

Mini-symposium title

Modeling virus infection

Mini-symposium organizers, names, affiliations and e-mails;

Libin Rong, University of Florida, libinrong@ufl.edu

Brief synopsis of mini-symposium including justification of how the topic relates to population dynamics;

Mathematical modeling and computational methods, combined with experimental data, have played an important role in studying virus dynamics within an infected host. As more data and observations arise, new models need to be developed to explain them. The objective of this mini-symposium is to bring together scientists from different disciplines to present their recent results, and foster cross-disciplinary discussion and collaboration. We expect that the interaction of participants will advance this area by developing new models that account for new data, improving the understanding of infectious disease pathogenesis, and providing insights for designing new treatment and vaccination strategies. Models that includes more biological details also create challenges in mathematical analyses and numerical simulations. We expect that the participation will lead to more developments in the theory of differential equations and dynamical systems, as well as computational and statistical methods that tackle model analysis and data comparison.

These models study the interaction between various populations of cells, target cells, and immune responses within an infected host, and thus serve as a good example of the study of population dynamics.

Confirmed speakers list (2 blocks, 8 speakers).

Jessica Conway, Penn State University

Cameron Browne, University of Louisiana at Lafayette

Chang-Yuan Cheng, National Pingtung University, Taiwan

Naveen Vaidya, San Diego State University

Jane Heffernan, York University, Canada

Ryan Nikin-Beers, University of Florida

Mingwang Shen, Xi'an Jiaotong University, China

Xia Wang, Xinyang Normal University, China