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Seminar

Speaker: **Professor Ian McKeague**
Columbia University

Title: **Adaptive resampling for detecting the presence of significant predictors**

Time: **3:20 – 4:20pm, Wednesday, April 17, 2013**

Place: **552 Hill Center**

Abstract

This talk discusses a new screening procedure based on marginal linear regression for detecting the presence of a significant predictor. Standard inferential methods are known to fail in this setting due to the non-regular limiting behavior of the estimated regression coefficient of the selected predictor; in particular, the limiting distribution is discontinuous at zero as a function of the regression coefficient of the predictor maximally correlated with the outcome. To circumvent this non-regularity, we propose a bootstrap procedure based a local model in order to better reflect small-sample behavior at a root-n scale in the neighborhood of zero. The proposed test is adaptive in the sense that it employs thresholding to distinguish situations in which a centered percentile bootstrap applies, and otherwise adapts to the local asymptotic behavior of the test statistic in a way that depends continuously on the local parameter. The talk is based on joint work with Min Qian.

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

