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Altri autori (Persone)	RabinovichM. I FristonK. J (Karl J.) VaronaPablo <1968->
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	The dynamical and structural basis of brain activity / Gustavo Deco, Viktor Jirsa, and Karl J. Friston -- Functional connectivity, neurocognitive networks, and brain dynamics / Vinod Menon -- Decoding mental states from patterns of brain activity / John-Dylan Haynes -- Transient brain dynamics / Mikhail Rabinovich and Pablo Varona -- A dynamic field account to language-related brain potentials / Peter Beim Graben and Roland Potthast -- Recognition of sequences of sequences using nonlinear dynamical systems / Stefan J. Kiebel and Karl J. Friston -- The stability of information flows in the brain / Mikhail Rabinovich, Christian Bick, and Pablo Varona -- Multiae scale EEG dynamics and brain functions / Maxim Bazhenov and Scott Makeig -- Mapping the multi-scale information content of complex brain signals / Vasily A. Vakorin and Randy McIntosh -- Connectivity and dynamics of neural information processing / Viktor Jirsa ... [et al.] -- Transient motor behavior and synchronization in the cortex / Andreas Daffertshofer and Bernadette C.M. van Wijk -- Free-energy and global

dynamics / Karl J. Friston -- Perception, action, and utility : the tangled skein / Samuel Gershman and Nathaniel Daw -- Short guide to modern nonlinear dynamics / Valentin Afraimovich, Mikhail Rabinovich, and Pablo Varona.

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#### Sommario/riassunto

Experimental and theoretical approaches to global brain dynamics that draw on the latest research in the field. The consideration of time or dynamics is fundamental for all aspects of mental activity--perception, cognition, and emotion--because the main feature of brain activity is the continuous change of the underlying brain states even in a constant environment. The application of nonlinear dynamics to the study of brain activity began to flourish in the 1990s when combined with empirical observations from modern morphological and physiological observations. This book offers perspectives on brain dynamics that draw on the latest advances in research in the field. It includes contributions from both theoreticians and experimentalists, offering an eclectic treatment of fundamental issues. Topics addressed range from experimental and computational approaches to transient brain dynamics to the free-energy principle as a global brain theory. The book concludes with a short but rigorous guide to modern nonlinear dynamics and their application to neural dynamics.

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