1. Record Nr. UNISA996465789203316

Titolo	Graph-Grammars and Their Application to Computer Science [[electronic resource]] : 3rd International Workshop, Warrenton, Virginia, USA, December 2-6, 1986 / / edited by Hartmut Ehrig, Manfred Nagl, Grzegorz Rozenberg, Azriel Rosenfeld
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1987
ISBN	3-540-48178-8
Edizione	[1st ed. 1987.]
Descrizione fisica	1 online resource (X, 622 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 291
Disciplina	510
Soggetti	Mathematics Mathematical logic Software engineering Computer programming Pattern recognition Health informatics Mathematics, general Mathematical Logic and Formal Languages Software Engineering Programming Techniques Pattern Recognition Health Informatics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Tutorial introduction to the algebraic approach of graph grammars -- May we introduce to you: Hyperedge replacement -- An introduction to parallel map generating systems -- Set theoretic approaches to graph grammars -- An introduction to the NLC way of rewriting graphs -- Array grammars -- Graph grammar based specification of interconnection structures for massively parallel computation -- Towards distributed graph grammars -- On partially ordered graph grammars -- A representation of graphs by algebraic expressions and

its use for graph rewriting systems -- On context-free sets of graphs and their monadic second-order theory -- Restricting the complexity of regular DNLC languages -- Apex graph grammars -- Graph grammar engineering: A software specification method -- A linguistic formalism for engineering solid modeling -- Graph grammars and diagram editing -- Graphics and their grammars -- On network algebras and recursive equations -- Ada-concurrency specified by graph grammars -- Basic notions of actor grammars -- Embedding rule independent theory of graph grammars -- Supporting the software development process with attributed NLC graph grammars -- Practical applications of precedence graph grammars -- Is parallelism already concurrency? Part 1: Derivations in graph grammars -- Is parallelism already concurrency? Part 2: Non-sequential processes in graph grammars -- Map OL-systems with edge label control: Comparison of marker and cyclic systems -- From 0L and 1L map systems to indeterminate and determinate growth in plant morphogenesis -- Fundamentals of edge-label controlled graph grammars -- Parallelism analysis in rule-based systems using graph grammars -- An efficient algorithm for the solution of hierarchical networks of constraints -- A software development environment based on graph technology -- Map 0L systems with markers -- Graph rewriting with unification and composition -- Complexity of pattern generation via planar parallel binary fission/fusion grammars -- Applications of L-systems to computer imagery -- Advances in array languages -- Rosenfeld's cycle grammars and kolam -- Application of graph grammars in music composing systems -- Boundary NLC and partition controlled graph grammars.

Sommario/riassunto

The generic term "graph-grammars" refers to a variety of methods for specifying (possibly infinite) sets of graphs or sets of maps. The area of graph-grammars originated in the late 60s motivated by considerations concerning pattern recognition - since then the list of areas which have interacted with the development of graph-grammars has grown quite impressively. It includes pattern recognition, software specification and development, VLSI layout schemes, data bases, lambda-calculus, analysis of concurrent systems, massively parallel computer architectures, incremental compilers, computer animation, complexity theory, developmental biology, music composition, representation of physical solids, and many others. This volume is based on the contributions presented at the third international workshop on graph-grammars and their applications, held in Warrenton, Virginia, USA in December 1986. Aiming at the best possible representation of the field not all of the papers presented at the meeting appear in this volume and some of the papers from this volume were not presented at the workshop. The volume consists of two parts: Part I presents tutorial introductions to a number of basic graph and map rewriting mechanisms. Part II contains technical contributions. This collection of papers provides the reader with an up-to-date overview of current trends in graph-grammars.