



## Selected Papers from ECM2021: Recent Advances in Combustion and Propulsion

Guest Editors:

**Prof. Dr. Francesco Creta**

Department of Mechanical and  
Aerospace Engineering, Sapienza  
University of Roma, Via  
Eudossiana 18, 00184 Roma, Italy

francesco.creta@uniroma1.it

**Dr. Donato Cecere**

Department of Energy  
Technologies and Renewable  
Sources (TERIN), TERIN-PSU-  
IPSE, S.P. 081, Via Anguillarese,  
301, 00123 Rome, Italy

donato.cecere@enea.it

Deadline for manuscript  
submissions:

**31 July 2021**

### Message from the Guest Editors

This Special Issue of *Aerospace* invites contributions to highlight recent advances in the theory, experimentation, and development of systems involving combustion processes, for the production and utilization of energy and propulsion.

Combustion still plays an important role in the world's energy systems, and it will continue to evolve with the changes in technological demands. In addition, due to the depletion of fossil fuels and the consequences of emissions and the anthropogenic greenhouse effect, new challenges need to be tackled.

Novel and advanced concepts in combustion technology will be needed to address the problem of clean and efficient energy conversion into electric and propulsive power.

Among such concepts are very lean premixed combustion, advanced supercritical CO<sub>2</sub> gas turbines with oxy-combustion and sequestration, premixed charged compression ignition, hydrogen enrichment of standard fuels in gas turbine combustion, supersonic scramjet combustion for hypersonic transportation, and supercritical combustion rocket engines with regenerative cooling systems, to name but a few.

Modern experimental techniques and numerical approaches exploiting high-performance computing resources are sufficiently advanced to address the problems in the aforementioned fields and to find new solutions.

This Special Issue of *Aerospace* will be dedicated to highly accurate analyses performed with the aid of advanced tools for the understanding of new clean combustion systems for future energy production and transportation applications.





# aerospace



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 many other databases.

**Journal Rank:** [CiteScore](#) - Q2 (*Aerospace Engineering*)

## Contact Us

---

*Aerospace*  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
Fax: +41 61 302 89 18  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/aerospace](http://mdpi.com/journal/aerospace)  
[aerospace@mdpi.com](mailto:aerospace@mdpi.com)