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Altri autori (Persone)	IonescuAdrian M
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction : CMOS scaling and single electronics -- Compact modeling of SETs -- Single-electron transistor logic -- Hybridization of CMOS and SET -- Few electron multiple valued logic and memory design -- Fabrication of SETs and compatibility with silicon CMOS.
Sommario/riassunto	"Take advantage of the low-power consumption and enhanced functionality of SETs (single electron transistors) along with the high-speed driving and voltage gain of CMOS technology. This cutting-edge resource provides you with the conceptual framework for CMOS-SET hybrid circuit design. Supported with over 180 illustrations and packaged with a CD-ROM of practical supplementary material, the book explains spice simulation of SETs and co-simulation with CMOS, introduces specific design strategies for hybrid CMOS-SET circuits, and presents CMOS-SET co-fabrication techniques. You gain a thorough understanding of the pros and cons of digital SETs, learn how SETs can help to solve the intrinsic drawbacks of CMOS technology, and discover how the hybridization of both technologies can produce new analog functionalities which are difficult to achieve in a pure CMOS approach. From the basic physics of single electron transistors and SET modeling, to advanced concepts like CMOS-SET co-integration, the book helps you realize significant performance benefits by showing you how to incorporate SET technology into your design projects."--Publisher's

website.
