1. Record Nr. UNINA9910300422503321

Titolo	Recurrence Quantification Analysis : Theory and Best Practices / / edited by Charles L. Webber, Jr., Norbert Marwan
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-07155-6
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (XIV, 421 p. 210 illus., 107 illus. in color.)
Collana	Understanding Complex Systems, , 1860-0832
Disciplina	512.72
Soggetti	Statistical physics System theory Vibration Dynamical systems Dynamics Biophysics Biological physics Computational complexity Physical geography Applications of Nonlinear Dynamics and Chaos Theory Systems Theory, Control Vibration, Dynamical Systems, Control Biological and Medical Physics, Biophysics Complexity Earth System Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Mathematical and Computational Foundations of Recurrence -- Estimating Kolmogorov Entropy from Recurrence Plots.-Identifying Coupling Directions by Recurrences -- Complex Network Analysis of Recurrences -- Time Distortions and Other Oddities -- Dynamic Coupling between Respiratry and Cardiovascular System.
Sommario/riassunto	The analysis of recurrences in dynamical systems by using recurrence plots and their quantification is still an emerging field. Over the past

decades recurrence plots have proven to be valuable data visualization and analysis tools in the theoretical study of complex, time-varying dynamical systems as well as in various applications in biology, neuroscience, kinesiology, psychology, physiology, engineering, physics, geosciences, linguistics, finance, economics, and other disciplines. This multi-authored book intends to comprehensively introduce and showcase recent advances as well as established best practices concerning both theoretical and practical aspects of recurrence plot based analysis. Edited and authored by leading researcher in the field, the various chapters address an interdisciplinary readership, ranging from theoretical physicists to application-oriented scientists in all data-providing disciplines.