



Call for Papers – GD 2023

31th International Symposium on Graph Drawing and Network Visualization

September 20-22, 2023 - Isola delle Femmine (Palermo), Italy
<https://gd2023.ing.unipg.it/>

Graph Drawing is concerned with the geometric representation of graphs and constitutes the algorithmic core of **Network Visualization**. Graph Drawing and Network Visualization are motivated by applications where it is crucial to visually analyze and interact with relational datasets. Examples of such application areas include data science, social sciences, web computing, information systems, biology, geography, business intelligence, information security, and software engineering.

GD has been the main annual event in this area for about 30 years. Its focus is on combinatorial and algorithmic aspects of graph drawing, their practical evaluation, as well as the design of network visualization systems and interfaces. Researchers and practitioners working on any aspects of graph drawing and network visualization are invited to contribute papers and posters and to participate in the symposium and the graph drawing contest.

GD 2023 will be held at Isola delle Femmine (Palermo), Italy, on September 20-22, 2023, with a reception on the evening of September 19. A pre-conference PhD school is planned for September 19, 2023. GD 2023 is designed to be held on-site. It is expected that each accepted paper will be presented in person by one of the authors, but if that proves too difficult (due to, for example, health, visa, or travel funding issues), please contact the PC chairs to request that your presentation be online.

The code of conduct for the GD conference can be found at <http://graphdrawing.org/codeOfConduct.html>

Papers

We invite authors to submit papers describing original research of theoretical or practical significance to graph drawing and network visualization. To promote a balanced coverage of the field, GD has two distinct tracks, and papers submitted to one track will not compete with papers submitted to the other track. Regular papers must be submitted explicitly to one of the two tracks. However, all program committee members may review papers from either track.

Track 1: Combinatorial and algorithmic aspects

This track is mainly devoted to **fundamental theoretical graph drawing advances**, such as combinatorial aspects and algorithm design. The range of topics for this track includes (but is not limited to):

- Design and analysis of graph drawing algorithms
- Geometric and topological graph theory
- Computational topology of graphs on surfaces
- Graph representations
- Geometric algorithms and optimization

Track 2: Experimental, applied, and network visualization aspects

This track is mainly devoted to the **practical aspects of graph drawing**, such as experimental evaluations of graph drawing related algorithms, the development and/or evaluation of related libraries and tools, or systems and interfaces in different application areas. The range of topics for this track includes (but is not limited to):

- Engineering of graph drawing algorithms and network visualization systems
- Libraries, tools and systems in the context of graph drawing and network visualization
- Interfaces and methods for interacting with graphs and networks
- Benchmarks and experimental studies in the context of graph drawing and network visualization
- Cognitive studies on network visualization readability and user interaction
- Visualization of networks in real world applications

Authors of accepted applied papers can request the opportunity to show a demo of their software/system during the poster session.

Short papers

In addition to the above two tracks, there will be a separate category for short papers, describing theoretical or applied contributions of shorter length. Papers in this category will be assigned a shorter time for presentation during the conference.

Rules for submission

Results that have been previously published (or are scheduled for publication) in another conference proceedings or journal, as well as simultaneous submissions of results to other conferences with published proceedings or journals are not permitted. Each paper or poster must be presented at the conference by an author (barring unforeseen circumstances), otherwise the

paper will not be included in the proceedings. Should any visa/travel/health restriction prevent an author from attending the conference and presenting a paper, they will be given ways to participate and give the talk via electronic means.

ChatGPT and similar large language models may be used to improve the paper's language, but its use should be mentioned as a footnote and the authors remain responsible for the full paper. In particular, the unattributed use of any such tools in the creation of the paper's scientific content is forbidden.

Submission format

All submissions must be formatted using the appropriate LaTeX style file, either *gd-llncs.cls* for long papers or *gd-llncs-short.cls* for short papers; these are derived from the style file used for the conference series Lecture Notes in Computer Science (LNCS) provided by Springer. The default margins and fonts must not be modified; in particular, the use of packages such as *times.sty* is not allowed. Submissions that do not comply with this format risk rejection without consideration of their merits.

To promote inclusion of figures in the submitted papers, submissions will have a strict limit on the number of text lines. Regular papers may have **at most 400 lines**. We expect the main content of the paper to typically fit within 14 pages (excluding references). For publishing purposes, the final version must adhere to a strict limit of 17 pages (including everything). Short papers may have **at most 225 lines**, typically fit within 7 pages (excluding references); the final version must adhere to a strict limit of 9 pages overall. The line count does not include: title, authors block, keywords, references; for figures, tables, and algorithm pseudo-code, only the lines of the main caption should be counted. Lines in all the rest of the paper, including the abstract, should be counted. The style file includes a method to number the counted lines according to these rules, which needs to be turned on for the submission. The claims of the paper should be fully substantiated. If this information does not fit within the line limit, the authors should include it in a clearly marked appendix, whose length is not constrained and which the reviewers may read at their own discretion. All submissions will be handled through EasyChair at the web site <https://easychair.org/conferences/?conf=gd2023>

Posters & Contest

Submissions of posters on graph drawing, network visualization, and related areas are solicited. The poster session will provide a forum for the communication of late-breaking research results (which may also appear elsewhere) to the GD community. Authors of posters should prepare an abstract (up to 2 pages in LNCS style) that must be submitted together with the poster itself.

Details about the traditional **Graph Drawing Contest**, which is held at the conference, are provided at the web site <https://www.graphdrawing.org/gdcontest/contest2023>

Lightweight Double-Blind Review Process

The review process will be handled in a "**lightweight double-blind mode**". This means that authors are not allowed to reveal their identity in the submitted paper, but are free to disseminate draft versions of the paper prior to the conference and to give talks on the topic as they normally would. In particular, the submitted paper should not contain the authors' names, affiliations, and email addresses. References to their own related work are allowed, as long as the supporting text maintains anonymity (e.g., using sentences in the third person).

Members of the Program Committee will not have the identity of the authors of any paper revealed to them during the entire review process. To handle conflicts of interest effectively, authors will be offered the opportunity to declare conflict of interest with PC members when they submit their paper.

Publication: Proceedings and Special Issues

All accepted papers (including the two-page poster abstracts) will appear in the conference proceedings, published by **Springer** in the **Lecture Notes in Computer Science (LNCS)** series. The LNCS proceedings will be made freely accessible to the GD community upon publication and openly accessible to anyone after four years.

Authors will be required to submit their accepted papers to the **arXiv repository** at the same time as submitting their camera-ready versions, in order to provide immediate and unrestricted open access to them. The self-archived arXiv papers shall consist of (essentially) the LNCS proceedings version plus an optional clearly marked appendix. This appendix could contain a long version of the entire paper or proofs that have been omitted from the main text. Subsequent submissions of revised versions of the paper to the arXiv (known as arXiv "replacements") are allowed. Upon submission of the camera-ready version of an accepted paper, the authors will be required to specify the arXiv identifier associated with the paper for inclusion in a **conference index**, which will be also published in the arXiv repository. Failure to comply with these guidelines will impede the publication of the paper.

Selected papers from both tracks will be invited for submission to a special issue of the **Journal of Graph Algorithms and Applications (JGAA)**. The authors of two selected papers in Track 2 will be invited to submit a substantially extended and enhanced version of their work to **IEEE Transactions on Visualization and Computer Graphics (TVCG)**.

A TVCG papers session at the Graph Drawing conference will also feature regular TVCG papers. Please find more details at <https://www.computer.org/digital-library/journals/tvcg/tvcg-partners-with-conferences>

Awards

For each of the two tracks, the Program Committee of GD 2023 will bestow a **Best Paper Award**. In addition, to recognize the effort of participants to present their work and to prepare their posters in a clear and elegant way, there will be a **Best Presentation Award** and a **Best Poster Award** voted on by the GD 2023 attendees.

Important Dates

Abstract submission deadline	May 30 (23:59 AOE)
Paper submission deadline	June 06 (23:59 AOE)
Notification of paper acceptance	July 16
Poster submission deadline	August 17 (23:59 AOE)
Notification of poster acceptance	August 29
Final versions due	September 06 (23:59 AOE)
Contest submission deadline	September 01 (23:59 AOE)
Symposium	September 20–22

Invited Speakers

Michael Kaufmann, University of Tübingen, Germany
Monique Teillaud, INRIA Nancy - Grand Est, LORIA, France

Program Committee

Md. Jawaherul Alam, Amazon
Daniel Archambault, Swansea University
Martin Balko, Charles University in Prague
Michael A. Bekos (co-chair), University of Ioannina
Steven Chaplick, Maastricht University
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Eva Czabarka, University of South Carolina
Emilio Di Giacomo, University of Perugia
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Petr Hlineny, Masaryk University, Brno
Andreas Kerren, Linköping University
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Debajyoti Mondal, University of Saskatchewan
Fabrizio Montecchiani, University of Perugia
Martin Nöllenburg, TU Wien
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Chrysanthi Raftopoulou, National Technical University of Athens
Lena Schlipf, Universität Tübingen
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Matthias Stallmann, North Carolina State University
Csaba Toth, California State University Northridge
Torsten Ueckerdt, Karlsruhe Institute of Technology
Johannes Zink, Universität Würzburg

Organizing Committee

Carla Binucci, University of Perugia, Italy
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Giacomo Ortali, University of Perugia, Italy
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Alessandra Tappini (co-chair), University of Perugia, Italy

Contest Committee

Philipp Kindermann, Universität Trier, Germany
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Tamara Mchedlidze, Utrecht University, The Netherlands
Wouter Meulemans (chair), TU Eindhoven, The Netherlands
Debajyoti Mondal, University of Saskatchewan, Canada