Special Issue on
Mathematical Modeling and Control of Infectious Diseases

CALL FOR PAPERS

In recent years, mathematical modelling has become a valuable tool in the analysis of infectious disease dynamics and to support the development of control strategies. This special issue will highlight the conceptual ideas and mathematical tools needed for infectious disease modeling. The focus will be on the dynamics of infectious diseases, the analysis of transmission patterns in various populations and methods to assess the effectiveness of control strategies such as HIV, childhood infections, influenza, and vector borne infections.

This special issue is concerned with qualitative behaviors of infectious disease model. The qualitative behavior of model includes positivity, uniqueness, local stability, global stability, bifurcation analysis, control of diseases, and existence of solutions. The aim of this special issue is to provide a platform for the discussion of the major research challenges and achievements on qualitative behaviors of infectious diseases and their control. Theoretical as well as application results are welcome.

Potential topics include but are not limited to the following:

- Modeling of infectious disease in integer order
- Modeling of infectious disease in fractional order
- Stochastic models for the spread of infectious diseases
- Models containing delay differential equations
- Age structured population models of infectious diseases
- Asymptotic behavior (local and global stability of epidemic models)
- Optimal control theory used in modelling of infectious diseases
- Numerical solutions of epidemic models by using realistic data
- Real world phenomena in Biomathematics
- Biological modeling
- Epidemiology

Authors can submit their manuscripts through the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/cmmm/mmcid/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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