



Editorial

Editorial Note: Applied Mathematics on Science and Engineering

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Mathematical modeling has become an indispensable tool in understanding and controlling the spread of infectious diseases. From classical compartmental models such as the SIR framework to advanced agent-based and stochastic approaches, mathematics provides a structured way to capture disease dynamics, predict outbreak patterns, and evaluate intervention strategies.

In recent years, global health crises have underscored the importance of reliable models that integrate epidemiological data, human behavior, and environmental factors. Such models not only enhance our ability to forecast infection trajectories but also serve as a scientific basis for public health policies, including vaccination campaigns, quarantine measures, and resource allocation.

This issue of the Journal of Applied Mathematics on Science and Engineering brings together research contributions that advance the theory and application of mathematical models in infectious disease studies. The works presented here demonstrate how interdisciplinary collaboration between mathematicians, epidemiologists, and engineers can yield powerful tools for decision-making in healthcare.

As infectious diseases continue to challenge societies worldwide, the role of applied mathematics in addressing these problems will only grow in significance. We encourage our readers and contributors to further explore this critical area of research, fostering innovations that bridge theory and practice for the betterment of global health.

— Editor-in-Chief

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