

Special Issue

Machine Learning, Data Mining, and Optimization Methods for Graphs

Message from the Guest Editors

This Special Issue focuses on advancing mathematical computing and algorithmic methodologies for graphs in the context of machine learning, data mining, and optimization. Recent developments in graph algorithms, graph neural networks, and combinatorial optimization have opened new opportunities for solving challenging problems involving graph-structured data.

We invite original contributions that explore novel mathematical models, computational techniques, and algorithmic innovations aimed at improving learning, inference, and optimization in graphs. Topics of interest include, but are not limited to, graph-based machine learning algorithms, spectral graph theory, scalable graph mining techniques, combinatorial optimization on large-scale graphs, and applications in network analysis. This Special Issue aims to bridge the gap between theoretical advances in graph algorithms and their practical applications, providing a platform for researchers to present state-of-the-art methodologies and real-world implementations.

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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.

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