

Abstract :

We present a dynamic urban economic model with neighbourhood interactions in a two dimensional space. The model simulates a land market where households, constrained by accessibility costs, value social (local public goods) and green (low density landscape) externalities. Various forms of urban sprawl patterns emerge from the model, mixing residential and green land. Various road network structures are also obtained. In this particular contribution, we analytically establish the conditions for a first leapfrog of residents that breaks urban continuity and leads to non-compact cities.

We show especially that the moment and size of residential leapfrog depend on the distance of the social interactions and the size of the landscape window considered by households. Implications for urban planning strategies are discussed.

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Geoffrey Caruso is Assistant Professor at the University of Luxembourg where he conducts research in Geographic Information Systems (GIS), spatial analysis, and urban modelling. He is also associate fellow of the Centre for Operations Research and Econometrics (CORE) in Louvain-la-Neuve where he conducted research prior to his arrival at the University of Luxembourg. He was also Research Associate at the University of Cambridge (UK) working on land use and transport interaction models, and obtained his PhD in Geographical Sciences at the University of Louvain.



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

S-GHOST (Self-Generating Housing, Open Space and Transportation) - a dynamic simulation model of urban sprawl

(joint with Jean Cavailhès, Pierre Frankhauser, Dominique Peeters, Isabelle Thomas, Gilles Vuidel)

Geoffrey Caruso
University of Luxembourg

January 12, 2011
13:00 – 14:00

Campus Limpertsberg
Building of Science – Room BS001
162a, avenue de la Faïencerie
L-1511 Luxembourg

Lunch is planned for the participants

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

Contact : crea@uni.lu (+352 46 66 44 6336 / 6139)

