1. Record Nr. UNINA9910484535903321

Titolo	Architecting dependable systems IV / / Rogerio de Lemos, Cristina Gacek, Alexander Romanovsky (eds.)
Pubbl/distr/stampa	Berlin, Germany ; ; New York, New York : , : Springer, , [2007] ©2007
ISBN	3-540-74035-X
Edizione	[1st ed. 2007.]
Descrizione fisica	1 online resource (XIV, 438 p.)
Collana	Programming and Software Engineering ; ; 4615
Disciplina	004.2
Soggetti	Computer architecture Fault-tolerant computing Computer systems - Reliability
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	International conference proceedings.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Architectural Description Languages -- Architecting Dependable Systems with the SAE Architecture Analysis and Description Language (AADL) -- A System Dependability Modeling Framework Using AADL and GSPNs -- Towards Improving Dependability of Automotive Systems by Using the EAST-ADL Architecture Description Language -- The View Glue -- Architectural Components and Patterns -- A Component-Based Approach to Verification and Validation of Formal Software Models -- A Pattern-Based Approach for Modeling and Analyzing Error Recovery -- Architectural Fault Tolerance Using Exception Handling -- Model-Centric Development of Highly Available Software Systems -- An Outline of an Architecture-Based Method for Optimizing Dependability Attributes of Software-Intensive Systems -- Architecting Distributed Systems -- A Distributed Monitoring System for Enhancing Security and Dependability at Architectural Level -- Architecting Dynamic Reconfiguration in Dependable Systems -- Ecotopia: An Ecological Framework for Change Management in Distributed Systems -- Generic-Events Architecture: Integrating Real-World Aspects in Event-Based Systems -- Flexible Communication Architecture for Dependable Time-Triggered Systems -- Business Process Monitoring for Dependability -- Architectural Assurances for Dependability -- Achieving Dependable Systems by Synergistic Development of Architectures and Assurance

	Cases -- Towards Evidence-Based Architectural Design for Safety-Critical Software Applications -- Extending Failure Modes and Effects Analysis Approach for Reliability Analysis at the Software Architecture Design Level.
Sommario/riassunto	As software systems become ubiquitous, the issues of dependability become more and more crucial. Given that solutions to these issues must be considered from the very beginning of the design process, it is reasonable that dependability is addressed at the architectural level. This book was born of an effort to bring together the research communities of software architectures and dependability. This state-of-the-art survey contains 18 expanded and peer-reviewed papers based on the carefully selected contributions to the Workshop on Architecting Dependable Systems (WADS 2006), organized at the 2006 International Conference on Dependable Systems and Networks (DSN 2006), held in Philadelphia, PA, USA, in June 2006. It also contains a number of invited papers written by recognized experts in the area. The papers are organized in topical sections on architectural description languages, architectural components and patterns, architecting distributed systems, and architectural assurances for dependability.