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Soggetti	Engineering mathematics Computational complexity Differential equations, Partial Statistical physics Engineering Mathematics Complexity Partial Differential Equations Applications of Nonlinear Dynamics and Chaos Theory
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Nota di contenuto	Advances on fixed point results on partial metric spaces -- Localization of the spectral expansions associated with the partial differential operators -- Irregularity in Graphs and Inverse Problems -- Hyers-Ulam and Hyers-Ulam-Rassias Stability for a Class of Integro-Differential Equations -- Fixed point results for mixed multivalued mappings of Feng-Liu type on Mb-metric spaces -- The limit q-Bernstein operators with varying q -- Analytical investigation on the fractional diffusion-absorption equation -- A New Contribution to Nonparametric Regression by Conic Quadratic Programming -- On the existence of solution for a sum fractional finite difference inclusion -- Fractional Order Filter Discretization by Particle Swarm Optimization Method -- Comparison on Solving a Class of Nonlinear Systems of Partial Differential Equations and Multiple Solutions of Second Order Differential Equations.
Sommario/riassunto	This book collects chapters dealing with some of the theoretical

aspects needed to properly discuss the dynamics of complex engineering systems. The book illustrates advanced theoretical development and new techniques designed to better solve problems within the nonlinear dynamical systems. Topics covered in this volume include advances on fixed point results on partial metric spaces, localization of the spectral expansions associated with the partial differential operators, irregularity in graphs and inverse problems, Hyers-Ulam and Hyers-Ulam-Rassias stability for integro-differential equations, fixed point results for mixed multivalued mappings of Feng-Liu type on Mb-metric spaces, and the limit q-Bernstein operators, analytical investigation on the fractional diffusion absorption equation. Brings new insights into the field of applied mathematical methods applied in engineering science including nonparametric regression by conic quadratic programming and fractional order filter discretization by particle swarm optimization method. Demonstrates the existence of a solution for a sum fractional finite difference inclusion; Presents multiple solutions of second order differential equations.

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