Biomechanical characterization of tissues and organs;
- Design and fabrication of biomachinery;
- Multiscale modeling in biomechanics;
- Damage and repair mechanisms of biological systems;
- Biofabrication techniques;
- Machine learning in biomechanics;
- Biomedical applications of biomachinery;
- Energy harvesting using biological systems.

### Guest Editors

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### Deadline for manuscript submissions

31 August 2025



## Machines

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## About the Journal

### Message from the Editor-in-Chief

*Machines* is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications. Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided. There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

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### Editor-in-Chief

Prof. Dr. Antonio J. Marques Cardoso  
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