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Collana	Programming and Software Engineering ; ; 6029
Disciplina	005.1
Soggetti	Software engineering Computer communication systems Programming languages (Electronic computers) Computer logic Computer programming Software Engineering/Programming and Operating Systems Computer Communication Networks Programming Languages, Compilers, Interpreters Software Engineering Logics and Meanings of Programs Programming Techniques
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Fine-Grain Concurrency -- Compensable Transactions -- SCOOP -- A Contract-Based Concurrent Object-Oriented Programming Model -- Using the Spec# Language, Methodology, and Tools to Write Bug-Free Programs -- Fixpoints and Search in PVS -- Multi Core Design for Chip Level Multiprocessing.
Sommario/riassunto	Software defects lead to enormous costs for the software industry and society as a whole. While testing is useful to find bugs, it is insufficient to show the absence of certain kinds of errors or that a program satisfies its specification. Such high levels of software quality can be

achieved by software verification, that is, by proving the correctness of a program with respect to its specification. Software verification has seen tremendous progress during the last decade; it continues to be an active research topic and is now also becoming increasingly popular among practitioners. This tutorial contains selected papers from the LASER summer Schools 2007 and 2008, both of which focused on correctness - Applied Software Verification in 2007 and Concurrency and Correctness in 2008. Topics covered include verification of fine-grain concurrency and transactions, the SCOOP model for concurrent object-oriented programming, the Spec# programming and verification system, verification in the prototype verification system PVS, and multi-core chip design.

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