数学与系统科学研究院

计算数学所学术报告

报告人：Prof. Hulin Wu

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报告题目：

Biological Dynamic Systems: Inverse Problems Based on Experimental Data

邀请人： 洪佳林 研究员

报告时间：2018 年 7 月 8 日（周日）

下午 16:00-17:00

报告地点： 数学院南楼二层

222 教室

Abstract：

Differential equation models are widely used to describe and characterize the behaviors of dynamic systems in physics, engineering, finance, economy, biology and among many other scientific fields. The properties and forward problems of various differential equations have been well studied in the past decades. However, the inverse problem (model construction and parameter estimation) of even simplest ordinary differential equation (ODE) models have not been fully explored until recently. In this talk, I will share our experience and results in developing statistical methods for ODE inverse problems via biomedical application examples, in particular modeling immune response to influenza infections. The model construction and parameter estimation methods for linear, nonlinear and high-dimensional ODEs will be introduced. Biological findings based on the established dynamic models will be discussed.

欢迎大家参加！