

Special Issue

Graph Theory and Algorithmic Applications: Theoretical Developments

Message from the Guest Editor

The algorithmic application of graph structure theory is not at all unexpected: as we learn more about what makes a graph "complex", we learn more about the computational complexity of graph-based problems. This connection is perhaps best exemplified by the seminal Graph Minors Project of Robertson and Seymour. Graph parameters, such as pathwidth and treewidth, developed in the Graph Minors project have provided efficient algorithms for many problems pertaining to large classes of graphs. In this Special Issue, we invite contributions that explore the algorithmic benefits arising from developments in graph theory. Topics of interest include, but are not limited to, the following:

- Exact, parameterized, or classical algorithms for graph problems.
- Novel, algorithmically interesting, graph parameters.
- Graph-based algorithmic meta-theorems.
- Any of the above topics applied to other classes of graphs such as random graphs, directed graphs, and/or hypergraphs.

Guest Editor

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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

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