1. Record Nr. UNINA9911034961403321

Autore	Naifar Omar
Titolo	Fractional Calculus and Applications : ICFCA 2024, Sousse, Tunisia, December 26–30 / / edited by Omar Naifar, Abdellatif Ben Makhlouf, Mohamed Ali Hammami
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	9783031953811 9783031953804
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (358 pages)
Collana	Springer Proceedings in Mathematics & Statistics, , 2194-1017 ; ; 505
Altri autori (Persone)	Ben MakhloufAbdellatif HammamiMohamed Ali
Disciplina	515.35
Soggetti	Differential equations Mathematical analysis System theory Control theory Engineering mathematics Engineering - Data processing Differential Equations Integral Transforms and Operational Calculus Systems Theory, Control Mathematical and Computational Engineering Applications
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	- The Fractional-Order Selkov-Schnakenberg Reaction-Diffusion model: Stability and Numerical simulations (Iqbal H. Jebril, Issam Bendib, Adel Ouannas, Salah Boulaaras, Iqbal M. Batiha and Shaher Momani) -- Finite-Time Stability Analysis of Reaction-Diffusion Systems with Fractional-Order Dynamics: A Study Using the Selkov-Schnakenberg Model (Issam Bendib, Adel Ouannas, Shaher Momani and Chaouki Aouiti) -- Global Stability Analysis of Fractional Selkov-Schnakenberg Reaction-Diffusion Systems (Iqbal H. Jebril, Issam Bendib, Adel Ouannas, Salah Boulaaras, Iqbal M. Batiha and Shaher Momani) -- Dynamics in Finite-Time of the Fractional-Order FitzHugh-

Nagumo model: stability, synchronization, and simulations (Issam Bendib, Adel Ouannas, Mohammed Al Horani and Mohamed Dalah) -- On Fractional Variable-Order Neural Networks under Atangana-Baleanu-Caputo Derivative (Ma'mon Abu Hammad, Amel Hioual, Adel Ouannas, Shaher Momani and Zohir Dibi) -- Blow up solutions for a variant of the Cahn-Hilliard equation describing growth of cancerous cells (Hussein Fakih, Salam Abou Baraki, Ragheb Mghames and Yahia Awad) -- A New Fractional Discrete Memristive Map with Incommensurate Order and Hidden Dynamics (Imane Zouak, Adel Ouannas and Amina-Aicha Khennaoui) -- Qualitative Analysis and Hopf bifurcation for a fractional order ratio-dependent prey-predator model (Canan Celik and Kübra Deerli) -- Hidden Chaos in new Fractional Sigmoidal-Based Quadratic Memristive Map (Louiza Diabi and Adel Ouannas) -- Stability Investigation of Nonlinear Fractional Difference Equations with Incommensurate Orders (Noureddine Djenina, Adel Ouannas, Shaher Momani and Giuseppe Grassi) -- Resolvent operator approach for solving some fractional abstract Volterra-Fredholm integro-differential equations with deviated argument (Fatiha Boutaous) -- Sequential Bayesian A-Optimal Sampling Locations for Fractional Partial Differential Equations (Ryad Ghanam and Edward L. Boone) -- On the Solutions of Two-Point Nonlinear Fractional Differential Equations with Multiple Fractional Boundary Conditions (Yahia Awad, Hussein Fakih, Karim Amin and Ragheb Mghames) -- Some new Chebyshev and Grüss-type fractional inequalities obtained by a generalized fractional integral operator (Mustafa Gürbüz and Çar Aak) -- Regularity of Solutions for a Class of Neutral Fractional Stochastic Differential Equations (Jihen Sallay) -- The Lindley q-Distribution: Development, Properties, and Statistical Applications (Bouzida Imed and Zitouni Mouna).

Sommario/riassunto

This proceedings volume convenes works within the field of fractional calculus and its applications, presented at the International Conference on Fractional Differentiation and its Applications (ICFCA), held in Sousse, Tunisia, from December 26th to 30th, 2024. In its first rendition, the ICFCA gathers papers from several countries such as Algeria, Lebanon, Qatar, Tunisia, Türkiye, and United Arab Emirates, among others. It aims to provide a unique platform for researchers engaged in fractional calculus in a mathematical context. Covered topics range from foundational aspects, such as fractional differential equations, stability analysis, boundary value problems, and inverse problems, to more applied aspects such as fractional control systems, and the use of fractional calculus tools and techniques in physics, engineering, biology, and more. This volume fills a gap in the fractional calculus landscape by covering theoretical developments and applications in various fields while showcasing the recent findings of a new generation of researchers.