Timothy McMurry

"Nonparametric Regression with Infinite Order Flat-Top Kernels"

Abstract: In this talk I will introduce some commonly used regression models which are flexible enough to accurately fit a wide range of data. In these models, the regression function r(x) is estimated by a weighted average of the observed data in a neighborhood of x. I will introduce a new family of weights which allow the estimators to automatically achieve optimal performance. The advantages of the new estimators will be shown to include faster rates of convergence to the true function r(x), and confidence intervals which are easier to construct and more accurately reflect the true variability of the estimator.