

1. Record Nr.	UNINA9910438105103321
Titolo	Applications of Chaos and Nonlinear Dynamics in Science and Engineering - Vol. 3 // edited by Santo Banerjee, Lamberto Rondoni
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2013
ISBN	3-642-34017-2
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (X, 296 p. 215 illus., 6 illus. in color.)
Collana	Understanding Complex Systems, , 1860-0832
Disciplina	621
Soggetti	Statistical physics Computational complexity System theory Physics Applications of Nonlinear Dynamics and Chaos Theory Complexity Complex Systems Applications of Graph Theory and Complex Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Preface -- Fluctuation Relations and Chaotic Dynamics -- Monsoon Chaos and Wind Turbine System -- Fractal and its Application in Epileptic Seizure -- Chaos Synchronization: Communications and Symbolic Analysis -- Chaos Synchronization: Systems and Circuits.
Sommario/riassunto	Chaos and nonlinear dynamics initially developed as a new emergent field with its foundation in physics and applied mathematics. The highly generic, interdisciplinary quality of the insights gained in the last few decades has spawned myriad applications in almost all branches of science and technology—and even well beyond. Wherever quantitative modeling and analysis of complex, nonlinear phenomena is required, chaos theory and its methods can play a key role. This third volume concentrates on reviewing further relevant contemporary applications of chaotic nonlinear systems as they apply to the various cutting-edge branches of engineering. This encompasses, but is not limited to, topics such fluctuation relations and chaotic dynamics in physics,

fractals and their applications in epileptic seizures, as well as chaos synchronization. Featuring contributions from active and leading research groups, this collection is ideal both as a reference and as a 'recipe book' full of tried and tested, successful engineering applications.
