

Special Issue

Biomechanics and Biomimetics for Insect-Inspired MAVs

Message from the Guest Editors

Biomechanics and biomimetics play a crucial role in the development of insect-inspired micro air vehicles (MAVs). The goal of this Special Issue is to gather contributions from various research efforts focused on unraveling the flight mechanics, movement control, and interactions with the environment seen in insects, with the ultimate aim of incorporating these insights into the design of highly agile and efficient MAVs. The intricate flight patterns and physical characteristics of insects provide a blueprint for engineering MAVs that are not only more efficient and durable but also display exceptional maneuverability and stability in diverse atmospheric conditions. This research is poised to advance the fields of robotics, aerospace engineering, and artificial intelligence by leveraging the unique aerodynamic and flight control tactics of insects to create MAVs that surpass traditional aircraft in terms of precision and agility, effectively handling complex tasks such as mimicking pollination, conducting search and rescue operations, and performing environmental surveillance.

Guest Editors

Prof. Dr. Jiyu Sun

Prof. Dr. Zhijun Zhang

Dr. Chao Liu

Deadline for manuscript submissions

closed (28 February 2025)



Biomimetics

an Open Access Journal
by MDPI

Impact Factor 3.9
CiteScore 4.2
Indexed in PubMed



mdpi.com/si/203596

Biomimetics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
biomimetics@mdpi.com

[mdpi.com/journal/
biomimetics](https://mdpi.com/journal/biomimetics)





Biomimetics

an Open Access Journal
by MDPI

Impact Factor 3.9
CiteScore 4.2
Indexed in PubMed



[mdpi.com/journal/
biomimetics](https://mdpi.com/journal/biomimetics)



About the Journal

Message from the Editor-in-Chief

Editor-in-Chief

Prof. Dr. Stanislav N. Gorb

Department of Functional Morphology and Biomechanics, Zoological
Institute, Kiel University, 24118 Kiel, Germany

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Engineering, Multidisciplinary) / CiteScore - Q2
(Biomedical Engineering)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.1 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the first half of 2025).