Special Issue

Advancing Mathematical Discovery and Reasoning with Large Language Models

Message from the Guest Editors

The goal of this Special Issue is to bring together researchers from mathematics, computer science, AI, and related fields to advance the state of the art in using large language models for mathematical discovery and reasoning. We aim to foster a rigorous discussion on how LLMs can be developed and applied to automate and assist in mathematical research and enhance problem-solving in applied domains. This Special Issue welcomes the original research, review papers, experimental reports, and funding on the topic, including, but not limited to, the following:

- Large Foundation Models for Mathematical Reasoning and Modeling;
- Large Language Models for Mathematics and its Applications;
- Mathematical foundations for explainable LLMs;
- Symbolic-Numeric Computation;
- Scientific Machine Learning Methodologies;
- Multimodal Geometric Reasoning;
- LLM-based Theorem Proving and Proof Generation;
- Integration of LLMs with Formal Proof Assistants;
- Mathematical Reasoning Techniques for LLMs;
- Multimodal and Visual Mathematics with AI;
- Theoretical Insights into LLM Reasoning.

Guest Editors

Dr. Ming Yan

School of Software, Xinjiang University, 666 Shengli Rd, Tianshan District, Ürümqi 830049, China

Dr. Juan Tang

School of Computer Science and Cyber Engineering, Guangzhou University, Guangzhou 510006, China

Deadline for manuscript submissions

31 December 2026

Mathematics

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 4.6

mdpi.com/si/247511

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

MDPI

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).