1.	Record Nr.	UNINA9910253963703321
	Titolo	Smart Systems Integration and Simulation / / edited by Nicola Bombieri, Massimo Poncino, Graziano Pravadelli
	Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
	ISBN	3-319-27392-2
	Edizione	[1st ed. 2016.]
	Descrizione fisica	1 online resource (239 p.)
	Disciplina	620
	Soggetti	Electronic circuits
		Microprocessors
		Electronics
		Microelectronics
		Circuits and Systems
		Processor Architectures
		Electronics and Microelectronics, Instrumentation
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Includes index.
	Nota di contenuto	1.Introduction -- 2.Smart Electronic Systems: An Overview -- 3.Design domains and abstraction levels for effective smart system simulation -- 4. Energy-Efficient Digital Processing via Approximate Computing -- 5. Discrete Power Devices and Power Modules -- 6.MEMS System-Level Modeling and Simulation in Smart Systems -- 7.Modeling and Simulation of the Power Flow in Smart Systems -- 8. Smart system case studies.
	Sommario/riassunto	This book-presents new methods and tools for the integration and simulation of smart devices. The design approach described in this book explicitly accounts for integration of Smart Systems components and subsystems as a specific constraint. It includes methodologies and EDA tools to enable multi-disciplinary and multi-scale modeling and design, simulation of multi-domain systems, subsystems and components at all levels of abstraction, system integration and exploration for optimization of functional and non-functional metrics. By covering theoretical and practical aspects of smart device design,

this book targets people who are working and studying on hardware/software modelling, component integration and simulation under different positions (system integrators, designers, developers, researchers, teachers, students etc.). In particular, it is a good introduction to people who have interest in managing heterogeneous components in an efficient and effective way on different domains and different abstraction levels. People active in smart device development can understand both the current status of practice and future research directions. Provides a comprehensive overview of smart systems design, focusing on design challenges and cutting-edge solutions; Enables development of a co-simulation and co-design environment that accounts for the peculiarities of the basic subsystems and components to be integrated; Describes development of modeling and design techniques, methods and tools that enable multi-domain simulation and optimization at various levels of abstraction and across different technological domains.