

ICGT 2017

10th Int. Conf. on Graph Transformation

Part of STAF 2017

July 18th and 19th 2017 - Marburg (Germany)

www.graph-transformation.org

Aims and scope

Dynamic structures are a major cause for complexity when it comes to model and reason about systems. They occur in software architectures, models, pointer structures, databases, networks, etc. As collections of interrelated elements, which may be added, removed, or change state, they form a fundamental modelling paradigm as well as a means to formalise and analyse systems. Applications include architectural reconfigurations, model transformations, refactoring, and evolution of a wide range of artefacts, where change can happen either at design or run time.

Based on the observation that these structures can be represented as graphs and their modifications as graph transformations, theory and applications of graphs, graph grammars and graph transformation systems have been studied in our community for more than 40 years. The conference aims at fostering interaction within this community as well as attracting researchers from other areas, either in contributing to the theory of graph transformation or by applying graph transformation to established or novel areas.

The 10th International Conference on Graph Transformation (ICGT 2017) will be held in Marburg, Germany, as part of STAF 2017 (Software Technologies: Applications and Foundations). Proceedings will be published by Springer in the **Lecture Notes in Computer Science** (LNCS) series.

Topics

Topics of interest include, but are not limited to:

- General models of graph transformation (e.g., high-level, adhesive, node, edge, and hyperedge replacement systems)
- Analysis and verification of graph transformation systems
- Graph theoretical properties of graph languages
- Automata on graphs and parsing of graph languages
- Logical aspects of graph transformation
- Computational models based on graph transformation
- Structuring and modularization of graph transformation
- Hierarchical graphs and decompositions of graphs
- Parallel, concurrent, and distributed graph transformation
- Term graph rewriting
- Graph transformation and Petri nets
- Model-driven development and model transformation
- Model checking, program verification, simulation and animation
- Syntax, semantics and implementation of programming languages, domain-specific languages, and visual languages
- Graph transformation languages and tool support
- Efficient algorithms (pattern matching, graph traversal, etc.)
- Applications and case studies of graph transformation in software engineering, including software architectures, refactoring, business processes, access control and service-orientation
- Application to computing paradigms such as bio-inspired, quantum, ubiquitous, and visual computing

Submission guidelines

Papers should be formatted using Springer's LNCS style (<http://www.springer.com/lncs>), and should contain original research. Simultaneous submission to other conferences or submission of material that has already been published elsewhere is not allowed. All submissions will be peer reviewed by members of the Programme Committee and external subreviewers.

Submission site:

<http://www.easychair.org/conferences/?conf=icgt2017>

Papers are solicited in three categories:

- **Research papers** (16 pages max) are evaluated with respect to their originality, significance, and technical soundness. Additional material intended for reviewers may be included in a clearly marked appendix.
- **Case studies** (12 pages max) describe applications of graph transformations in any application domain.
- **Tool presentation papers** (12 pages max) demonstrate the main features and functionality of graph-based tools. These papers may have an appendix with a detailed demo description (up to 5 pages), which will be reviewed but not included in the proceedings.

Important dates

- Abstract submission: February 27, 2017
- Paper submission: March 5, 2017
- Notification: April 7, 2017
- Camera-ready version: April 21, 2017
- Conference: July 18-19, 2017

Special issue

A special issue of the **Journal of Logic and Algebraic Methods in Programming** (Elsevier) will be devoted to extended versions of the best ICGT'17 papers.

Invited Speaker

We are pleased to announce Georg Gottlob (University of Oxford) as invited speaker.

Program chairs

- Detlef Plump (University of York, UK)
- Juan de Lara (Universidad Autónoma de Madrid, Spain)

Program committee

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Contact

In case of questions, please contact the PC-chairs at: icgt2017@easychair.org