



The University of Chicago

Department of Statistics

Seminar Series

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“Instrumental Variable Estimation of Nonlinear Errors-in-Variables Models”

MONDAY February 28, 2005 at 4:00 PM
133 Eckhart Hall, 5734 S. University Avenue

Refreshments following the seminar in Eckhart 110.

ABSTRACT

This paper establishes that instruments enable the identification of nonparametric regression models in the presence of measurement error and provides a root n consistent and asymptotically normal estimator when the regression function is parametrically specified. Both the identification and the estimation methodologies rely on Fourier analysis and on the theory of generalized functions. The proposed estimator takes the well-known form of a generalized method of moment estimator with a plugged-in nonparametric kernel density estimate, thus facilitating the analysis of its asymptotic properties. The finite-sample properties of the estimator are investigated through Monte Carlo simulations and an application to the estimation of the black-white male wage gap illustrates the usefulness of the proposed method.