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Autore	Atangana Abdon
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Nota di contenuto	History on Covid-19 Spread -- Fractional Dierential and Integral Operators -- Existence and Uniqueness for stochastic dierential equations -- Numerical scheme for a general Stochastic equation with classical and fractional derivatives -- A simple SIR model of Covid-19 spread -- An application of SEIRD approach -- Modelling the transmission of Coronavirus with SEIR approach -- Modeling the spread of Covid-19 with a SIA IR IU approach: Inclusion of unreported infected class -- A comprehensive analysis of Covid-19 model -- Analysis of SEIARD model of Coronavirus transmission -- A mathematical model with Covid-19 reservoir -- A new model with asymptomatic and

quarantined classes.

Sommario/riassunto

This book provides a thorough conversation on the underpinnings of Covid-19 spread modelling by using stochastics nonlocal differential and integral operators with singular and non-singular kernels. The book presents the dynamic of Covid-19 spread behaviour worldwide. It is noticed that the spread dynamic followed process with nonlocal behaviours which resemble power law, fading memory, crossover and stochastic behaviours. Fractional stochastic differential equations are therefore used to model spread behaviours in different parts of the worlds. The content coverage includes brief history of Covid-19 spread worldwide from December 2019 to September 2021, followed by statistical analysis of collected data for infected, death and recovery classes.