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Soggetti	Software engineering Programming languages (Electronic computers) Computer logic Software Engineering/Programming and Operating Systems Software Engineering Programming Languages, Compilers, Interpreters Logics and Meanings of Programs
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Program Testing and Analysis -- Black-Box Testing of Grey-Box Behavior -- On Checking Whether a Predicate Definitely Holds -- Using a Software Testing Technique to Improve Theorem Proving -- Auto-generating Test Sequences Using Model Checkers: A Case Study -- Mutually Enhancing Test Generation and Specification Inference -- JMLAutoTest: A Novel Automated Testing Framework Based on JML and JUnit -- Test Theory and Test Derivation Algorithms -- Compositional Testing with ioco -- Defining Observation Objectives for Reactive and Distributed Systems -- Time-Optimal Real-Time Test Case Generation Using Uppaal -- Test Cases Generation for Nondeterministic Real-Time Systems -- Property Oriented Test Case Generation -- Computing Unique Input/Output Sequences Using Genetic Algorithms --

Automatic Generation of Test Purposes for Testing Distributed Systems -- Test Methods and Test Tools -- Interaction Testing in an Embedded System Using Hardware Fault Injection and Program Mutation -- Automatic Conformance Testing of Internet Applications -- A Use Case Driven Testing Process: Towards a Formal Approach Based on UML Collaboration Diagrams -- VISWAS and on Diagnosability with IEEE Std P1522 and UML2.0 Testing Profile -- Towards a Tool Environment for Model-Based Testing with AsmL.

Sommario/riassunto

Formal methods provide system designers with the possibility to analyze system models and reason about them with mathematical precision and rigor. The use of formal methods is not restricted to the early development phases of a system, though. The different testing phases can also benefit from them to ease the production and application of effective and efficient tests. Many still regard formal methods and testing as an odd combination. Formal methods traditionally aim at verifying and proving correctness (a typical academic activity), while testing shows only the presence of errors (this is what practitioners do). Nonetheless, there is an increasing interest in the use of formal methods in software testing. It is expected that formal approaches are about to make a major impact on emerging testing technologies and practices. Testing proves to be a good starting point for introducing formal methods in the software development process. This volume contains the papers presented at the 3rd Workshop on Formal Approaches to Testing of Software, FATES 2003, that was in affiliation with the IEEE/ACM Conference on Automated Software Engineering (ASE 2003). This year, FATES received 43 submissions. Each submission was reviewed by at least three independent reviewers from the program committee with the help of additional reviewers. Based on their evaluations, 18 papers submitted by authors from 13 different countries were selected for presentation at the workshop.
