

Title: Modeling Infection Dynamics Across the Scales

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Summary:

Mathematical models can help describe the dynamics of complex biological systems. An important example, which spans several biological scales, is modeling host-parasite interactions. Pathogens impact all ecosystems, from viruses of microbes (phages) to the spread of infectious pathogens in human populations. A better understanding of infection dynamics across scales can lead to significant insights in theoretical biology, along with effective control measures against parasites that harm humans. This session will explore recent results, methods and models in mathematical ecology and epidemiology across the scales.

\*\*\*This mini-symposium will have one junior and three senior faculty presenters in the fields of Experimental/Theoretical and Mathematical Biology and each one will present their work on the modeling infection dynamics on distinct scales.

Proposed speakers and their affiliations:

- 1)Naveen Vaidya, San Diego State University, nvaidya@sdsu.edu, confirmed
- 2)Fabio Milner, Arizona State University, milner@asu.edu, confirmed.
- 3)Juan B. Gutierrez, University of Georgia, jgutierrez@uga.edu, confirmed
- 4) Anna Jolles, Oregon State University, aejolles@gmail.com, confirmed.