



## Transonic Flow

Guest Editor:

**Prof. Dr. Simon Prince**

Department of Aerospace  
Engineering, Cranfield University,  
Cranfield MK43 0AL, UK

Deadline for manuscript  
submissions:

**closed (30 November 2023)**

### Message from the Guest Editor

Dear Colleagues,

Transonic flow research has been of critical importance since the development of high-speed propeller aeroplanes and turbojet engines in the mid-1940s. The transonic flow regime has been, and remains, a challenge both for computational prediction and experimental simulation. The close coupling of the shock waves arising from the compressibility of the air and the viscous flow on the aircraft surfaces leads to highly unsteady and complicated flows that often involve detrimental flow separations. These can lead to unsteady loading that can cause structural vibrations of aircraft components. An understanding of unsteady transonic flow is therefore fundamental to the safe design of high-speed aircraft.

Today's aircraft industry is challenged to develop revolutionary new aircraft concepts to address the aviation impact on climate change and noise. This is driving reassessments in design philosophy to achieve step changes in aerodynamic and propulsive efficiency, involving much closer coupling of the aircraft fuselage, wings, and engines.





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Konstantinos Kontis**

School of Engineering, University of Glasgow, James Watt Building South, University Avenue, Glasgow G12 8QQ, Scotland, UK

## 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.

## 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, and other databases.

**Journal Rank:** JCR - Q2 (*Engineering, Aerospace*) / CiteScore - Q2 (*Aerospace Engineering*)

## Contact Us

---

*Aerospace* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/aerospace](http://mdpi.com/journal/aerospace)  
[aerospace@mdpi.com](mailto:aerospace@mdpi.com)  
[X@Aerospace\\_MDPI](#)