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Seminar

Speaker: **Professor Michael Levine**
Purdue University

Title: **Nonparametric regression with rescaled time series errors**

Time: **3:20 – 4:20pm, *Wednesday*, September 18, 2013**

Place: **552 Hill Center**

Abstract

We consider a heteroscedastic {nonparametric regression model with an} autoregressive error process of finite known order p. The heteroscedasticity is incorporated using a scaling function {defined at uniformly spaced design points on an interval [0,1]}. We provide an innovative nonparametric estimator of the variance function and establish its consistency and asymptotic normality. We also propose a semiparametric estimator for the vector of autoregressive error process coefficients that is consistent at the square root of the sample size rate and asymptotically normal for a sample size T. Explicit asymptotic variance covariance matrix is obtained as well. Finally, the finite sample performance of the proposed method is tested in simulations.

***** Refreshments will be served at @2:50pm in Room 502 Hill Center *****