# *Post-doctoral position*

## Field: Economic geography and urban economics

### Location

Université Bourgogne Franche Comté, Dijon (France)

Laboratoire d'Economie de Dijon (Université Bourgogne Franche Comté)

Duration: 12 months

Vacant position from 2018, September

### Position requirements & Application

Ph.D Degree, not delivered by the Université Bourgogne France Comté

Please send your CV and Cover Letter by May 15th 2018 at the latest

**Contact :** **Pr. Catherine Baumont** catherine.baumont@u-bourgogne.fr

## Urban dynamics and uses of vacant spaces in the energy and socio-ecological transition

In a context of controlled spending on and consumption of energy and emphasis on the environment we live in, it seems essential to seek out a model of a city that is at one and the same time dense, environmentally-friendly and cultural. Reconstructing the actual city – as opposed to expanding the urban footprint – may be one response to this since what are termed "non-developed" vacant spaces make up nearly a quarter of the city. Urban sprawl promoted growth of the built environment whether residential, industrial or tertiary (Newman et al. 2016). It is precisely through these facts that we come to the domain of application of theories of urban cycles (Brueckner and Rosenthal, 2009) driven by the construction of new housing. In phases of expansion, new housing is developed in the outlying areas while in phases of reconstruction it develops in the central areas. The preference of well-to-do households for better quality housing then leads to a socio-economic organization of cities determined by the spatial distribution of "generations" of housing (Baumont and Guillain, 2016). In parallel, further to work by Brueckner, Thisse and Zenou (1999), urban models have emphasized the complexity of residential location choice for households (Gaigné et al., 2017; Gaigné et al., 2012): household preferences for modern amenities (culture and leisure, transport infrastructure), heritage and the environment (landscapes, green spaces, ecosystem services, etc.) may support their residential choice for peripheral areas (preference for open spaces) or central areas (preference for heritage amenities) or require arbitration (preference for open spaces and central locations; preferences for cultural services and open spaces, etc.). Consideration of population density and built density (Girard, 2016) in urban micro-economic models (e.g. Wu et al, 2004) reveals these choices and the diversity of possible urban equilibria.

In France, urban renewal programmes and policies derived from the debate on environmental policy (*Grenelle de l'environnement*) are impelling these effects even in the hearts of cities. Major

development policies such as that for Greater Paris are seeing modern districts rise around the new stations of the Grand Paris Express metropolitan railway.

So the existence of vacant spaces within cities is at the heart of new urban dynamics, depending on the use to be made of those areas: renovation of old housing, conversion of abandoned areas (e.g. industrial wasteland), provision of environmental or cultural amenities, etc. (Baumont and Guelton, 2017). What infill development strategies are to be adopted? What public policies are to be implemented? Two main forms of tension may arise: socio-economic tension through the emergence of new dynamics of urban segregation or ecological tension through the emergence of new spatial organizations of urban land use.

The challenge is to study these new urban tensions by mobilizing spatial economic theories on household location choice. Three types of contribution are expected depending on candidates' skills and experience.

First, a conceptual effort to define the ecological city[1] through a synthesis of urban micro-economics literature enhanced by multidisciplinary contributions in the environmental domain. Analyses in the form of typologies, empirical summaries or meta-analyses are expected at this stage.

Second, land-use dynamics integrated into an urban model. Here there are two alternative proposals.

- Either to incorporate land-use change dynamics based on urban cycle theories into residential choice models (Brueckner and Rosenthal, 2009). The results expected from this stage are to illuminate urban segregation patterns induced by the energy and ecological transitions.
- Or to study spatial dynamics induced by the recharacterization of land use in a context of economic geography (Helpman, 1988; Pfügler and Tabuchi, 2010). The results expected from this input relate to the effects of housing renovation policies on the drawing-power of cities.

Third, alongside this, one contribution – cross-cutting the foregoing – is to perform the associated empirical studies. The starting point will be the study of vacant spaces in cities. Close attention will be paid to environmental evaluation (Maslanskaïa-Pautrel and Baumont, 2016; Baumont et al. 2017) and to the effects of housing renovation policies. The Dijon agglomeration will be one possible study area.

## *References*

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[1] This term is used here to approximate the combination of economic, social and environmental criteria by reference to what is used in analyses of "ecological" inequalities.

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