



## Aerobots and Hopping Vehicles for Exploration of Planetary Extreme Environments

Guest Editor:

**Dr. Jekanthan**

**Thangavelautham**

Space and Terrestrial Robotic  
Exploration (SpaceTReX)  
Laboratory, Department of  
Aerospace and Mechanical  
Engineering, University of  
Arizona, Tucson, AZ 85721, USA

Deadline for manuscript  
submissions:

**closed (31 October 2022)**

### Message from the Guest Editor

Planetary exploration has advanced from the use of flyby spacecraft to orbiters to landers and to rovers. However, due to limitations with current robotic landing systems, these landers and rovers can only land on relatively flat, benign terrain. Rovers, in turn, have advanced in size and mobility, enabling them to traverse kilometers over an entire mission. However, all these platforms are limited from exploring extreme and rugged environments such as crater walls, cliffs, canyons, and caves. Now, next-generation aerobot platforms are being proposed and built to fly off-world. Together with aerobot platforms are increasingly sophisticated hopping vehicles that are being proposed for achieving mobility in low-gravity environments such as asteroids, comets, and moons. In these environments, gravity is too low for conventional wheeled vehicles to gain traction, and hence, hopping is a viable technique to achieve higher speeds and greater range. Together, these new generations of aerobots and hopping platforms promise to extend the reach and capabilities of future planetary missions.





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](#)