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Titolo	Memristive Computing / / by Yongbin Yu, Xiangxiang Wang, Xiao Feng, Jiarun Shen, Nyima Tashi, Pinaki Mazumder
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ISBN	981-9603-32-3
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (XVI, 376 p. 255 illus., 185 illus. in color.)
Disciplina	573.85
Soggetti	Neural circuitry Computer storage devices Memory management (Computer science) Neural networks (Computer science) Signal processing Electronic circuits Neural Circuits Computer Memory Structure Mathematical Models of Cognitive Processes and Neural Networks Digital and Analog Signal Processing Electronic Circuits and Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chua Corsage Memristor -- Memristor Model and its Emulator -- Chaotic Circuits based on Memristor -- Memristor-based En/decryption System -- Filter Design based on Memristive Family -- Memristive Filter for Signal Processing -- Memristor network-based Swarm Intelligence -- Memristor-based Neural Network.-Memristive Neural Network Stability Analysis -- Memristive Neural Network Synchronization Analysis -- Mismatched Memristive Neural Network Synchronization Analysis on Time Scales.
Sommario/riassunto	This book delves into a wide array of topics, ranging from memristor and its emulator to chaotic circuits based on memristor, memristor-based en/decryption systems, filter design based on memristive family, memristive filter for signal processing, memristor network-based

swarm intelligence, dynamic analysis of memristive neural networks, and the application of memristor-based neural networks. It provides a comprehensive and systematic exploration of how memristors empower and drive cutting-edge research in neuromorphic computing and artificial intelligence. This book encourages fostering interdisciplinary information literacy and cultivating cross-disciplinary computational thinking. This book plays a pivotal role in embracing and advancing the development of neuromorphic computing. Through profound foundational theories and academic analysis methods, this book guides artificial intelligence graduate students and engineering professionals in constructing a comprehensive knowledge and technological framework for memristor research.