Applied Dynamical Systems Seminar

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12:00p.m., HH-3017

A Reaction-Diffusion Model of Rabies with Spatial Heterogeneity

Abstract:

In this talk, I will show how the theory of the principal eigenvalue and basic reproduction number R0, which was reported in my last talk, can be used to study a reaction-diffusion model of rabies with spatial heterogeneity. It turns out that R0 can be characterized via the principal eigenvalue of an elliptic eigenvalue problem associated with this model. By using numerical computations of R0, we are able to discuss the influence of spatial heterogeneity and population mobility on the disease transmission. This talk is based on my joint paper with Wendi Wang (SIAM J. Appl. Dyn. Syst., in press).

----------All are welcome----------