



ICGT 2018

11th International Conference on Graph Transformation
<http://www.icgt-conferences.org>



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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 time or at 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.

ICGT 2018 will be held in Toulouse, France, as part of STAF 2018 (Software Technologies: Applications and Foundations). Proceedings will be published by Springer in the LNCS series (final confirmation pending) and a special issue of the Journal of Logic and Algebraic Methods in Programming (Elsevier) will be devoted to extended versions of the best ICGT'18 papers.

Topics of Interest

To foster a lively exchange of perspectives on the conference subject, the PC of ICGT 2018 encourages all kinds of contributions related to graph transformation, either from a theoretical, or from a practical point of view. Topics of interest include, but are not limited to:

- General models of graph transformation
- 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 in software engineering, including software architectures, refactoring, business processes, access control and service-orientation
- Applications to paradigms such as bio-inspired, quantum, ubiquitous, and visual computing

Important Dates

Abstract Submission: **23 February 2018** Notification: **9 April 2018**
Paper Submission: **2 March 2018** Conference: **25-27 June 2018**

Paper Submission Details

Papers can be submitted at <http://www.easychair.org/conferences/?conf=icgt2018> using Springer's LNCS format (<http://www.springer.com/lncs>). Simultaneous submission to other conferences with proceedings or submission of material that has already been published elsewhere is not allowed. Papers are solicited in three categories:

- **Research papers** (15 pages max) are evaluated w.r.t. originality, significance, and technical soundness. *Theoretical papers* should include a motivation and examples illustrating the theoretical contribution. *Application papers* should contain a case study and evaluation. Additional material intended for reviewers may be included in a clearly marked appendix.
- **Tool presentation papers** (5 pages max) demonstrate main new features and functionality of graph-based tools or new 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.
- **New ideas papers** (5 pages max) describe initial reflections on the establishment of connections of graph transformation with a new area. They are evaluated w.r.t. innovation, potential for success as well as value for the ICGT research community.