1. Record Nr. UNISA996465906403316

Titolo	Graph Transformations [[electronic resource]] : 5th International Conference, ICGT 2010, Twente, The Netherlands, September 27--October 2, 2010, Proceedings / / edited by Hartmut Ehrig, Arend Rensink, Grzegorz Rozenberg, Andy Schürr
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2010
ISBN	1-280-38925-7 9786613567178 3-642-15928-1
Edizione	[1st ed. 2010.]
Descrizione fisica	1 online resource (XII, 419 p.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 6372
Disciplina	004
Soggetti	Computer science—Mathematics Discrete mathematics Software engineering Artificial intelligence—Data processing Computer science Algorithms Machine theory Discrete Mathematics in Computer Science Software Engineering Data Science Computer Science Logic and Foundations of Programming Formal Languages and Automata Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Speakers -- A False History of True Concurrency: From Petri to Tools -- How Far Can Enterprise Modeling for Banking Be Supported by Graph Transformation? -- Session 1. Graphs and Logic -- Graph Transformation Units Guided by a SAT Solver -- Delaying Constraint Solving in Symbolic Graph Transformation -- A Dynamic Logic for Termgraph Rewriting -- Session 2. Behavioural Analysis -- A New Type

of Behaviour-Preserving Transition Insertions in Unfolding Prefixes -- On the Computation of McMillan's Prefix for Contextual Nets and Graph Grammars -- Verification of Graph Transformation Systems with Context-Free Specifications -- Saturated LTSs for Adhesive Rewriting Systems -- A Hoare Calculus for Graph Programs -- Session 3. Models and Model Transformation -- Formal Analysis of Functional Behaviour for Model Transformations Based on Triple Graph Grammars -- Conflict Detection for Model Versioning Based on Graph Modifications -- A Component Concept for Typed Graphs with Inheritance and Containment Structures -- Combining Termination Criteria by Isolating Deletion -- Session 4. Algebraic Foundations -- Graph Rewriting in Span-Categories -- Finitary -Adhesive Categories -- Hereditary Pushouts Reconsidered -- Session 5. Applications -- Graph Transformation for Domain-Specific Discrete Event Time Simulation -- Counterpart Semantics for a Second-Order ?-Calculus -- Declarative Mesh Subdivision Using Topological Rewriting in MGS -- A Model for Distribution and Revocation of Certificates -- Session 6. Rule Composition -- Local Confluence for Rules with Nested Application Conditions -- Multi-Amalgamation in Adhesive Categories -- Amalgamating Pushout and Pullback Graph Transformation in Collagories -- Doctoral Symposium -- ICGT 2010 Doctoral Symposium -- EMF Model Transformation Based on Graph Transformation: Formal Foundation and Tool Environment -- Recognizable Graph Languages for the Verification of Dynamic Systems -- Stochastic Modelling and Simulation of Dynamic Resource Allocation -- Bisimulation Theory for Graph Transformation Systems -- Realizing Impure Functions in Interaction Nets -- Composite EMF Modeling Based on Typed Graphs with Inheritance and Containment Structures -- Formal Modeling and Analysis of Communication Platforms Like Skype Based on Petri Net Transformation Systems -- LTS Semantics for Process Calculi from Their Graphical Encodings -- Automated Assistance for Search-Based Refactoring Using Unfolding of Graph Transformation Systems -- Correctness of Graph Programs Relative to HR?+? Conditions -- Static Type Checking of Model Transformation Programs -- Using Graph Transformations and Graph Abstractions for Software Verification.

Sommario/riassunto

Graphs are among the simplest and most universal models for a variety of s- tems, not just in computer science, but throughout engineering and the life sciences. When systems evolve we are interested in the way they change, to p- dict, support, or react to their evolution. Graph transformation combines the idea of graphs as a universal modelling paradigm with a rule-based approach to specify their evolution. The area is concerned with both the theory of graph transformation and their application to a variety of domains. The biannual International Conferences on Graph Transformation aim at bringingtogetherresearchersandpractitionersinterestedin the foundations and applicationsof graphtransformation.The ?fth conference,ICGT 2010,was held at the University of Twente (The Netherlands) in September/October 2010, alongwith severalsatellite events.It continuedthe line ofconferences previously held in Barcelona (Spain) in 2002, Rome (Italy) 2004, Natal (Brazil) in 2006 and Leicester (UK) in 2008, as well as a series of six International Workshops on Graph Transformation with Applications in Computer Science from 1978 to 1998. Also, ICGT alternates with the workshop series on Application of Graph Transformation with Industrial Relevance (AGTIVE). The conference was held under the auspices of EATCS and EASST.