Applied Dynamical Systems Seminar

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Monday, March 04, 2013
13:00-14:00
HH-3026

Asymptotic Analysis and Applications

Abstract:

 I will use some examples to illustrate various applications of asymptotic analysis in statistics, biology and physics. To be specific, I will provide an asymptotic formula of nonlinear moment for a large sum of random variables. I will derive a singular perturbation solution of steady-state Poisson-Nernst-Planck system in an ion channel model. I will approximate the periodic pattern and dynamic threshold of a bird migration model. In the last, I will give a brief introduction of some recent developments in asymptotic analysis of orthogonal polynomials.