

### **Innovative Approaches to Space Sustainability**

High quality and relevant manuscripts are solicited for a special topical issue of *Advances in Space Research* (ASR) entitled “**Innovative Approaches to Space Sustainability**”.

Amidst the rapid advancements in commercial spaceflight and the deployment of LEO mega constellations, the space environment is facing unprecedented stress. The rapid increase in the number of satellites may generate more space debris, exacerbating collision risks, which could render certain orbits unusable. Consequently, the sustainable development of space has become a crucial factor in the continued utilization of space resources by humanity. Achieving sustainable development in space necessitates the advancement of debris monitoring and removal technologies and ensure the safe disposal of satellites at the end of their operational lifespans. To highlight the latest research advancements and emerging trends in the field of sustainable space development, this special issue aims to highlight recent findings, identify critical issues, and inspire further research on space sustainability thus creating a forum for discussing topics in civil space exploration. Areas of interest include, but are not limited to, the following:

- On-orbit service
- Space debris removal
- End-of-life deorbit technology
- Collision assessment and collision avoidance
- Space object detection and tracking
- Orbit determination and maneuver detection
- Space object characterization
- Debris environment modeling and prediction
- Reusable rockets and spacecraft
- Anti-disturbance control techniques for sustainable space mission
- Space traffic management
- Space situational awareness
- Cislunar situational awareness
- Orbital dynamics and prediction
- Formation spacecraft cluster control
- Artificial intelligence applied to the space sustainable development

Papers must be submitted electronically to <https://www.editorialmanager.com/AISR>. To ensure that all manuscripts are correctly identified for inclusion into the special issue, authors must select “**Special Issue: Space Sustainability**” when they reach the "Article Type" step in the submission process.

The general format for submission of papers can be found on the *ASR* Elsevier web site at <http://www.journals.elsevier.com/advances-in-space-research/>

Submitted papers must be written in English and should include full affiliation postal addresses for all authors. Only full-length papers will be considered for publication, subject to peer review by a minimum of two reviewers. There are no page limits although the length of the paper should be appropriate for the material being presented. While the deadline for submissions is **30 June 2025**, papers will be published

electronically as soon as they are accepted. The printed issue will be assembled within a reasonable time with late papers being printed in regular issues of ASR. All articles will be typeset at no cost to the author. There is a charge for printing color figures; there is no charge for color figures on the electronic version.

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