Call for Papers – GD 2022

30th International Symposium on

Graph Drawing and Network Visualization

September 13-16, 2022 - Tokyo, Japan

https://graphdrawing.github.io/gd2022/

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, or 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, 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 2022 will be held at the Tokyo Institute of Technology, Japan, on September 13-16, 2022, with a reception on the evening of September 13. A pre-conference PhD school is planned for September 12-13, 2022. While we hope that a physical conference will be possible, details of the exact format of the venue (onsite, online, hybrid) will be announced before the submission deadline. Regardless of the format, we are committed to offering remote participation for both presenters and the audience.

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 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
- Geometric network design and optimization
- Geometric computing

Track 2: Experimental, applied, and network visualization aspects

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

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

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.

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 number of lines limit. Regular papers must have **at most 400 lines**, (excluding references and figures) and **at most 14 pages** (excluding references). Short papers must have **at most 225 lines** (excluding references and figures) and **at most 7 pages** (excluding references). The claims of the paper should be fully substantiated. If this information does not fit within the page limits, 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=gd2022*

Posters

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 the LNCS style) that must be submitted together with the poster itself.

Contest

Details about the traditional **Graph Drawing Contest** held at the conference are provided on the conference web site *https://graphdrawing.github.io/gd2022/pages/contest/*

Lightweight Double-Blind Review Process

This year, for the first time in the GD conference, 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 paper that they submit to GD'22, 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 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, anonymising references).

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 relevant 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 the LNCS proceedings version (identical, except for possibly changed references to the appendix resp. the arXiv 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.

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 restriction prevent an author from attending the conference and presenting a paper, he/she will be given ways to participate and give the talk via electronic means.

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 2022 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 2022 attendees.

Important Dates

Invited Speakers

Ulrik Brandes, ETH Zürich, Switzerland
Kazuo Misue, University of Tsukuba, Japan

Program Committee

Patrizio Angelini (co-chair), John Cabot University, Italy
Therese Biedl, University of Waterloo, Canada
Sabine Cornelsen, Universität Konstanz, Germany
Giordano Da Lozzo, Roma Tre University, Italy
Stephan Diehl, Universität Trier, Germany
Henry Förster, Universität Tübingen, Germany
Martin Gronemann, TU Wien, Austria
Yasuhiro Hashimoto, The University of Aizu, Japan
Michael Hoffmann, ETH Zürich, Switzerland
Hiroshi Hosobe, Hosei University, Japan
Yifan Hu, Yahoo! Research, USA
Takayuki Itoh, Ochanomizu University, Japan
Philipp Kindermann, Universität Trier, Germany
Karsten Klein, Universität Konstanz, Germany
Stephen Kobourov, University of Arizona, USA

Jan Kratochvíl, Charles University of Prague, Czech Republic
Kim Marriott, Monash University, Australia
Irene Parada, TU Eindhoven, The Netherlands
Sergey Pupyrev, Facebook, USA
Helen Purchase, University of Glasgow, Scotland
Arnaud Sallaberry, LIRMM, Université Paul-Valéry Montpellier, France
Ingo Scholtes, University of Zurich, Switzerland
Falk Schreiber, Universität Konstanz, Germany
André Schulz, FernUniversität in Hagen, Germany
Andrew Suk, University of California San Diego, USA
Antonios Symvonis, National Technical University of Athens, Greece
Alessandra Tappini, University of Perugia, Italy
Meirav Zehavi, Ben-Gurion University, Israel
Reinhard von Hanxleden (co-chair), Christian-Albrechts-Universität zu Kiel, Germany
Tatiana von Landesberger, Universität Köln, Germany

Organizing Committee

Takayuki Itoh (chair), Ochanomizu University, Japan
Ken Wakita, Tokyo Institute of Technology, Japan
Masahiko Itoh, Hokkaido Information University, Japan
Hsiang-Yun Wu, St. Pölten University of Applied Sciences, Austria
Rina Nakazawa, IBM Research, Japan

Contest Committee

Philipp Kindermann (chair), Universität Trier, Germany
Tamara Mchedlidze, Utrecht University, The Netherlands
Wouter Meulemans, TU Eindhoven, The Netherlands