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Nota di contenuto	Verified Software: Theories, Tools, Experiments Vision of a Grand Challenge Project -- Verification Tools -- Towards a Worldwide Verification Technology -- It Is Time to Mechanize Programming Language Metatheory -- Methods and Tools for Formal Software Engineering -- Guaranteeing Correctness -- The Verified Software Challenge: A Call for a Holistic Approach to Reliability -- A Mini Challenge: Build a Verifiable Filesystem -- A Constructive Approach to Correctness, Exemplified by a Generator for Certified Java Card Applets -- Some Interdisciplinary Observations about Getting the "Right" Specification -- Software Engineering Aspects -- Software Verification and Software Engineering a Practitioner's Perspective -- Decomposing Verification Around End-User Features -- Verifying Object-Oriented Programming -- Automatic Verification of Strongly Dynamic Software Systems -- Reasoning about Object Structures Using Ownership -- Modular Reasoning in Object-Oriented Programming -- Scalable Specification and Reasoning: Challenges for Program Logic -- Programming Language and Methodology Aspects -- Lessons from the JML Project -- The Spec# Programming System: Challenges and Directions -- Integrating Static Checking and Interactive Verification: Supporting Multiple Theories and Provers in Verification --

Components -- Automated Test Generation and Verified Software --  
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by Using DISCOVERER -- Constraint Solving and Symbolic Execution.

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## Sommario/riassunto

This state-of-the-art survey is an outcome of the first IFIP TC 2/WG 2.3 working conference on Verified Software: Theories, Tools, Experiments, VSTTE 2005, held in Zurich, Switzerland, in October 2005. This was a historic event gathering many top international experts on systematic methods for specifying, building and verifying high-quality software. The book includes 32 revised full papers and 27 revised position papers, preceded by a general introduction to the area, which also presents the vision of a grand challenge project: the "verifying compiler". Most contributions are followed by a transcription of the vivid discussion that ensued between the author and the audience. The papers have been organized in topical sections on verification tools, guaranteeing correctness, software engineering aspects, verifying object-oriented programming, programming language and methodology aspects, components, static analysis, design, analysis and tools, as well as formal techniques.

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