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COLLOQUIUM ANNOUNCEMENT

Department of Statistics
Virginia Tech

Thursday, October 22, 2009
204 Hutcheson Hall
3:30 p.m.

SPEAKER: Chris Parmeter, Dept. of Ag. Econ, Virginia Tech

TITLE: Constrained Nonparametric Kernel Regression: Estimation
and Inference

ABSTRACT:

Restricted kernel regression methods have recently received much well-deserved attention. Powerful methods have been proposed for imposing monotonicity on the resulting estimate, a condition often dictated by theoretical concerns; see Hall, Huang, Gifford & Gijbels (2001) and Hall & Huang (2001), among others. However, to the best of our knowledge, there does not exist a simple yet general approach towards constrained nonparametric kernel regression that allows practitioners to impose any manner and mix of constraints on the resulting estimate. In this paper we generalize Hall & Huang's (2001) approach in order to allow for equality or inequality constraints on a nonparametric kernel regression model and its derivatives of any order. The proposed approach is straightforward, both conceptually and in practice. A testing framework is provided allowing researchers to thereby impose and test the validity of the restrictions. Theoretical underpinnings are provided, illustrative Monte Carlo results are presented, and an application is considered.



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