

## Special Issue

# Structural Dynamics Modelling, Aeroelastic Analysis and Experimental Verification Methods for Aircraft Systems

### Message from the Guest Editors

Dear colleagues, Structural dynamics and aeroelasticity are important problems in the design of aircraft. With the development of new aircraft, such as aircraft with high aspect ratios, morphing wings, eVTOLs, blended wing bodies, and hypersonic vehicles, there appear to be some complicated aeroelastic problems that need to be solved through the innovation of analyzing and experimental methods. These problems include lumped parameter nonlinearity, geometrical nonlinearity, time-varying systems, coupled flight dynamics and elasticity, propeller aeroelastic instability, gust response and alleviation, flow separation and buffeting, etc.

Meanwhile, data-driven based modeling and digital twin techniques, the structural dynamics and aeroelasticity of aircraft confront great innovations in the areas of numerical modeling and experimental methods. This Special Issue aims to report new developments in the fields of structural dynamic modeling, aeroelastic analyses, and experiment verification methods for aircraft systems. We cordially invite submissions of original research papers, reviews, and short communications that align with the theme of this Special Issue.

---

### Guest Editors

Dr. Weizhe Feng

Prof. Wei Qian

Dr. Rafic M. Ajaj

---

### Deadline for manuscript submissions

31 December 2025



## Aerospace

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.2  
CiteScore 4.0



[mdpi.com/si/222608](https://mdpi.com/si/222608)

*Aerospace*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[aerospace@mdpi.com](mailto:aerospace@mdpi.com)

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





# Aerospace

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.2  
CiteScore 4.0



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



## About the Journal

### Message from the Editor-in-Chief

You are welcome to contribute a research article or a comprehensive review for consideration and publication in *Aerospace* (ISSN 2226-4310), an on-line, open access journal.

*Aerospace* adheres to rigorous peer-review as well as editorial processes and publishes high quality manuscripts that address both the fundamentals and applications of aeronautics and astronautics. Our goal is to enable rapid dissemination of high impact works to the scientific community.

---

### Editor-in-Chief

Prof. Dr. Konstantinos Kontis  
School of Engineering, University of Glasgow, James Watt Building  
South, University Avenue, Glasgow G12 8QQ, Scotland, UK

---

### Author Benefits

#### Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, and other databases.

#### Journal Rank:

JCR - Q2 (Engineering, Aerospace) / CiteScore - Q2  
(Aerospace Engineering)