

Graduate Seminar

Professor Xiaoqiang Zhao

**Thursday, September 24, 2015
HH-3017, 1:00p.m.**

Basic Reproduction Numbers for Population Models

Abstract:

The basic reproduction number is one of the most important concepts in population biology. In epidemiology, it is the expected number of secondary cases produced, in a completely susceptible population, by a typical infective individual, and it is also a commonly used measure of the effort needed to control an infectious disease. In this talk, I will first present the motivations for the basic reproduction number. Then I will show how to introduce this concept for autonomous systems with compartmental structure. Two application examples and further developments will be also mentioned.