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Titolo	Near Threshold Computing : Technology, Methods and Applications / / edited by Michael Hübner, Cristina Silvano
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ISBN	3-319-23389-0
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	PART I: NTC opportunities, challenges and limits -- Chapter 1: Extreme Energy Efficiency by Near Threshold Voltage Operation -- Part II Micro-architecture challenges and energy management at NTC -- Chapter2: Many-core Architecture for NTC: Energy Efficiency from the Ground Up -- Chapter 3: Variability-Aware Voltage Island Management for Near-Threshold Voltage Computing With Performance Guarantees -- Part III Memory system design for NTC -- Chapter4: Resizable Data Composer (RDC) Cache: A Near-Threshold Cache tolerating Process Variation Via architectural fault tolerance -- Chapter 5 Memories for NTC.
Sommario/riassunto	This book explores near-threshold computing (NTC), a design-space using techniques to run digital chips (processors) near the lowest possible voltage. Readers will be enabled with specific techniques to design chips that are extremely robust; tolerating variability and resilient against errors. Variability-aware voltage and frequency allocation schemes will be presented that will provide performance guarantees, when moving toward near-threshold manycore chips. · Provides an introduction to near-threshold computing, enabling reader with a variety of tools to face the challenges of the

power/utilization wall; · Demonstrates how to design efficient voltage regulation, so that each region of the chip can operate at the most efficient voltage and frequency point; · Investigates how performance guarantees can be ensured when moving towards NTC manycores through variability-aware voltage and frequency allocation schemes. .