1. Record Nr. UNINA9910299822303321

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Titolo	On the Mathematical Modeling of Memristor, Memcapacitor, and Meminductor / / by Ahmed G. Radwan, Mohammed E. Fouda
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-17491-6
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (244 p.)
Collana	Studies in Systems, Decision and Control, , 2198-4182 ; ; 26
Disciplina	519 620 621 621.3815
Soggetti	Electronic circuits Statistical physics Information theory Circuits and Systems Applications of Nonlinear Dynamics and Chaos Theory Information and Communication, Circuits
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Introduction -- Memristor: Models, Types and Applications -- Memristor Mathematical Models and Emulators -- Memristor-based Relaxation Oscillator Circuits -- Memristor-based Multilevel Digital Systems -- Memcapacitor: Modelling, Analysis and Emulators -- Memcapacitor based applications -- Meminductor: Modelling, Analysis and Emulators.
Sommario/riassunto	This book introduces the basic fundamentals, models, emulators and analyses of mem-elements in the circuit theory with applications. The book starts reviewing the literature on mem-elements, models and their recent applications. It presents mathematical models, numerical results, circuit simulations, and experimental results for double-loop hysteresis behavior of mem-elements. The authors introduce a generalized memristor model in the fractional-order domain under different input and different designs for emulator-based mem-

elements, with circuit and experimental results. The basic concept of memristive-based relaxation-oscillators in the circuit theory is also covered. The reader will moreover find in this book information on memristor-based multi-level digital circuits, memristor-based multi-level multiplier and memcapacitor-based oscillators and synaptic circuits.