



Proceedings of the  
Fourth International Workshop on  
Graph-Based Tools  
(GraBaTs 2010)

Preface

2 pages

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This proceedings contains selected and extended papers presented at GraBats'10, the 4<sup>th</sup> International Workshop on Graph Based Tools, which was colocated with the Fifth International Conference on Graph Transformation (ICGT 2010) and the Seventeenth Annual Workshop on Software Model Checking (SPIN). The 2010 edition continued the GRABATS series of workshops, which serve as a forum for researchers and practitioners interested in the development and application of practical graph-based tools. Based upon mathematically solid underlying concepts, graphs are at the core of tools and techniques in various application areas, and dealing with practical concerns, like: tools for model-driven development, meta CASE tools or generators, tools for Visual languages (UML, Domain-specific languages), model transformation and model management tools, visualization, animation and simulation tools, analysis of models, transformations and programs (including verification and validation, static analysis, testing), data analysis and pattern recognition techniques, tool integration techniques, software engineering tools, software evolution and efficient algorithms (pattern matching, handling of large graph models).

In all these areas tools are developed that store, retrieve, transform and display graphs. It is the purpose of this workshop to summarize the state of the art of graph-based tool development, bring together developers of graph-based tools in different application fields and to encourage new tool development cooperations.

This year's workshop had a special emphasis on applications of graph-based tools to Model-Driven Engineering. Different tools, built around industry-driven frameworks (like Eclipse), are based on the notion of graph to perform different activities, most notably different model transformations, like animations, simulations, refactorings and model-to-model transformations.

This year we received 17 submissions, from which 12 were selected for presentation at the workshop, 4 as long presentations and 8 as short ones. In addition, the technical programme also included an invited presentation "Methods and Tools for the Verification of Finite-State and Infinite-State Graph Transformation Systems" by Prof. Barbara König of the University Duisburg-Essen, Germany; as well as a joint invited talk with SPIN by Darren Cofer (Rockwell Collins, USA) entitled "Model Checking: Cleared for Take Off". The programme was organized in 4 sessions: "Graph Transformation tools and applications", "Verification and analysis I", "Diagram editors, animation and visualization" and "Verification and analysis II". For this post-proceedings, 10 of the presented papers were selected by the Program Committee, after a second phase of review.

We would like to thank the members of the Program Committee and the secondary reviewers for their excellent work, they are listed below. We would also like to thank the organizing committee of ICGT/SPIN 2010 for their constant support, as well as the editorial team of ECEASST.

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Juan de Lara, Daniel Varro.  
PC chairs of GraBaTs'10.



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