

# Colloquium

**Dr. Yijun Lou**  
**The Hong Kong Polytechnic University**

**Friday, July 24, 2015**  
**2:00pm, HH 3017**

**Age Structures in Population Growth: modelling, analysis,  
numerical simulations and applications**

**Abstract:** This talk will present my personal view on the investigations of age structures in population growth via functional differential systems. The first part will focus on modelling the structured population by a PDE equation with an appropriate boundary condition and initial data. Then, various functional differential systems can be derived from the PDE equation with respective biological assumptions. The second and third parts are going to illustrate the application side of the first part, by analyzing a structured population growth model and studying an age-structured predator-prey model. This talk is partially based on joint work with Drs. Jian Fang and Stephen Gourley.