

1. Record Nr.	UNINA9910555008503321
Titolo	Fractional order analysis : theory, methods and applications // edited by Hemen Dutta, Ahmet Ocak Akdemir, Abdon Atangana
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , 2020
ISBN	1-119-65420-3 1-119-65423-8 1-119-65422-X
Descrizione fisica	1 online resource (443 pages) : illustrations
Disciplina	515.83
Soggetti	Fractional calculus
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	On the fractional derivative and integral operators -- Generalized conformable fractional operators and their applications -- Analysis of new trends of fractional differential equations -- New estimations for exponentially convexity via conformable fractional operators -- Lyapunov type inequalities for local fractional proportional derivatives -- Minkowski type inequalities for mixed conformable fractional integrals -- New estimations for different kinds of convex functions via conformable integrals and RiemannLiouville fractional integral operators -- Legendre-Spectral algorithms for solving some fractional differential equations -- Mathematical modeling of an autonomous nonlinear dynamical system for Malaria transmission using Caputo derivative -- MHD free convection flow over a vertical plate with ramped wall temperature and chemical reaction in view of non-singular kernel -- Comparison of the different fractional derivatives for the dynamics of Zika virus.
Sommario/riassunto	"The book contains new research findings in fractional order analysis. Different tools and techniques from the field of fractional order analysis are found to be extremely helpful in practical applications because such analyses can help in developing mathematical methods or models more accurately. The book covers topics such as: conformable fractional operators, local fractional proportional derivatives, fractional derivative and integral operators, different inequalities via several fractional

environments, different type of fractional integral operators, fractional-order chaotic model, flow models in fractional environment, multi-dimensional fractional order models, fractional modelling of the transmission dynamics of Influenza, and Zika virus model with various fractional derivatives. Using this book, readers can find several useful, relevant and connected topics in one place, which is necessary for crucial understanding of research problems of an applied nature"--

---