

Abstract :

This paper aims at developing a novel approach to study the population density distribution across space. In the wake of the existing literature, we focus on the analysis of regional population density. We work in a Bayesian parametric framework and, by referring to the Gamma distribution, we are able to introduce heterogeneity across space without incurring any a priori denitions of territorial unit. Besides implementing a new technical method, our contribution is also adopting an original framework that allows for including an approximation of individual preferences as further and driving force in location choices, in addition to the canonical Euclidean distance. We perform an empirical application of our method for Massachusetts. Our technique provides reliable and interesting results: the prediction of density population across Massachusetts mostly depends on the Euclidean distance from Boston and the ethnic composition of the population.

Keywords: Agglomerations, Bayesian inference, Distance, Gibbs sampling, Kendall's tau index, Population density. JEL Classification: C11, C40, C51, R14; AMS Classification: 62J12, 62P20.

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The Center for Research in Economic Analysis of the University of Luxembourg is pleased to invite you to the **Lunchtime Seminar in Economics:**

**On the population density distribution across space:
a probabilistic approach**
(joint with I. Epifani)

Rosella Nicolini

Universitat Autònoma de Barcelona

January 19, 2011
13:00 – 14:00

Campus Limpertsberg
Building of Science – Room BS001
162a, avenue de la Faiënerie
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Lunch is planned for the participants

Registration: by email to fdef-colloques@uni.lu

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