Special Issue

Mathematics-Based Methods in Graph Machine Learning

Message from the Guest Editors

Graphs are ubiquitous in the real world. The analysis of graphs has a long history, and fruitful theoretical results are obtained in many fields of mathematics. With the development of information technology and the Internet, graph data are now widely collected for research. In the age of big data, graph analysis is an emerging field in machine learning. In classic machine learning, spectral clustering based on graph cuts and graph-based semi-supervised learning have had a significant impact on many fields. In the period of representation learning, graph embedding has received widespread attention, and many mathematics-based methods dominate this field. Recently, graph neural networks, which originate from spectral graph theory, generalize neural networks and deep learning to the graph. A broad class of models, which leverage results from mathematics are proposed. These models achieve new state-of-the-art performances in practical scenarios. The aim of this Special Issue is to highlight the recent advances in the development of mathematics-based graph machine learning, including theories, models, algorithms, and applications in the real world.

Guest Editors

Dr. Di Jin

School of Computer Science and Technology, Tianjin University, Tianjin 300072, China

Prof. Dr. Liang Yang

School of Artificial Intelligence, Hebei University of Technology, Tianjin 300401, China

Deadline for manuscript submissions

closed (31 December 2022)

Mathematics

an Open Access Journal by MDPI

Impact Factor 2.2
CiteScore 4.6

mdpi.com/si/110441

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