

GEORGE MASON UNIVERSITY
COLLEGE OF SCIENCE
BIOLOGY DEPARTMENT SEMINAR
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Shweta Bansal, Department of Biology, Georgetown University

“When does individual behavior matter: contact network models for immunizing pathogens”

Many infectious agents spread via close contact between infected and susceptible individuals. The nature and structure of interactions among individuals is thus of fundamental importance to the spread of infectious disease. Heterogeneities among host interactions can be modeled with contact networks, and analyzed using tools of percolation theory. Thus far, the field of contact network epidemiology has largely been focused on the impact of network structure on the progression of disease epidemics. In this talk, we introduce network models which incorporate feedback of the disease spread on network structure, and explore how this feedback limits the potential for future outbreaks. This has implications for seasonal diseases such as influenza, and supports the need for more adaptive public health policies in response to disease dynamics.

TUESDAY March 17, 2015

3:00-4:15 PM

Johnson Center Room Meeting Room D