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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Architecture Specific Models: Software Design on Abstract Platforms -- Tight Structuring for Precise UML-Based Requirement Specifications -- Integrating Performance Modeling in the Software Development Process -- The Inevitable Pain of Software Development: Why There Is No Silver Bullet -- Toward Component-Oriented Formal Software Development: An Algebraic Approach -- Higher Order Applicative XML Documents -- A New Paradigm for Requirements Specification and Analysis of System-of-Systems -- Towards Ontology Driven Software Design -- A Model Based Development Approach for Distributed Embedded Systems -- Pervasive Challenges for Software Components -- Model Generation for Legacy Systems -- Automatic Failures-Free Connector Synthesis: An

Example -- Module Dependences in Software Design -- Towards Fully Automatic Execution Monitoring -- Automation of Software System Development Using Natural Language Processing and Two-Level Grammar -- A General Resource Framework for Real-Time Systems -- Architecture Based Model Driven Software and System Development for Real-Time Embedded Systems -- A Computational Model for Complex Systems of Embedded Systems -- Software Evolution as the Key to Productivity -- Model-Checking Complex Software – A Memory Perspective -- Agile Modeling with the UML -- Predictable Component Architectures Using Dependent Finite State Machines -- From Object Orientation to Goal Orientation: A Paradigm Shift for Requirements Engineering -- View Consistency in Software Development.

Sommario/riassunto

This volume contains the papers from the workshop “Radical Innovations of Software and Systems Engineering in the Future.” This workshop was the ninth in the series of Monterey Software Engineering workshops for formulating and advancing software engineering models and techniques, with the fundamental theme of increasing the practical impact of formal methods. During the last decade object orientation was the driving factor for new system solutions in many areas ranging from e-commerce to embedded systems. New modeling languages such as UML and new programming languages such as Java and CASE tools have considerably influenced the system development techniques of today and will remain key techniques for the near future. However, actual practice shows many deficiencies of these new approaches: – there is no proof and no evidence that software productivity has increased with the new methods; – UML has no clean scientific foundations, which inhibits the construction of powerful analysis and development tools; – support for mobile distributed system development is missing; – for many applications, object-oriented design is not suited to producing clean well-structured code, as many applications show.
