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	Collana	Nonlinear Systems and Complexity, , 2195-9994 ; ; 12
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	Nota di bibliografia	Includes bibliographical references at the end of each chapters.
	Nota di contenuto	From the Contents: Patterns of Synchrony in Neuronal Networks: The role of synaptic inputs -- On Topological and Hyperbolic Properties of Systems with Homoclinic Tangencies -- Homoclinic -explosion: Hyperbolicity Intervals and their Bifurcation Boundaries -- Self-organized Regularity in Long-range Systems.
	Sommario/riassunto	This book, along with its companion volume, Nonlinear Dynamics New Directions: Theoretical Aspects, covers topics ranging from fractal analysis to very specific applications of the theory of dynamical systems to biology. This second volume contains mostly new applications of the theory of dynamical systems to both engineering and biology. The first volume is devoted to fundamental aspects and includes a number of important new contributions as well as some review articles that emphasize new development prospects. The topics addressed in the

two volumes include a rigorous treatment of fluctuations in dynamical systems, topics in fractal analysis, studies of the transient dynamics in biological networks, synchronization in lasers, and control of chaotic systems, among others. This book also: ·   Develops applications of nonlinear dynamics on a diversity of topics such as patterns of synchrony in neuronal networks, laser synchronization, control of chaotic systems, and the study of transient dynamics in biological ·   Includes a study of self-organized regularity in long-range systems ·   Explains use of Levenstein's distance for measuring lexical evolution rates.