



ΟΙΚΟΝΟΜΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΑΘΗΝΩΝ

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ΤΜΗΜΑ ΣΤΑΤΙΣΤΙΚΗΣ

ΑΝΑΚΟΙΝΩΣΗ

Την **Πέμπτη 27/05/2010, και ώρα 15.00-16.00** θα γίνει σεμινάριο από την Ursula U. Muller (Department of Statistics, Texas A&M University) με τίτλο

«Nonlinear regression with missing responses».

Το σεμινάριο θα δοθεί στην αίθουσα του 5^{ου} ορόφου στην πτέρυγα Αντωνιάδου.

Ακλουθεί abstract

Nonlinear regression with missing responses

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My talk will focus on linear and nonlinear regression, with a response variable that is allowed to be “missing at random”. My only structural assumptions on the distribution of the variables are that the errors have mean zero and are independent of the covariates. The independence assumption is important: it enables us to construct easy-to-implement estimators for expectations of the joint distribution that only require a root- n consistent estimator for the parameter vector, but no elaborate estimation techniques for the nonparametric parts. The independence assumption further allows us to construct estimators for the response density that converge at a faster rate than the usual local smoothing methods. The idea is to write the density as an integral of the error distribution which can be estimated by plugging in residual-based kernel estimators. For an appropriate class of regression functions, the proposed density estimators are consistent and converge with the optimal parametric rate $n^{1/2}$. Moreover, both the estimator of the joint distribution and the density estimator are proved to be efficient (in the sense of Hájek and Le Cam) if an efficient estimator for the regression parameter is used. The construction of such an estimator will also be addressed.