

Special Issue

Computational Biomechanics and Biomimetics in Flying and Swimming

Message from the Guest Editors

This Special Issue aims to focus on computational models, numerical algorithms and methods, and computer software and frameworks in the biomechanics and biomimetics of biological flying and swimming, and their applications. The topics of interest include, but are not limited to:

- Computational fluid dynamics with geometrical and kinematical complexities of a body, wings, and fins;
- Numerical algorithms and methods for coupled multiphysics such as wing–air and fin–water interactions;
- Modeling for wings, fins, and joints, which consist of complex and multiscale structures, such as reduced order modeling and multiscale modeling;
- Complementary methodologies such as scaling laws;
- Computer software and frameworks for coupled multiphysics and large-scale analyses;
- Passivity of flexible structures;
- Control and maneuverability in flying and swimming;
- Simulation-based biomimetic design for flying and swimming biorobots.

Guest Editors

Prof. Dr. Daisuke Ishihara

Prof. Dr. Hao Liu

Prof. Dr. Shinobu Yoshimura

Deadline for manuscript submissions

closed (31 October 2023)



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About the Journal

Message from the Editor-in-Chief

Editor-in-Chief

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