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Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 1313
Disciplina	005.1/01/5113
Soggetti	Software engineering Computer programming Programming languages (Electronic computers) Computer logic Software Engineering Programming Techniques Programming Languages, Compilers, Interpreters Logics and Meanings of Programs
Lingua di pubblicazione	Inglese
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Nota di contenuto	Diagrams and programming languages for programmable controllers -- Graphical specification and reasoning: Case study generalised railroad crossing -- A graphic notation for formal specifications of dynamic systems -- A semantic integration of object-Z and CSP for the specification of concurrent systems -- Class refinement and interface refinement in object-oriented programs -- Formalizing requirements for distributed systems with trace diagrams -- Consistent graphical specification of distributed systems -- Design of reactive control systems for event-driven operations -- An M-Net semantics for a real-time extension of μ SDL -- Reconciling real-time with asynchronous message passing -- Specifying the remote controlling of valves in an explosion test environment -- PICGAL: Practical use of formal specification to develop a complex critical system -- Mathematical

modeling and analysis of an external memory manager -- Automatic translation of VDM-SL specifications into gofer -- Towards an Integrated CASE and theorem proving tool for VDM-SL -- Specification of required non-determinism -- A corrected failure-divergence model for CSP in Isabelle/HOL -- A proof obligation generator for VDM-SL -- Verification of cryptographic protocols: An experiment -- TLA + PROMELA: Conjecture, check, proof -- A TLA solution to the specification and verification of the RLP1 retransmission protocol -- An efficient technique for deadlock analysis of large scale process networks -- Implementing a model checker for LEGO -- Formal verification of transformations for peephole optimization -- A meta-method for formal method integration -- Reuse of verified design templates through extended pattern matching -- A compositional proof system for shared variable concurrency -- A framework for modular formal specification and verification -- A timed semantics for the StateMate implementation of statecharts -- Using PVS to prove a Z refinement: A case study -- Verification of reactive systems using DisCo and PVS -- Term rewrite systems to derive set boolean operations on 2D objects -- A normal form reduction strategy for hardware/software partitioning -- Viewpoint consistency in Z and LOTOS: A case study -- A UNITY mapping operator for distributed programs.

Sommario/riassunto

This book constitutes the refereed proceedings of FME '97, the 4th International Symposium of Formal Methods Europe devoted to Industrial Applications and Strengthened Foundations of Formal Methods, held in Graz, Austria, in September 1997. The 35 revised full papers presented in the volume were selected from a total of 94 submissions. Formal methods and mathematically based techniques are increasingly recognized as a viable technology for the development and engineering of computing systems. The majority of the papers in this volume describe industrial applications, extensions to existing techniques, or case studies; papers on theoretical aspects show clear potential applicability.
