1. Record Nr. UNINA9910484601703321

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| Autore | Anastassiou George A. <1952-> |
| Titolo | Generalized fractional calculus : new advancements and applications / / George A. Anastassiou |
| Pubbl/distr/stampa | Cham, Switzerland : , : Springer, , [2021]<br>Â©2021 |
| ISBN | 3-030-56962-4 |
| Edizione | [1st ed. 2021.] |
| Descrizione fisica | 1 online resource (XV, 498 p. 1 illus.) |
| Collana | Studies in Systems, Decision and Control, , 2198-4182 ; ; 305 |
| Disciplina | 515.352 |
| Soggetti | Fractional calculus<br>Fractional differential equations<br>Control and systems theory |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | Caputo -fractional Ostrowski inequalities -- Caputo -fractional Ostrowski and Gruss inequalities involving several functions -- Weighted Caputo fractional Iyengar type inequalities -- Generalized Canavati g-fractional Iyengar and Ostrowski inequalities -- Generalized Canavati g-fractional Polya inequalities -- Caputo generalized -fractional integral type inequalities -- Generalized -fractional Quantitative Approximation by Sub-linear Operators -- Generalized g–iterated fractional Quantitative Approximation by Sublinear Operators -- Generalized g–Fractional vector Representation Formula and Bochner integral type inequalities for Banach space valued functions -- Iterated g–Fractional vector Bochner integral Representation Formulae and inequalities for Banach space valued functions -- Vectorial generalized g–fractional direct and iterated Quantitative Approximation by linear operators -- Quantitative Multivariate Complex Korovkin Approximation Theory -- M-fractional integral type inequalities -- Principles of Stochastic Caputo Fractional Calculus with Fractional Approximation of Stochastic Processes -- Trigonometric Caputo Fractional Approximation of Stochastic Processes -- Trigonometric Conformable Fractional Approximation of Stochastic Processe -- Commutative Caputo Fractional Korovkin Approximation for Stochastic Processes -- Trigonometric Commutative Caputo Fractional Korovkin |

Approximation for Stochastic Processes -- Commutative Conformable Fractional Korovkin Approximation for Stochastic Processes -- Trigonometric Commutative Conformable Fractional Korovkin Approximation for Stochastic Processes -- Concluding Remarks.

Sommario/riassunto

This book deals with the quantitative fractional Korovkin type approximation of stochastic processes. Computational and fractional analysis play more and more a central role in nowadays either by themselves or because they cover a great variety of applications in the real world. The author applies generalized fractional differentiation techniques of Caputo, Canavati and Conformable types to a great variety of integral inequalities, e.g. of Ostrowski and Opial types, etc. Some of these are extended to Banach space valued functions. These inequalities have also great impact on numerical analysis, stochastics and fractional differential equations. The author continues with generalized fractional approximations by positive sublinear operators which derive from the presented Korovkin type inequalities, and the author include also abstract cases. The author present also multivariate complex Korovkin quantitative approximation theory. It follows M-fractional integral inequalities of Ostrowski and Polya types. The author’s results are weighted so they provide a great variety of cases and applications. The author lays there the foundations of stochastic fractional calculus. The author considers both Caputo and Conformable fractional directions, and the author derives regular and trigonometric results. Our positive linear operators can be expectation operator commutative or not. This book results are expected to find applications in many areas of pure and applied mathematics and stochastics. As such this book is suitable for researchers, graduate students and seminars of the above disciplines, also to be in all science and engineering libraries.

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| 2. | Record Nr. | UNINA9910137090703321 |
| | Autore | Emanuel Dutra |
| | Titolo | Circulation weather types as a tool in atmospheric, climate and environmental research / / edited by : Alexandre M. Ramos, David Barriopedro and Emanuel Dutra |
| | Pubbl/distr/stampa | Frontiers Media SA, 2015<br>Lausanne, Switzerland : , : Frontiers Media SA, , 2015<br>©2007-2015 |
| | Descrizione fisica | 1 online resource (151 pages) : illustrations; digital, PDF file(s) |
| | Collana | Research Topics |
| | Disciplina | 551.6 |
| | Soggetti | Meteorology - Research<br>Climatology - Methodology<br>Environmental sciences |
| | Lingua di pubblicazione | Inglese |
| | Formato | Materiale a stampa |
| | Livello bibliografico | Monografia |
| | Nota di bibliografia | Includes bibliographical references. |
| | Nota di contenuto | Circulation weather types as a tool in atmospheric, climate, and environmental research -- A new circulation type classification based upon Lagrangian air trajectories --Circulation weather types and spatial variability of daily precipitation in the Iberian Peninsula --The influence of circulation weather patterns at different spatial scales on drought variability in the Iberian Peninsula --Multi-decadal classification of synoptic weather types, observed trends and links to rainfall characteristics over Saudi Arabia --From daily climatic scenarios to hourly atmospheric forcing fields to force Soil-Vegetation-Atmosphere transfer models --Cold surge activity over the Gulf of Mexico in a warmer climate --A climatology of low level wind regimes over Central America using a weather type classification approach --Circulation patterns identified by spatial rainfall and ocean wave fields in Southern Africa --Weather types across the Maritime Continent: from the diurnal cycle to interannual variations --A synoptic climatology of heavy rain events in the Lake Eyre and Lake Frome catchments. |
| | Sommario/riassunto | Classifications of circulation weather systems have a long history in meteorology and climatology. Starting with manual classifications over |

specific regions of the globe, these tools (generally called “catalogs of synoptic types”) were restricted mainly to weather forecasting and historical climate variability studies. In the last decades, the advance of computing resources and the availability of datasets have fostered the development of fast and objective methods that process large amount of data. In recent years numerous methods of circulation type classification have been designed, showing their usefulness on a wide range of applications in scientific domains related to weather, climate, and environment. This Research Topic highlights methodological advances in circulation weather types and also their applications to different research areas. The articles included in this research topic show that circulation weather types can be used not only in Europe, where they have been always more frequent, but also applied to other regions of the world.