



INSTITUT DE STATISTIQUE
UNIVERSITE CATHOLIQUE DE LOUVAIN

STATISTICS SEMINAR

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"Least squares estimation of nonlinear spatial trends"

Friday, Februari 20, 20098

16:30

Room : c 115 (STAT)

Abstract

The goal of this work is to study the asymptotic and finite sample properties of an estimator of a nonlinear regression function when errors are spatially correlated, and when the spatial dependence structure is unknown. The proposed method is based on a weighted nonlinear least squares approach, taking into account the spatial covariance. Weak consistency of the regression parameters estimator is derived, along with its asymptotic Gaussian limit. The behavior of the proposed estimator is illustrated with a simulation study, considering different correlation structures in R^2 and a more general case including a spatial covariate. The method is also applied to two real data cases.

You are welcome to the coffee break before the seminar (room : c 105)

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