Estimation of a Nonsmooth Functional

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Abstract

ABSTRACT HERE - A general lower bound is developed for the minimax risk when estimating an arbitrary functional. The bound is based on testing two composite hypotheses. It is shown to be effective in estimating the L1 norm of the mean of a multivariate Normal observation. An asymptotically sharp minimax rate optimal estimator is constructed based on approximation theory and Hermite polynomials. This work is joint with Tony Cai.