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Nota di contenuto	A partial algebras approach to graph transformation -- The contractum in algebraic graph rewriting -- A category-theoretical approach to vertex replacement: The generation of infinite graphs -- Issues in the practical use of graph rewriting -- The category of typed graph grammars and its adjunctions with categories of derivations -- Graph unification and matching -- On the interleaving semantics of transformation units — A step into GRACE -- A graph rewriting framework for Statecharts semantics -- Programmed graph transformations and graph transformation units in GRACE -- Pragmatic and semantic aspects of a module concept for graph transformation systems -- Software integration problems and coupling of graph

grammar specifications -- Using attributed flow graph parsing to recognize clichés in programs -- Reconfiguration Graph Grammar for massively parallel, fault tolerant computers -- The use of tree transducers to compute translations between graph algebras -- The bounded degree problem for non-obstructing eNCE graph grammars -- Process specification and verification -- An event structure semantics for graph grammars with parallel productions -- Synchronized composition of graph grammar productions -- The decomposition of ESM computations -- Formal relationship between graph grammars and Petri nets -- Hierarchically distributed graph transformation -- On edge addition rewrite systems and their relevance to program analysis -- Graph automata for linear graph languages -- The obstructions of a minor-closed set of graphs defined by hyperedge replacement can be constructed -- Concatenation of graphs -- HRNCE grammars — A hypergraph generating system with an eNCE way of rewriting -- Node replacement in hypergraphs: Simulation of hyperedge replacement, and decidability of confluence -- Chain-code pictures and collages generated by hyperedge replacement -- Transformations of graph grammars -- Drawing graphs with attribute graph grammars -- Graph pattern matching in PROGRES -- A technique for recognizing graphs of bounded treewidth with application to subclasses of partial 2-paths -- The definition in monadic second-order logic of modular decompositions of ordered graphs -- Group based graph transformations and hierarchical representations of graphs -- Integrating lineage and interaction for the visualization of cellular structures -- Cellworks with cell rewriting and cell packing for plant morphogenesis -- Subapical bracketed L-systems.

Sommario/riassunto

This book contains a collection of 37 refereed full papers selected from the contributions presented at the 5th International Workshop on Graph Grammars and Their Applications to Computer Science, held in Williamsburg, Virginia, USA, in November 1994. The book covers the whole spectrum of methods and techniques for the investigation of the structure of graphs and graph transformations. The papers are divided into nine topical sections on rewriting techniques, specification and semantics, software engineering, algorithms and architectures, concurrency, graph languages, pattern and graphics, structure and logic of graphs, and biology.