Statistics Seminar

Department of Mathematical Sciences

DATE:	Thursday, February 18, 2016
TIME:	1:15pm to 2:15pm
LOCATION:	WH 100E
SPEAKER:	Anton Schick, Binghamton University
TITLE:	Convergence rates of kernel density estimators in the L_1 norm

Abstract

The usual approach to evaluate the performance of a kernel density estimator (KDE) is to look at the mean integrated square error. This provides rates of convergence in the L_2-norm. In this talk rates of convergence in the L_1-norm are presented. We consider both estimators of a density f and its convolution $f*f$ with itself. In the former case the rates are nonparametric $n^{-s/(2s+1)}$ and depend on the smoothness s of f. In the second case we obtain the parametric rate $n^{-1/2}$.