AN ESTIMATOR FOR THE FUNCTIONAL $\int F^2(x)dH[F(x)]$

P.S.S. Thewarapperuma

The density functional $I = \int F^2(x)dH[F(x)]$ plays an important role in nonparametric statistics. For 'smooth' H, various estimators have been proposed by many authors. They also have shown the consistency and the asymptotic normality of these estimators under mild conditions on the function H and density F.

When H^1 is not bounded, for example $H^1(x) = \frac{1}{x(1-x)}$ XE [0,1], we have proposed an estimator for I. Using one sample model a kernel type estimator was used (for unknown f) for this purpose. Presently we are considering possible extensions of these results for the case of the general linear model $Y = x^1B + e$.