1. Record Nr. UNINA9910980481203321

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Titolo	Resilient Computer System Design / / by Victor Castano, Igor Schagaev
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2015
ISBN	9783319150697 3319150693
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (271 p.)
Disciplina	004.24 620 621.382 658.56
Soggetti	Telecommunication Security systems Computers Communications Engineering, Networks Security Science and Technology Hardware Performance and Reliability
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Basic Concepts, Motivation and Structure -- Background Concepts and Resilience -- Dealing with faults: redundancy -- Impact of radiation on electronics -- FT models -- Hardware support of resilience -- System software support of hardware checking -- Implementation: hardware prototype, comparisons, simulation and testing -- Conclusions -- Vision on Evolving System Future.
Sommario/riassunto	This book presents a paradigm for designing new generation resilient and evolving computer systems, including their key concepts, elements of supportive theory, methods of analysis and synthesis of ICT with new properties of evolving functioning, as well as implementation schemes and their prototyping. The book explains why new ICT applications require a complete redesign of computer systems to address challenges of extreme reliability, high performance, and power efficiency. The authors present a comprehensive treatment for

designing the next generation of computers, especially addressing safety-critical, autonomous, real time, military, banking, and wearable health care systems. § Describes design solutions for new computer system - evolving reconfigurable architecture (ERA) that is free from drawbacks inherent in current ICT and related engineering models § Pursues simplicity, reliability, scalability principles of design implemented through redundancy and re-configurability; targeted for energy-, reliability- and performance-wise operations § Provides development processes for next generation systems using various redundancy types for implementation of required system properties through design stages § Presents a prototype for new computer system - resilient and evolving architecture with supportive hardware for system reconfigurability.