

## Global Navigation Satellite Systems: Recent Scientific Advances

### Announcement of a Special Issue

*Advances in Space Research*

Papers are invited for a special topical issue of *Advances in Space Research* (ASR) entitled **Global Navigation Satellite Systems: Recent Scientific Advances**.

The impact of global navigation satellite systems (GNSS) goes beyond the original objectives of GPS, and extends to a variety of activities and contributes to the progress of science and the development of society. This Special Issue aims at presenting the new possibilities to use GNSS satellite constellations for scientific purposes, at introducing recent achievements in the field, and at updating on ongoing projects. The main topics will focus on:

- Systems and technologies for navigation in space: use of GNSS in terrestrial orbits and beyond terrestrial orbits (e.g. GNSS to the Moon), dedicated systems for exo-navigation (e.g. new systems for PNT on the Moon, Mars, in the solar system, etc.) and their scientific possibilities;
- Contribution of GNSS to the improvement of time and space references on Earth, with particular impact on the accuracy of the terrestrial reference frame;
- Scientific developments in physics with a potential impact on future GNSS, particularly in testing fundamental laws of physics (general relativity, quantum technologies, etc.);
- Transversal topics of interest to a wide number of scientific fields including collection of GNSS Big Data (baseband data recording), and GNSS scientific data archives, Internet of Things positioning for science, scientific payloads on GNSS satellites, novel disruptive technologies for science, and the topic of GNSS science and education.

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: GNSS Advances**” 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 **1 March 2023**, 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.

**Dr. Elisa Felicitas Arias** ([felicitas.arias@obspm.fr](mailto:felicitas.arias@obspm.fr)) and **Dr. Paride Testani** ([Paride.Testani@esa.int](mailto:Paride.Testani@esa.int)) are the Guest Editors for this special issue. Questions can be directed to Dr. Arias, Dr. Testani or to the Co-Editor for Special Issues, Dr. Peggy Ann Shea ([sssrc@msn.com](mailto:sssrc@msn.com)).