CALL FOR PAPERS

Special Issue of Journal of Graph Algorithms and Applications (JGAA) on

Parameterized and Approximation Algorithms in Graph Drawing

Dear Graph Drawers,

It is a great pleasure to invite you to submit a paper to the Special Issue of Journal of Graph Algorithms and Applications (JGAA) on "Parameterized and Approximation Algorithms in Graph Drawing".

In the course of a few decades, the fields of parameterized complexity and approximation algorithms have emerged as distinguished research areas providing an impressive collection of broadly usable methodologies and remarkable theoretical and practical contributions. These branches of complexity theory provide a framework of powerful techniques that allow us to tackle hard (often NP-hard) problems, by either considering restricted graph classes or by seeking solutions "close" to the optimal ones. Moreover, in recent years, the research efforts in these two fields have converged into the study of the unified notion of parameterized approximation algorithms.

Submission Deadline: February 28th, 2022.

Topics

The emphasis of this special issue is on original results in the areas of fixed-parameter tractable and approximation algorithms in graph drawing and network visualization. This includes, but is not limited to, theoretical and combinatorial aspects that arise at the interface of graph drawing with computational and discrete geometry, combinatorial optimization, visual computing, VLSI and computer-aided design, computer graphics, and information visualization. The range of topics includes:

- fixed-parameter tractable and approximation algorithms
- (parameterized) inapproximability
- W[k]-hardness
- parameterized approximations
- (lossy) kernelization
- fine-grained complexity of approximations
- subexponential-time approximations

Other topics that are not listed but that might be of interest for the study of parameterized and approximation algorithms in graph drawing will also be evaluated. To bridge the gap between theory and practice, we welcome contributions dealing with techniques and data structures to obtain efficient parameterized and approximation algorithms to tackle graph-visualization problems as well as implementations, experimental evaluations, and algorithm engineering issues of approximation, parameterized, and kernelization algorithms that emerge in practice.

Paper Submission

We invite authors to submit papers describing original research of theoretical or practical significance concerned with parameterized and approximation algorithms in graph drawing and network visualization until the 28th of February, 2022. We aim for a fast reviewing process in order to have this special issue available at the end of 2022. Papers should be submitted to the editors of the special issue in PDF format. All communications between the editors, authors, and reviewers will be done by email unless otherwise requested by the author or reviewer. All submissions must be formatted using the LaTeX style file of Journal of Graph Algorithms and Applications (http://jgaa.info/authors.jsp). The default margins and fonts must not be modified. The submission should contain a scholarly exposition of ideas, techniques, and results, including motivation and a clear comparison with related work. The claims of the paper should be fully substantiated, including full proofs or appropriate experimental data. Papers of good quality that do not fit within the scope of this special issue might be handled as regular JGAA submissions.

Guest Editors

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