

**Indiana University-Purdue University
Indianapolis**
Department of Mathematical Sciences

STATISTICS SEMINAR

12:15pm—1:15pm, Tuesday, April 09, 2019
LD 265

Speaker: Xiang Wang
Department of Mathematical Sciences, IUPUI

Title: Efficient Estimation of the Nonparametric Mean and
Covariance Functions for Longitudinal and Sparse Func-
tional Data

Abstract:

We consider the estimation of mean and covariance functions for longitudinal and sparse functional data by using the full quasi-likelihood coupling a modification of the local kernel smoothing method. The proposed estimators are shown to be consistent, asymptotically normal, and semiparametrically efficient in terms of their linear functionals. Their superiority to the competitors is further illustrated numerically through simulation studies. The method is applied to analyze AIDS study and atmospheric study.