

Special Issue

Graph and Hypergraph Algorithms and Applications

Message from the Guest Editor

Graphs and hypergraphs are abstract structures able to capture a wide variety of real-world applications and can be used to solve problems arising from diverse fields ranging from artificial intelligence to network flows and from linear algebra to integer optimization problems, to cite only a few. The aim of this Special Issue is to collect valuable, original and high quality papers on hypergraph and graph algorithms and applications. Given the immense number of applications and the diverse fields in which graphs and hypergraphs are studied and applied, the scope of this Special Issue is very broad. It includes virtually any applicative field, apart from the traditional field of algorithms and data structure. Topics of interest include but are not limited to the following, in which graphs or hypergraphs are the main tool for the problem or the application:

- Optimization problems;
- Quantum computing;
- Computational complexity analysis;
- Exact and approximation (hyper)graph algorithms;
- Database systems;
- Social Network Analysis;
- Routing and shortest path;
- Recommendation systems;
- Graph neural networks.

Guest Editor

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Deadline for manuscript submissions

31 October 2026



Algorithms

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Impact Factor 1.8
CiteScore 4.5



mdpi.com/si/222785

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About the Journal

Message from the Editor-in-Chief

Algorithms are the very core of Computer Science. The whole area has been considered from quite different perspectives, having led to the development of many sub-communities: Complexity theory (limitations), approximation or parameterized algorithms (types of problems), geometric algorithms (subject area), metaheuristics, algorithm engineering, medical imaging (applications), indicates the range of perspectives. Our journal welcomes submissions written from any of these perspectives, so that it may become a forum for exchange of ideas between the corresponding scientific subcommunities.

Editor-in-Chief

Prof. Dr. Frank Werner

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