

# Table of Contents

## Invited Papers

Improving Flow in Software Development Through Graphical Representations .....	1
<i>Margaret-Anne D. Storey</i>	
A Perspective on Graphs and Access Control Models .....	2
<i>Ravi Sandhu</i>	
Transformation Language Design: A Metamodelling Foundation .....	13
<i>Tony Clark, Andy Evans, Paul Sammut, and James Willans</i>	

## Integration Technology

Rule Execution in Graph-Based Incremental Interactive Integration Tools .....	22
<i>Simon M. Becker, Sebastian Lohmann, and Bernhard Westfechtel</i>	
Composition of Relations in Enterprise Architecture Models .....	39
<i>René van Buuren, Henk Jonkers, Maria-Eugenia Iacob, and Patrick Strating</i>	
Event-Driven Grammars: Towards the Integration of Meta-modelling and Graph Transformation .....	54
<i>Esther Guerra and Juan de Lara</i>	

## Chemistry and Biology

Analysis of Metabolic Pathways by Graph Transformation .....	70
<i>Francesc Rosselló and Gabriel Valiente</i>	
The Potential of a Chemical Graph Transformation System .....	83
<i>Maneesh K.Yadav, Brian P. Kelley, and Steven M. Silverman</i>	

## Graph Transformation Concepts

Concepts for Specifying Complex Graph Transformation Systems .....	96
<i>Boris Böhlen and Ulrike Ranger</i>	
Typing of Graph Transformation Units .....	112
<i>Renate Klempien-Hinrichs, Hans-Jörg Kreowski, and Sabine Kuske</i>	

Towards Graph Programs for Graph Algorithms .....	128
<i>Detlef Plump and Sandra Steinert</i>	

## DPO Theory for High-Level Structures

Adhesive High-Level Replacement Categories and Systems .....	144
<i>Hartmut Ehrig, Annegret Habel, Julia Padberg, and Ulrike Prange</i>	
Fundamental Theory for Typed Attributed Graph Transformation .....	161
<i>Hartmut Ehrig, Ulrike Prange, and Gabriele Taentzer</i>	
Parallel Independence in Hierarchical Graph Transformation .....	178
<i>Annegret Habel and Berthold Hoffmann</i>	

## Analysis and Testing

Generating Test Cases for Code Generators by Unfolding Graph Transformation Systems .....	194
<i>Paolo Baldan, Barbara König, and Ingo Stürmer</i>	
Stochastic Graph Transformation Systems .....	210
<i>Reiko Heckel, Georgios Lajios, and Sebastian Menge</i>	
Model Checking Graph Transformations: A Comparison of Two Approaches .....	226
<i>Arend Rensink, Ákos Schmidt, and Dániel Varró</i>	

## Graph Theory and Algorithms

Election, Naming and Cellular Edge Local Computations .....	242
<i>Jérémie Chalopin, Yves Métivier, and Wiesław Zielonka</i>	
Embedding in Switching Classes with Skew Gains .....	257
<i>Andrzej Ehrenfeucht, Jurriaan Hage, Tero Harju, and Grzegorz Rozenberg</i>	
Synchronizers for Local Computations .....	271
<i>Yves Métivier, Mohamed Mosbah, Rodrigue Ossamy, and Afif Sellami</i>	

## Application Conditions and Logic

Constraints and Application Conditions: From Graphs to High-Level Structures .....	287
<i>Hartmut Ehrig, Karsten Ehrig, Annegret Habel, and Karl-Heinz Pennemann</i>	

Specification Matching of Web Services Using Conditional Graph Transformation Rules .....	304
<i>Alexey Cherchago and Reiko Heckel</i>	
Representing First-Order Logic Using Graphs .....	319
<i>Arend Rensink</i>	

## Transformation of Special Structures

Coproduct Transformations on Lattices of Closed Partial Orders .....	336
<i>Gemma Casas-Garriga and José L. Balcázar</i>	
Parsing String Generating Hypergraph Grammars .....	352
<i>Sebastian Seifert and Ingrid Fischer</i>	
Composition of Path Transductions .....	368
<i>Tanguy Urvoy</i>	

## Object-Orientation

Translating Java Code to Graph Transformation Systems .....	383
<i>Andrea Corradini, Fernando Luís Dotti, Luciana Foss, and Leila Ribeiro</i>	
Extending Graph Rewriting for Refactoring .....	399
<i>Niels Van Eetvelde and Dirk Janssens</i>	
Derivations in Object-Oriented Graph Grammars .....	416
<i>Ana Paula Lüdtke Ferreira and Leila Ribeiro</i>	

## Tutorials and Workshops

Tutorial Introduction to Graph Transformation: A Software Engineering Perspective .....	431
<i>Luciano Baresi and Reiko Heckel</i>	
Tutorial on DNA Computing and Graph Transformation .....	434
<i>Tero Harju, Ion Petre, and Grzegorz Rozenberg</i>	
Workshop TERMGRAPH 2004 .....	437
<i>Maribel Fernández</i>	
Workshop on Graph-Based Tools .....	439
<i>Tom Mens, Andy Schürr, and Gabriele Taentzer</i>	
Workshop on Petri Nets and Graph Transformations .....	442
<i>Hartmut Ehrig, Julia Padberg, and Grzegorz Rozenberg</i>	

Workshop on Software Evolution Through Transformations: Model-Based vs. Implementation-Level Solutions . . . . .	445
<i>Reiko Heckel and Tom Mens</i>	
Workshop on Logic, Graph Transformations, Finite and Infinite Structures . . . . .	448
<i>Bruno Courcelle and David Janin</i>	
<b>Author Index</b> . . . . .	451

Graph Transformations

Second International Conference, ICGT 2004, Rome,

Italy, September 28 - October 1, 2004, Proceedings

Ehrig, H.; Engels, G.; Parisi-Presicce, F.; Rozenberg, G.

(Eds.)

2004, XII, 456 p., Softcover

ISBN: 978-3-540-23207-0