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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Background and Related Work -- System Model -- Experimental Framework -- Thermal Safe Power (TSP) -- Transient and Peak Temperature Computation based on Matrix Exponentials (MatEx) -- Selective Boosting for Multicore Systems (seBoost) -- Energy and Peak Power Efficiency Analysis for Simple Approximation Schemes -- Energy-Efficient Task-to-core Assignment for Homogeneous Clustered Manycores -- Energy-Efficient Task-to-core Assignment for Heterogeneous Clustered Manycores -- Conclusions.
Sommario/riassunto	This book focuses on two of the most relevant problems related to power management on multicore and manycore systems. Specifically, one part of the book focuses on maximizing/optimizing computational performance under power or thermal constraints, while another part focuses on minimizing energy consumption under performance (or real-time) constraints. Provides a comprehensive introduction to energy, power, and temperature management, highlighting the

different optimization goals, particularly computational performance, power and energy consumption, and temperature; Highlights the differences and similarities between the two key challenges of performance optimization under power or thermal constraints and energy minimization under performance constraints; Discusses in detail several means that can be used to optimize performance or energy while satisfying the desired constraints, including core heterogeneity, task-to-core assignment/mapping, dynamic power management (DPM), and dynamic voltage and frequency scaling (DVFS).