

LES ATELIERS DU CERPE

Le **mardi 25 mai à 12H45** à la **salle académique** de la
faculté de droit (5^e étage)

Petite restauration dès 12H30 (réservation souhaitée à nicolas.gonne@fundp.ac.be)

Nicolas Debarsy

CERPE

Identifying nonlinearities in spatial auto-regressive models

Joint work with Vincenzo Verardi (CRED and ECARES)

Abstract In spatial autoregressive models, the functional form of autocorrelation is assumed to be linear. In this paper, we propose a simple semiparametric procedure, based on Yatchew's (1998) partial linear least squares, that relaxes this restriction. Simple simulations show that this model outperforms traditional SAR estimation when nonlinearities are present. We then apply the methodology on real data to test for the spatial pattern of voting for independent candidates in US presidential elections. We find that in some counties, votes for "third candidates" are non-linearly related to votes for "third candidates" in neighboring counties, which pleads for strategic behavior.