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Nota di contenuto	Relativistic Superjet, Tetraneutrons and Higgs Boson in the Quark-Gluon Model -- Split Dislocations in a Fractal Coupled Structure -- A New Price of the Arithmetic Asian Option:A Simple Formula -- Study on Analog and Discrete Chaos Oscillators Synchronization -- Investigating Environmental Temperature Effect on Gene Transcription Phenomena: Chaos Approach -- Rotor-stator contact in a hydropower machine with squeeze-film damper -- One-directional grid scroll hidden attractor on the plane -- Fundamental Frequency Impact on Vilnius Chaos Oscillator Dynamics -- Evaluation of critical dimension composite operators for the stochastic model A -- Analysis and Control of Chaos in Simple 3D Autonomous System with Exponential Nonlinearity -- Principal component analysis on granularity and instability of economic systems in emerging countries -- Codification of images based on deterministic Brownian motion -- Synthesis of multifractals by Brownian dynamics of a point in a field of N central forces -- A Higher-Order Septic Nonlinear Model for Transverse waves in a Generalized Elastic Medium -- Renormalization group study of two-species reaction-diffusion system: Influence of random velocity fluctuations -- Helical Magnetohydrodynamic Turbulence Progress in Two-Loop

Approximation -- Dynamics of an electronic relay systems with bandpass ltered feedback -- Thermodynamics of Dissipative Solitons -- Possible Chaotic Behavior in Models Inspired by Field Theories -- Generalized Normal Forms in Dynamical Systems Near Equilibrium -- Chemical Analogs of Voronoi Diagrams -- 3-D Discrete Vortex and Convection for the Lorenz System -- 3-D Discrete Eddy and Convection for the Turing Model -- Complex dynamics generated by simultaneous route and departure time choice in transportation networks -- Distributions of the reection amplitude for networks with unitary and symplectic symmetries in the case of large absorption -- Modulational Instability, Vector Solitons and Extreme Amplitude Envelopes in Asymmetric Coupled Nonlinear Schrodinger Equations -- A New Method for Improving Pseudorandomness of Pseudorandom Sequences with Applications -- Entropy-Based Approaches of Edge Significance Quantification in Complex Networks: Detection of Link Vulnerabilities Using Static, Dynamic and Group-Focused Methods -- On the Efficiency and Accuracy of the FORM Algorithm Applied to Nonlinear Models for Geotechnical Design -- Metamodelling with the Multi-Dimensional Hermite Polynomial Chaos Expansion -- Exploring the Chaotic Dynamics of Cocirculating Disease Strains:Toward Agent-Based Modeling -- Dynamics of a Hydropower Rotor supported by an Elastic Generator-Bearing Bracket -- Chaos in hydrodynamic system with delay -- Defining ontologies within the FDB model -- Investigation the effect of moment on processes near the surface of a crystalline body based on a micromodel -- Anomalous scaling under the influence of helicity and finite-time correlations in the Kazantsev-Kraichnan model of fully developed kinematic magnetohydrodynamic turbulence -- SIR and SIS Epidemic Dynamics in Random Contact Networks -- Effects of nonlinear magnetic forces on the dynamics of hydropower generators with floating rotor rim -- Core expansion and spiral breakup in oscillatory recovering media -- Optimization of the Management of the Quality of Living Environment using the Chaotic Approach -- Dynamics of a Cournot Game with Differentiated Goods and Asymmetric Information -- Attractor Coexistence, Butterfly Effects, and Chaos (ABC):A Review of Lorenz and Generalized Lorenz Models -- Invariant Boltzmann Statistical Mechanics and the Physical Foundations of Quantum Mechanics, Quantum Gravity, and Quantum Cosmology -- Weak Chaos in the Plasma of a Fusion Device -- Chaos in the 0 SFS Josephson junction -- A Fisher Information Perspective of Relativistic Quantum Mechanics -- Temporal Divergence of C. elegans Locomotion -- Predicting high frequency prices: new evidence from the E-mini S&P 500 futures market.

Sommario/riassunto

This proceedings of 16th CHAOS2023 International Conference 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 Engineering Sciences. The principal aim of CHAOS2023 International Conference is to expand the development of the theories of the applied nonlinear field, the methods, empirical data, and computer techniques as well as the best theoretical achievements of chaotic theory. CHAOS2023 Conference provides a forum for bringing together the various groups working in the area of Nonlinear and Dynamical Systems, Chaotic theory, and Application to exchange views and report research findings. Chapter 22 and 23 are available open access under a Creative Commons Attribution 4.0 International License via link.springer.com.