



## Mathematical Biology and Infectious Diseases

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### Message from the Guest Editors

Mathematical biology provides theoretical foundations for elucidating and characterizing various infectious disease dynamics in the coupled ecological and epidemiological system. Several large epidemics in the 21st Century, including the original SARS, Ebola, Zika, and COVID-19, have demonstrated the importance of the mathematical modeling of infectious diseases for effective decision support. While a large number of epidemic models have been developed recently, many of them focus on human populations. Other important biological and ecological factors, such as pathogen evolution, vector and non-human carriers' population dynamics, environmental variability, and landscape heterogeneity, should be considered in current epidemic models for a more accurate depiction of the coupled eco-epidemiological system.

In this Special Issue, we encourage submissions providing cutting-edge methodologies and innovative insights into the interface of mathematical biology and infectious diseases. Potential topics include but are not limited to, the keywords provided below.





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## Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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