Special Issue

Advances in Quantum Artificial Intelligence and Machine Learning

Message from the Guest Editors

The use quantum coprocessors for extensive and non tractable computation routines in AI will lead to new machine learning and artificial intelligence applications. Linear algebra-based quantum machine learning is based on quantum gates that describe quantum basic linear algebra subroutines. These subroutines exhibit theoretical exponential speedups compared to classical counterparts and are essential for machine learning. Quantum annealing solves optimization problems. Quantum-Inspired machine learning and AI algorithms are based on mathematical quantum theory to model the algorithms. Quantum cognition uses a mathematical quantum theory to model cognitive phenomena. clues from psychology indicate that human cognition is not only based on traditional probability theory as explained by Kolmogorov's axioms but additionally on quantum probability. Submissions may include original research articles or comprehensive reviews related to the topic.

Guest Editors

Prof. Dr. Andreas (Andrzej) Wichert

Prof. Dr. Moret-Bonillo Vicente

Prof. Dr. Antonio Chella

Deadline for manuscript submissions

closed (30 November 2022)

Σ

Mathematics

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