Special Issue

Mathematical Fundaments of Sustainability and Applications

Message from the Guest Editor

The mathematical foundations of sustainability refer to mathematical principles, models, and techniques aiming to understand, quantify, and guide actions toward achieving sustainable systems, whether ecological, economic, or social. These foundations enable us to model complex systems, forecast long-term outcomes, optimise resource use while balancing environmental limits, and ensure the whole system's viability. Here is a breakdown of the key mathematical areas involved:

- Dynamical systems, control, and viability theory;
- Optimisation techniques;
- Statistical and data science;
- Game and decision theory;
- Systems theory and cybernetics;
- Thermodynamics and entropy in sustainability.

Sustainability theory is applied to a wide variety of domains to help achieve a balance between economic development, environmental protection, and social welfare. Although we do not want to limit the study topics, this Special Issue seeks research on the mathematical foundations of sustainability science. For this reason, the submitted papers are expected to contain an attempt or some content oriented toward such mathematical foundations.

Guest Editor

Dr. Sigifredo M. Laengle

Faculty of Economics and Business, University of Chile, Diagonal Paraguay 257, Santiago 8320000, Chile

Deadline for manuscript submissions

28 February 2026

Mathematics

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 4.6

mdpi.com/si/241525

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

mdpi.com/journal/mathematics

Mathematics

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 4.6

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 18.4 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).

MDPI