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Soggetti	Computer engineering Computers Data encryption (Computer science) Software engineering Computers, Special purpose Computer logic Computer Engineering Computing Milieux Cryptology Software Engineering/Programming and Operating Systems Special Purpose and Application-Based Systems Logics and Meanings of Programs
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Invited Paper -- The Ten Most Powerful Principles for Quality in (Software and) Software Organizations for Dependable Systems -- Verification and Validation -- Empirical Assessment of Software On-Line Diagnostics Using Fault Injection -- Speeding-Up Fault Injection Campaigns in VHDL Models -- Specification and Verification of a Safety Shell with Statecharts and Extended Timed Graphs -- Validation of Control System Specifications with Abstract Plant Models -- A Constant Perturbation Method for Evaluation of Structural Diversity in

Multiversion Software -- Expert Error: The Case of Trouble-Shooting in Electronics -- The Safety Management of Data-Driven Safety-Related Systems -- Software Support for Incident Reporting Systems in Safety-Critical Applications -- Software Process Improvement -- A Dependability-Explicit Model for the Development of Computing Systems -- Deriving Quantified Safety Requirements in Complex Systems -- Improving Software Development by Using Safe Object Oriented Development : OTCD -- A Safety Licensable PES for SIL 4 Applications -- Safety and Security Issues in Electric Power Industry -- Dependability of Computer Control Systems in Power Plants -- A Method of Analysis of Fault Trees with Time Dependencies -- Formal Methods -- A Formal Methods Case Study: Using Light-Weight VDM for the Development of a Security System Module -- Formal Methods: The Problem Is Education -- Formal Methods Diffusion: Past Lessons and Future Prospects -- Invited Paper -- Safe Tech: A Control Oriented Viewpoint -- Safety Guidelines, Standards and Certification -- Derivation of Safety Targets for the Random Failure of Programmable Vehicle Based Systems -- IEC 61508 — A Suitable Basis for the Certification of Safety-Critical Transport-Infrastructure Systems ?? -- Hardware Aspects -- An Approach to Software Assisted Recovery from Hardware Transient Faults for Real Time Systems -- Programmable Electronic System Design & Verification Utilizing DFM -- SIMATIC S7-400F/FH: Safety-Related Programmable Logic Controller -- Safety Assessment I -- Assessment of the Reliability of Fault-Tolerant Software: A Bayesian Approach -- Estimating Dependability of Programmable Systems Using BBNs -- Design for Safety -- Improvements in Process Control Dependability through Internet Security Technology -- A Survey on Safety-Critical Multicast Networking -- Invited Paper -- Causal Reasoning about Aircraft Accidents -- Transport & Infrastructure -- Controlling Requirements Evolution: An Avionics Case Study -- HAZOP Analysis of Formal Models of Safety-Critical Interactive Systems -- Failure Mode and Effect Analysis for Safety-Critical Systems with Software Components -- Safety Assessment II -- Risk Ordering of States in Safecharts -- Dependability Evaluation: Model and Method Based on Activity Theory -- Forensic Software Engineering and the Need for New Approaches to Accident Investigation.

Sommario/riassunto

This book constitutes the refereed proceedings of the 19th International Conference on Computer Safety, Reliability, and Security, SAFECOMP 2000, held in Rotterdam, The Netherlands in October 2000. The 33 revised full papers presented together with three invited papers were carefully reviewed and selected for inclusion in the book. The papers are organized in topical sections on verification and validation; software process improvement; formal methods; safety guidelines, standards and certification; hardware aspects; safety assessment; design for safety; and transport and infrastructure.
