

1081-35-157

King-Yeung Lam*, lam.184@osu.edu, and **Yuan Lou** and **Wei-Ming Ni**. *PDE vs ODE Dynamics*.

Dynamics, or behaviour of solution of nonlinear reaction-diffusion system is deeply related to that of its kinetic problem. In this lecture, we will use the classical Lotka-Volterra competition model as an example to illustrate some connections between the two. Also, the asymptotic behavior of the principal eigenvalue of linear cooperative elliptic systems, as the diffusion rates approach zero, will be motivated and studied. (Received February 08, 2012)