1. Record Nr. UNISA996465867103316

Titolo	Formal Methods for Components and Objects [[electronic resource]] : Third International Symposium, FMCO 2004, Leiden, The Netherlands, November 2-5, 2004, Revised Lectures / / edited by Frank S. de Boer, Marcello M. Bonsangue, Susanne Graf, Willem-Paul de Roever
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2005
Edizione	[1st ed. 2005.]
Descrizione fisica	1 online resource (VIII, 328 p.)
Collana	Programming and Software Engineering ; ; 3657
Disciplina	005.13/1
Soggetti	Software engineering Programming languages (Electronic computers) Computer logic Operating systems (Computers) Software Engineering/Programming and Operating Systems Software Engineering Programming Languages, Compilers, Interpreters Logics and Meanings of Programs Operating Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	A Theory of Predicate-Complete Test Coverage and Generation -- A Perspective on Component Refinement -- A Fully Abstract Semantics for UML Components -- From (Meta) Objects to Aspects: A Java and AspectJ Point of View -- MoMo: A Modal Logic for Reasoning About Mobility -- Probabilistic Linda-Based Coordination Languages -- Games with Secure Equilibria, -- Priced Timed Automata: Algorithms and Applications -- rCOS: Refinement of Component and Object Systems -- Program Generation and Components -- Assertion-Based Encapsulation, Object Invariants and Simulations -- A Dynamic Binding Strategy for Multiple Inheritance and Asynchronously Communicating Objects -- Observability, Connectivity, and Replay in a Sequential Calculus of Classes -- Timing Analysis and Timing Predictability.

Sommario/riassunto

Formal methods have been applied successfully to the verification of medium-sized programs in protocol and hardware design. However, their application to the development of large systems requires more emphasis on specification, modelling and validation techniques supporting the concepts of reusability and modifiability, and their implementation in new extensions of existing programming languages. This book presents revised tutorial lectures given by invited speakers at the Third International Symposium on Formal Methods for Components and Objects, FMCO 2004, held in Leiden, The Netherlands, in November 2004. The 14 revised lectures by leading researchers present a comprehensive account of the potential of formal methods applied to large and complex software systems such as component-based systems and object systems. The book provides an unique combination of ideas on software engineering and formal methods that reflect the expanding body of knowledge on modern software systems.