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Titolo	Qualitative Analysis and Control of Complex Neural Networks with Delays / / by Zhanshan Wang, Zhenwei Liu, Chengde Zheng
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ISBN	3-662-47484-0
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (398 p.)
Collana	Studies in Systems, Decision and Control, , 2198-4182 ; ; 34
Disciplina	620
Soggetti	Vibration Dynamics Computational complexity Automatic control Power electronics Vibration, Dynamical Systems, Control Complexity Control and Systems Theory Power Electronics, Electrical Machines and Networks
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 and index.
Nota di contenuto	Introduction to Neural Networks -- Preliminaries on Dynamical Systems and Stability Theory -- Survey of Dynamics of Cohen-Grossberg Type RNNs -- Delay-partitioning-method Based Stability Result for RNNs -- Stability result on the static and vector field recurrent neural networks -- Stability Criteria for RNNs Based on Secondary Delay Partitioning -- LMI-based Stability Criteria for Static Neural Networks -- Multiple Stability for Discontinuous RNNs -- LMI-based Passibity Criteria for RNNs with Delays -- Dissipativity and Invariant Sets for Neural Networks with Delay -- Synchronization Stability in Complex Neural Networks -- Stabilization of Stochastic RNNs with Stochastic Delays -- Adaptive Synchronization of Complex Neural Networks.
Sommario/riassunto	This book focuses on the stability of the dynamical neural system, synchronization of the coupling neural system and their applications in automation control and electrical engineering. The redefined concept of

stability, synchronization and consensus are adopted to provide a better explanation of the complex neural network. Researchers in the fields of dynamical systems, computer science, electrical engineering and mathematics will benefit from the discussions on complex systems. The book will also help readers to better understand the theory behind the control technique and its design.