

Special Issue

Fractional Dynamics in Epidemic Models: Theoretical Approaches and Applications

Message from the Guest Editors

This Special Issue explores the intersection of fractional dynamics and epidemiological modeling, focusing on advanced theoretical approaches and their practical applications in understanding and controlling infectious diseases. The integration of stochastic models and non-linear dynamics provides a robust framework for capturing the inherent randomness and complexity of epidemic spread, while fractional calculus offers a powerful tool to model memory effects and long-range dependencies in disease transmission. By treating epidemics as complex systems, this Special Issue highlights the interplay between individual behaviors, environmental factors, and population-level dynamics. Contributions in this collection emphasize the role of dynamical systems theory in analyzing stability, bifurcations, and control strategies for epidemic models.

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About the Journal

Message from the Editor-in-Chief

Fractal and Fractional (*Fractal Fract.*) is a scholarly online journal which provides a forum for discussion on new original models and methods in fractals and fractional calculus both from theory and applications. It is a peer-reviewed, open access journal that publishes high quality original research articles, review papers and short communications.

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