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Disciplina	005.13/1
Soggetti	Software engineering Application software Computer programming Computer logic Information technology Business—Data processing Software Engineering/Programming and Operating Systems Computer Applications Programming Techniques Software Engineering Logics and Meanings of Programs IT in Business
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
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Nota di contenuto	Reasoning about interference in an object-based design method -- Using relative refinement for fault tolerance -- Specification and validation of a security policy model -- Experiences from applications of RAISE -- Role of VDM(++) in the development of a real-time tracking and tracing system -- The integration of LOTOS with an object oriented development method -- An industrial experience on LOTOS-based prototyping for switching systems design -- Towards an implementation-oriented specification of TP protocol in LOTOS -- A

metalanguage for the formal requirement specification of reactive systems -- Model checking in practice -- Algorithm refinement with read and write frames -- Invariants, frames and postconditions: a comparison of the VDM and B notations -- The industrial take-up of formal methods in safety-critical and other areas: A perspective -- A proof environment for concurrent programs -- A VDM ? study of Fault-Tolerant stable storage — Towards a computer engineering mathematics -- Applications of modal logic for the specification of real-time systems -- Formal methods reality check: Industrial usage -- Automating the generation and sequencing of test cases from model-based specifications -- The parallel abstract machine: A common execution model for FDTs -- Generalizing Abadi & Lamport's method to solve a problem posed by A. Pnueli -- Real-time refinement -- Different FDT's confronted with different ODP-viewpoints of the trader -- On the derivation of executable database programs from formal specifications -- A concurrency case study using RAISE -- Specifying a safety-critical control system in Z -- An overview of the SPRINT method -- Application of composition development method for definition of SYNTHESIS information resource query language semantics -- Verification tools in the development of provably correct compilers -- Encoding W : A Logic for Z in 2OBJ -- Formal verification for fault-tolerant architectures: Some lessons learned -- Conformity clause for VDM-SL -- Process instances in LOTOS simulation -- The SAZ project: Integrating SSADM and Z -- Maintaining consistency under changes to formal specifications -- An EVES data abstraction example -- Putting advanced reachability analysis techniques together: The "ARA" tool -- Integrating SA/RT with LOTOS -- Symbolic model checking for distributed real-time systems -- Adding specification constructors to the refinement calculus -- Selling formal methods to industry -- Tool Descriptions.

Sommario/riassunto

The last few years have borne witness to a remarkable diversity of formal methods, with applications to sequential and concurrent software, to real-time and reactive systems, and to hardware design. In that time, many theoretical problems have been tackled and solved, and many continue to be worked upon. Yet it is by the suitability of their industrial application and the extent of their usage that formal methods will ultimately be judged. This volume presents the proceedings of the first international symposium of Formal Methods Europe, FME'93. The symposium focuses on the application of industrial-strength formal methods. Authors address the difficulties of scaling their techniques up to industrial-sized problems, and their suitability in the workplace, and discuss techniques that are formal (that is, they have a mathematical basis) and that are industrially applicable. The volume has four parts: - Invited lectures, containing a lecture by Cliff B. Jones and a lecture by Antonio Cau and Willem-Paul de Roever; - Industrial usage reports, containing 6 reports; - Papers, containing 32 selected and refereed papers; - Tool descriptions, containing 11 descriptions.
