

Sixth International Conference on Graph Transformation

ICGT 2012

– Modeling and Analysis of Dynamic Structures –

University of Bremen, Germany
24 – 29 September, 2012

2nd Call for Papers

Dynamic structures are a major cause for complexity when it comes to model and reason about systems. They occur in software architectures, configurations of artefacts such as code or models, pointer structures, databases, networks, etc. As 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, refactorings, and evolution of a wide range of artefacts, where change can happen either at design or at run time. Dynamic structures occur also as part of semantic domains or computational model for formal modelling languages.

Based on the observation that all these approaches rely on very similar notions of graphs and 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 to join us, either in contributing to the theory of graph transformation or by applying graph transformations to already known or novel areas, such as self-adaptive systems, overlay structures in cloud or P2P computing, advanced computational models for DNA computing, etc.

In order to yield a high-quality conference program covering all aspects of graph transformations, their theory and applications, the conference will consist of a Foundations and an Applications track with separate program committees.

Topics of interest include, but are not limited to

Foundations Track

General models of graph transformation

Parallel, concurrent, and distributed graph Transformations

Hierarchical graphs and graph decompositions

High-level and adhesive replacement systems

Term graph rewriting

Graph theoretical properties of graph languages

Applications Track

Model-driven development, especially model transformations

Domain-specific languages

Software architecture, refactoring and evolution

Implementation of programming languages

Access control and security models

Aspect-oriented development

Geometrical and topological aspects of graph transformation	Image generation and pattern recognition techniques
Graph automata and parsing of graph languages	Bioinformatics and system biology
Logical aspects of graph transformation	Natural computing
Behavioural analysis and verification of graph transformation systems	Workflows and business processes
Structuring and modularization concepts for transformation systems	Self-adaptive systems and ubiquitous computing
Graph transformation and Petri nets	Service-oriented applications and semantic web

The 6th International Conference on Graph Transformation (ICGT 2012) will be held at the University of Bremen (Germany) in the last week of September 2012. It continues the series of conferences previously held in Barcelona (Spain) in 2002, Rome (Italy) in 2004 (ICGT 2004), Natal (Brazil) in 2006 (ICGT 2006), Leicester (UK) in 2008 (ICGT 2008), and Enschede (The Netherlands) in 2010 (ICGT 2010), as well as a series of six International Workshops on Graph Transformation with Applications in Computer Science between 1978 to 1998.

The conference takes place under the auspices of EATCS (<http://www.eatcs.org/>), EASST (<http://www.easst.org/>), and IFIP (<http://www.ifip.org/>) WG 1.3. Proceedings will be published by Springer in the Lecture Notes in Computer Science (<http://www.springer.com/lncs>) series.

As at its predecessors, several ICGT satellite events will take place before and after the main conference.

Paper submission

Papers can be submitted at <http://www.easychair.org/conferences/?conf=icgt2012>. Submitted papers may not exceed 15 pages using Springer's LNCS format (<http://www.springer.com/lncs>), and should contain original research. Simultaneous submission to other conferences with proceedings or submission of material that has already been published elsewhere is not allowed.

The papers will be peer reviewed by the members of the Program Committee and the subreviewers. The PC will be divided into two parts -- one part for each track.

Important Dates

Abstract submission:	13 April 2012
Full paper submission:	20 April 2012
Notification of acceptance:	4 June 2012
Final version due:	2 July 2012
Main conference:	25 - 28 September 2012
Satellite events:	24 and 29 September 2012

Program Committee of the Foundations Track

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Organisation

Local Organisation

Berthold Hoffmann, Marcus Ermler, Hans-Jörg Kreowski, Sabine Kuske,
Melanie Luderer, Sylvie Rauer, Helga Reinermann, Caroline von Totth

Program Chairs

Gregor Engels, University of Paderborn (*Applications track*)
Hans-Jörg Kreowski, University of Bremen (*Foundations track*)

Further information can be found at <http://www.informatik.uni-bremen.de/icgt2012>.

In case of questions, please contact us at icgt2012@informatik.uni-bremen.de.