UNIVERSITY OF SYDNEY

SCHOOL OF MATHEMATICS AND STATISTICS

Statistics Seminar

Friday, 10 June, 2.00pm

Carslaw 173

Support Estimation under Measurement Error

Dr Alex Meister
Australian National University

Abstract

This talk is concerned with estimating the support of a probability density based on contaminated data. In the univariate subproblem, we introduce a new method based on moment estimation to empirically determine the endpoints of a distribution function. Unlike earlier approaches, the estimator achieves consistency under very weak conditions and without any a-priori knowledge about the sharpness or smoothness of the distribution whose support is of interest. Furthermore we describe a procedure of estimating the whole support as a set in the multivariate case. An important generalization, compared to existing methods, concerns the fact that the support is not assumed to be simply-connected.

References:

1. Meister, A. (2004). Support estimation via moment estimation in presence of noise. submitted.

2. Meister, A. (2005). Estimating the support of multivariate densities under measurement error. to appear in *J. Multivariate Anal.*

Enquiries about the Statistics Seminar should be directed to
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