

Special Issue

Advances in CubeSat Sails and Tethers

Message from the Guest Editors

Spacecraft size and propulsion are major limiting factors in space mission design. Chemical and electric propulsion require the spacecraft size to be several orders of magnitude larger than CubeSats. The CubeSat Standard in conjunction with the New Space movement have revolutionized the space industry and scientific exploration. CubeSats consist of one or multiple 10×10×10 cm units stacked together in order to achieve the desired mission objectives. With a typical CubeSat mass in the range of 1–10 kg, their propellant storage capabilities are extremely limited if available at all. Propellantless propulsion systems use an external force to propel the spacecraft, instead of on-board propellant. This can be photon pressure and solar wind originating in the Sun, as well as magnetic field originating in a planet's core or atmospheric particles dragging the spacecraft to a lower altitude. We can employ physical lightsails to reflect photons and travel the Solar System. A similar dragsail can be used in low Earth orbit (LEO) for orbital debris mitigation with deorbiting. Virtual electromagnetic sails can also be generated:

Guest Editors

Dr. Andris Slavinskis

Space Technology Department, UT Tartu Observatory, Observatooriumi 1, 61602 Tõravere, Tartu Maakond, Estonia

Dr. Pekka Janhunen

Finnish Meteorological Institute, Erik Palménin aukio 1, 00560 Helsinki, Finland

Deadline for manuscript submissions

closed (30 November 2023)



Aerospace

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.0



mdpi.com/si/138110

Aerospace
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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, 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)