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Nota di contenuto	Intro -- Preface -- Organization -- Graph Theory in Coq: Axiomatizing Isomorphism of Treewidth-Two Graphs (Abstract of Invited Talk) -- Contents -- Theoretical Advances -- Acyclic Contextual Hyperedge Replacement: Decidability of Acyclicity and Generative Power -- 1 Introduction -- 2 Contextual Hyperedge Replacement -- 3 Acyclicity of CHR Grammars is Decidable -- 4 Acyclicity Restricts Generative Power -- 5 Conclusions -- References -- Graph Rewriting Components -- 1 Introduction -- 2 Example -- 3 Basic Notions -- 4 Transformation and Runtime Systems -- 5 Components -- 6 Architectural Models -- 7 Structural Operational Semantics -- 8 Conclusion and Related Work -- References -- Decidability of Resilience for Well-Structured Graph Transformation Systems -- 1 Introduction -- 2 Preliminaries -- 2.1 Graph Transformation Systems -- 2.2 Transition Systems and Well-structuredness -- 3 Decidability -- 4 Application to Graph Transformation Systems -- 5 Rule-Specific Criteria -- 6 Related Concepts -- 7 Conclusion -- References -- Probabilistic Metric Temporal Graph Logic -- 1 Introduction -- 2 Probabilistic Timed Automata -- 3 Probabilistic Timed Graph Transformation Systems -- 4 Probabilistic Metric Temporal Graph Logic -- 5 Bounded Model Checking Approach -- 6 Evaluation -- 7 Conclusion and Future Work -- References -- Categories of Differentiable Polynomial Circuits for

Machine Learning -- 1 Introduction -- 2 Reverse Derivative Categories -- 3 Reverse Derivatives and Algebraic Presentations -- 4 Polynomial Circuits -- 5 Functional Completeness -- 6 Polynomial Circuits in Machine Learning: Case Studies -- 7 Conclusions and Future Work -- References -- Application Domains -- A Generic Construction for Crossovers of Graph-Like Structures -- 1 Introduction -- 2 Running Example -- 3 Preliminaries: M-Adhesive Categories. 4 A Pushout-Based Crossover Construction -- 5 Instantiating Existing Approaches to Graph-Based Crossover -- 6 Related Work -- 6.1 Further Approaches for Graph-Based Crossover -- 6.2 Crossover in MDO -- 7 Conclusion -- A Proofs -- References -- Towards Development with Multi-version Models: Detecting Merge Conflicts and Checking Well-Formedness -- 1 Introduction -- 2 Preliminaries -- 3 Single-Version Models -- 4 Multi-version Models as Typed Graphs -- 4.1 Directly Checking Well-Formedness for Multi-version Models -- 5 Directly Checking Merge Results for Multi-version Models -- 5.1 Directly Checking for Merge Conflicts -- 5.2 Directly Checking Well-Formedness for Merge Results -- 6 Evaluation -- 7 Related Work -- 8 Conclusion -- References -- Visual Smart Contracts for DAML -- 1 Introduction -- 2 Visual Models for Smart Contracts -- 3 Templates as Classes -- 4 Choices as Visual Contracts -- 5 Graph Transformation Semantics -- 6 Validation -- 7 Conclusion -- References -- Computational Category-Theoretic Rewriting -- 1 Introduction and Motivation -- 2 Important Categories in Computational Graph Transformation -- 2.1 Graphs and Their Homomorphisms -- 2.2 C-Sets and Their Homomorphisms -- 2.3 Relationships Between C-Sets and Typed Graphs -- 3 Category-Theoretic Rewriting -- 4 Design and Implementation of Generic Categorical Rewriting -- 5 Conclusions and Future Work -- References -- Invariant Analysis for Multi-agent Graph Transformation Systems Using k-Induction -- 1 Introduction -- 2 Labeled Transition Systems and k-Induction -- 3 Graph Transformation and Running Example -- 4 Symbolic States and Steps -- 5 Causality and Independence in GTS -- 6 Causality-Based k-Induction and Pruning Techniques -- 7 Conclusion and Future Work -- References -- Tool Presentation -- Tool Support for Functional Graph Rewriting with Persistent Data Structures - GrapeVine. 1 Introduction -- 2 Related Work -- 3 GrapeVine Concepts -- 3.1 Overview -- 3.2 A Fully-Persistent Data Structure for Functional Graph Rewriting -- 4 A Taste of Interacting with GrapeVine -- 5 Conclusions and Future Work -- References -- Author Index.
