Special Issue

Synergies Between Artificial Intelligence and Pure Mathematics

Message from the Guest Editors

AI holds significant potential in the study and resolution of open problems in pure mathematics. Moreover, AI systems, particularly those utilizing machine learning and neural networks, can be very effective in assisting humans in the verification or generation of proofs, but also in suggesting novel conjectures and insights that might elude human researchers and traditional computer science approaches. On the other hand, mathematics, especially abstract algebra and category theory, is frequently recognized as a valuable tool in computer science, providing a theory-grounded framework to a field that often lacks a rigorous formalism. The primary aim of this Special Issue is to further advance and strengthen the synergy between pure mathematics and AI. Novel and unpublished works concerning applications of AI to pure mathematics, such as automated theorem proving, neural conjecture suggestions, neural architectures for mathematical methods, neural networks in topology, algebra and fuzzy logic, mathematical foundations of learning processes, and learning models, are welcome to be submitted.

Guest Editors

Dr. Francesco Giannini
Scuola Normale Superiore, 56126 Pisa, Italy

Dr. Stefano Fioravanti
Department of Algebra, Faculty of Mathematics and Physics,Charles University, 18675 Praha, Czech Republic

Deadline for manuscript submissions

31 January 2026

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 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).