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Titolo	Ageing of Integrated Circuits : Causes, Effects and Mitigation Techniques / / edited by Basel Halak
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Descrizione fisica	1 online resource (XIII, 228 p. 145 illus., 107 illus. in color.)
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1. Understanding Ageing Mechanisms -- Chapter 2. The Effects of Ageing on the reliability and performance of Integrated Circuits -- Chapter 3. Ageing Mitigation Techniques for Microprocessors using using Anti- Ageing Software -- Chapter 4. Ageing Mitigation Techniques for SRAM Memories -- Chapter 5. Ageing-aware Logic Synthesis -- Chapter 6. On-Chip Ageing Monitoring and System Adaptation -- Chapter 7. Aging Monitors for SRAM Memory Cells and Sense Amplifiers -- Chapter 8. A Cost-Efficient Aging Sensor based on Multiple Paths Delay Fault Monitoring.
Sommario/riassunto	This book provides comprehensive coverage of the latest research into integrated circuits' ageing, explaining the causes of this phenomenon, describing its effects on electronic systems, and providing mitigation techniques to build ageing-resilient circuits. Describes in detail the physical mechanisms of CMOS ageing; Provides an in-depth discussion on the impact of ageing on the performance and reliability of integrated circuits; Presents state-of-the art synthesis algorithms for

ageing resilient digital systems; Introduces application-dependent techniques to mitigate the effects of aging; Discusses the design and implementation of on-chip aging monitoring sensors for aging-adaptable systems; Includes more than 200 references on state-of-art research in this area, providing direction for further reading.