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Nota di contenuto	Active Nanoobjects, Neutrino and Higgs Boson in a Fractal Models of the Universe.-Coupled Fractal Structures with Elements of Cylindrical Type -- Brain dynamics explained by means of spectral-structural neuronal networks -- Eect of long-range spreading on two-species reaction-diusion system -- Special Sensitive System via Furstenberg family and its applications -- Mosaic patterns in reaction-diffusion systems -- Modulating the Light-Driven conductivity in Biosystem -- Approaches to Estimating the Dynamics of Interacting Populations with Impulse Eects and Uncertainty -- Tricritical directed percolation with long-range spreading -- Anisotropic MHD Turbulence Near Two Spatial Dimensions: General Field Theoretic Renormalization Group Analysis --

Intermittency of Chaos Functions and the Belousov-Zhabotinsky Reaction -- Reaction-Diffusion Systems and Propagation of Limit Cycles with Chaotic Dynamics -- Decision-making in a context of uncertainty -- Microwave oven plasma reactor moding and its detection -- Unexpected Properties of Open Quantum Graphs and Microwave Networks -- Dynamics of a Cournot duopoly game with differentiated goods between public and private firms -- Influence of the Heart Rate on Dynamics of Cardiorespiratory System -- Threshold Method for Control of Chaotic Oscillations -- Some Implications of Invariant Model of Boltzmann Statistical Mechanics to the Gap between Physics and Mathematics -- Deterministic Irreversibility Mechanism and Basic Element of Matter -- Global Indeterminacy and Invariant Manifolds near Homoclinic Orbit to a Real Saddle in a Resource Optimal System -- The method of singular integral equations in the theory of microstrip antennas based on chiral metamaterials -- Microstrip and fractal antennas based on chiral metamaterials in MIMO systems. .

Sommario/riassunto

Gathering the proceedings of the 12th CHAOS2019 International Conference, this book highlights recent developments in nonlinear, dynamical and complex systems. The conference was intended to provide an essential forum for Scientists and Engineers to exchange ideas, methods, and techniques in the field of Nonlinear Dynamics, Chaos, Fractals and their applications in General Science and the Engineering Sciences. The respective chapters address key methods, empirical data and computer techniques, as well as major theoretical advances in the applied nonlinear field. Beyond showcasing the state of the art, the book will help academic and industrial researchers alike apply chaotic theory in their studies. .