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Graph Transformations

Second International Conference, ICGT 2004
Rome, Italy, September 28 – October 2, 2004
Proceedings

Springer

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Preface

ICGT 2004 was the 2nd International Conference on Graph Transformation, following the first one in Barcelona (2002), and a series of six international workshops on graph grammars with applications in computer science between 1978 and 1998. ICGT 2004 was held in Rome (Italy), Sept. 29–Oct. 1, 2004 under the auspices of the European Association for Theoretical Computer Science (EATCS), the European Association of Software Science and Technology (EASST), and the IFIP WG 1.3, Foundations of Systems Specification.

The scope of the conference concerned graphical structures of various kinds (like graphs, diagrams, visual sentences and others) that are useful when describing complex structures and systems in a direct and intuitive way. These structures are often augmented with formalisms that add to the static description a further dimension, allowing for the modelling of the evolution of systems via all kinds of transformations of such graphical structures. The field of graph transformation is concerned with the theory, applications, and implementation issues of such formalisms.

The theory is strongly related to areas such as graph theory and graph algorithms, formal language and parsing theory, the theory of concurrent and distributed systems, formal specification and verification, logic, and semantics. The application areas include all those fields of computer science, information processing, engineering, and the natural sciences where static and dynamic modelling using graphical structures and graph transformations, respectively, play important roles. In many of these areas tools based on graph transformation technology have been implemented and used.

The proceedings of ICGT 2004 consist of two parts. The first part comprises the contributions of the invited talks followed by the carefully reviewed and accepted 26 papers that were selected out of 58 submissions. The topics of the papers range over a wide spectrum, including graph theory and graph algorithms, theoretic and semantic aspects, modelling, applications in chemistry and biology, and tool issues. The second part contains two tutorial introductions to graph transformation and their relation to software and DNA computing, and short presentations of the satellite events of ICGT 2004.

We would like to thank the members of the program committee and the secondary reviewers for their enormous he1p in the selection process. We are also grateful to Reiko Heckel and Alexey Cherchago for their technical support in running the conference system and in editing the proceedings. Moreover, we would like to express our gratitude to the local organizers Paolo Bottoni (Chair), and Marta Simeoni who did a great job. Finally, we would like to acknowledge the always excellent cooperation with Springer, the publisher of the Lecture Notes in Computer Science.

July 2004

Gregor Engels, Hartmut Ehrig
Francesco Parisi-Presicce, Grzegorz Rozenberg

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