

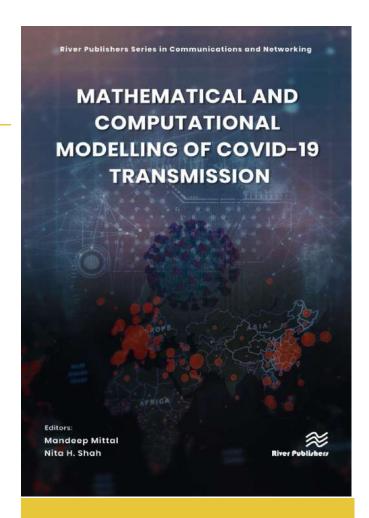
## **Mathematical and Computational Modelling of Covid-19 Transmission**

## Fditors:

Mandeep Mittal, Amity University Noida, India Nita H. Shah, Gujarat University, India

Infectious diseases are leading threats and are of highest risk to the human population globally. Over the last two years, we saw the transmission of Covid-19. Millions of people died, and also forced to live with a disability. Mathematical models are effective tools that enable analyzing relevant information, simulate the related process and evaluate beneficial results. They can help to make rational decisions towards a healthy society. Formulation of mathematical models for a pollution-free environment is also very important for society. To determine the system which can be modelled, we need to formulate the basic context of the model underlying some necessary assumptions. This describes our beliefs in terms of the mathematical language of how the world functions.

This book addresses issues during the Covid phase and post-Covid phase. It analyzes transmission, impact of coinfections, and vaccination as a control or to decrease the intensity of infection. It also talks about the violence and unemployment problems occurring during the post-Covid period. This book will help societal stakeholders to resume normality slowly and steadily.



## River Publishers Series in Mathematical, Statistical and Computational Modelling for Engineering

ISBN: 9788770228312 e-ISBN: 9788770228305

Available From: December 2023

Price: € 108.50 \$ 61.99

## **KEYWORDS:**

Air Pollution, ANN Model, Atanganaâ€"Baleanu fractional, Auto regression model, Basic reproduction number, Booster dose, Caputo fractional-order derivative, Caputo derivative, Classifying motive of information, Co-infection, Coronavirus, COVID-19, Dynamical system, Environment, Epidemic violence, Forecast, Forward bifurcation, Hopf Bifurcation, L1 scheme, LSTM, Mathematical model, Medical Wastage, Memory effect, Misinformation spread dynamics, **Next-generation** matrix method. Numerical simulation, Omicron, Optimal control, Pandemic, Pattern identification of misinformation spread, Pneumonia, **Prey-Predator** Prediction, Model, Simulation, s, Square root functional respon Analysis Transmissible Equilibrium points diseases in predato nt, Vaccination, Validation and Predi ution

www.riverpublishers.com marketing@riverpublishers.com