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COLLOQUIUM ANNOUNCEMENT

Department of Statistics
Virginia Tech

Thursday, November 5, 2009
204 Hutcheson Hall
3:30 p.m.

SPEAKER: Helen Zhang, Dept. of Statistics, North Carolina State University

TITLE: Automatic Model Structure Selection for Partially Linear Models

ABSTRACT:

Partial linear models provide good compromises between linear and nonparametric models. However, how to decide which covariates are linear and which are nonlinear is a long-standing problem and not completely solved yet. Two methods are commonly used in practice: the first method is based on hypotheses testing, which is theoretically challenging due to multiple nonparametric tests. The second method is preliminary screening based on univariate analysis such as scatter plots to decide the proper regression form for each term, which is kind of very ad hoc. In this paper, we tackle this problem in the model selection perspective. A unified estimation and selection approach is proposed, and it can automatically determine the linearity or nonlinearity of each covariate and estimate these components consistently at the same time. Both theoretical and numerical properties of the proposed estimators are presented.



☺ Please join us after the colloquium for refreshments at Top of the Stairs (217 College Ave.) ☺