

Special Issue

Mathematical Methods of Astrophysics and Space Science

Message from the Guest Editors

We are excited to invite you to submit a paper for this Special Issue of *Mathematics*, entitled “Mathematical Methods of Astrophysics and Space Science”. This issue focuses on using mathematical methods to explore astrophysical problems, particularly in space and planetary science. Areas of interest include comet origin and dynamics, origin and evolution of Kuiper Belt objects, search for Planet X, origin and evolution of rogue planets, captured objects in our solar system, stellar motion and star dynamics near our vicinity in the galaxy, star and star cluster formation and dynamics, dust particle accretion and dynamics, extra solar system objects (i.e., Oumuamua), interstellar and exoplanet space missions, and direct measurement of dark matter using spacecraft motion. The areas of interest in mathematics include the following: mathematical models of dark matter in our galaxy, dynamical systems, dynamics of the three, four, and n-body problem, weak stability and weak capture/escape, permanent capture, topological methods in studying dynamics, and magnetohydrodynamics.

Guest Editors

Prof. Dr. Edward A. Belbruno

1. Department of Mathematics, Yeshiva University, New York, NY 10033-3299, USA

2. Department of Astrophysical Sciences, Princeton University, New Jersey, NJ 08544, USA

Dr. James Lauer Green

Space Science Endeavors, Silver Spring, MD 20901, USA

Deadline for manuscript submissions

1 October 2026



Mathematics

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.6



mdpi.com/si/225104

Mathematics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
mathematics@mdpi.com

[mdpi.com/journal/
mathematics](https://mdpi.com/journal/mathematics)





Mathematics

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.6



[mdpi.com/journal/
mathematics](https://mdpi.com/journal/mathematics)



About the Journal

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

Editor-in-Chief

Prof. Dr. Francisco Chiclana
School of Computer Science and Informatics, De Montfort University,
The Gateway, Leicester LE1 9BH, UK

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), RePEc, and other databases.

Journal Rank:

JCR - Q1 (Mathematics) / CiteScore - Q1 (General Mathematics)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.3 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the second half of 2025).