

Curriculum Vitae (Short)

Thomas Houet, Ph.D.
Associate Researcher, Geography

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Education

- 2006: University of Rennes 2 : Ph. D. (Geography)
Dissertation (May 2006): "Land cover changes and water management: Prospective modelling in agricultural patchy landscape"
- 2002 : University of Rennes 2: D.E.A., Degree d'Etudes Approfondies, between the Master's and the French doctorate (Geography)
- 2001 : University of Saint-Etienne: D.E.SS., Degree d'Etudes Supérieures Spécialisées, between the Master's and the French doctorate (GIS)
- 2000 : University of Rennes 2: M. A. (Geography)
- 1999 : Study abroad University of Portsmouth,UK. Rennes/ Portsmouth ERASMUS Exchange Program

Research interests

Land-use/land cover change; landscape ecology; forecasting future trends of landscape change ; Prospective modelling; geographic information systems; remote sensing.

Teaching interests

Lectures: Spatial analysis in geography: theory and fundamentals
Remote sensing (Initiation & Advanced)
Introduction to future studies
Modelling approach in geography and futures studies

Tutorials: Fine scale futures studies: sample applications
Remote sensing (Initiation & Advanced on Idrisi and eCognition)
Introduction to LUCC models
Modelling approach in geography and futures studies

Selected Sponsored Research Programs

- 2011-2015: ANR "Young Research Scientist" - Project "Modelling Past and Future land use and cover changes in the Pyrenees mountains (MODE RESPYR) Principal Investigator T. Houet, €140,000.
<http://w3.mode-respyr.univ-tlse2.fr/index.php>
- 2010-2013: City Modelling and Climate Change (ACCLIMAT) PI V. Masson (Meteo-France / CNRM) €900,000.
<http://www.cnrm.meteo.fr/ville.climat//spip.php?rubrique47>
- 2008-2010: Bilateral International Program funded by the Spanish ministry of Sciences and technologic advances – Project: "Geomatic simulations for modelling environmental dynamics: methodological and thematic advances". Project Leader: M. Camacho-Olmedo (Univ. Granada)

Editorial activities

Guest editor:

Landscape Ecology, 2010, Special issue on Monitoring and modelling landscape dynamics,
<http://dx.doi.org/10.1007/s10980-009-9417-x>
Ecological Modelling, 2009; Special issue on spatially explicit landscape modelling,
<http://dx.doi.org/10.1016/j.ecolmodel.2009.06.025>

Most relevant Peer-reviewed Publications

2011

Houet T. and Pigeon G. (2011), Mapping Urban Climate Zones And Quantifying Climate Behaviors - An Application On Toulouse Urban Area (France), *Environmental Pollution*, Vol 159, Iss 8-9, 2180-2192, <http://dx.doi.org/10.1016/j.envpol.2010.12.027>

Houet T., Hubert-Moy L. and Tyssot C., (2011) Fine scale spatialised prospective modelling - a methodological approach. Application to water management in Brittany, *Revue Internationale de Géomatique, European Journal of Geomatics and Spatial Analysis*, vol. 21, pp. 67-93, <http://dx.doi.org/10.3166/rig.21hs.67-93>

Galop D., **Houet T.**, Mazier F., Leroux G. & Rius D., (2011) Grazing activities and biodiversity history in the Pyrénées – the use of paleoecology and historical ecology to provide new insights on high-altitude ecosystems in the framework of a Human-Environment Observatory, *PAGES news*, vol 19, n°2, pp. 53-56

2010

Houet T., Verburg P. and Loveland T. (2010), Monitoring and modelling landscape dynamics, *Landscape Ecology*, Vol 25, n°2, pp.163-167, <http://dx.doi.org/10.1007/s10980-009-9417-x>

Gaucherel C, Griffon S, Misson L and **Houet T** (2010) Combining process-based models for future biomass assessment at landscape scale, *Landscape Ecology*, Vol 25, n°2, pp.201-215, <http://dx.doi.org/10.1007/s10980-009-9400-6>

Houet T., Loveland T. R., Hubert-Moy L., Napton D., Gaucherel C. and Barnes C. (2010) "Exploring subtle land use and land cover changes: a framework based on future landscape studies", *Landscape Ecology*, Vol 25, n°2, pp.249-266 <http://dx.doi.org/10.1007/s10980-009-9362-8>

2009

Gaucherel C and **Houet T** (2009) Preface to the selected papers on spatially explicit landscape modelling: current practices and challenges. *Ecological Modelling*, 220(24):2477-3480, <http://dx.doi.org/10.1016/j.ecolmodel.2009.06.025>

2008

Houet T., Hubert-Moy L. et Tyssot C., 2008, « Modélisation prospective spatialisée à l'échelle locale : approche méthodologique », *Revue Internationale de Géomatique*, Vol. 18/3, pp. 345-373 <http://geo.e-revues.com/article.jsp?articleId=12135>

Houet T., Hubert-Moy L., Corgne et Marchand J.-P., 2008, « Approche systémique du fonctionnement d'un territoire agricole bocager », *L'espace géographique*, Vol. 2008-3, pp. 270-286 <http://www.mgm.fr/PUB/EG/EG308R.html>

2007

Houet T. et Gaucherel C., 2007, « Simulation dynamique et spatialement explicite d'un paysage agricole bocager : Validation sur un petit bassin versant breton sur la période 1981-1998 », *Revue Internationale de Géomatique*, vol. 17/3-4, pp. 491-516 <http://geo.e-revues.com/article.jsp?articleId=11154>

2006

Houet T. and Hubert-Moy L., 2006, "Modelling and projecting land-use and land-cover changes with a cellular automaton considering landscape trajectories: an improvement for simulation of plausible future states", *EARSel eProceedings*, n°5, pp. 63-76 http://las.physik.uni-oldenburg.de/eProceedings/vol05_1/05_1_houet1.pdf

Gaucherel C., Giboire N., Viaud V., **Houet T.**, Baudry J. and Burel F., 2006, "A domain specific language for patchy landscape modelling : the Brittany agricultural mosaic as a case study", *Ecological Modelling*, vol. 194, n°1-3, pp. 233-243 <http://dx.doi.org/10.1016/j.ecolmodel.2005.10.026>

2005

Mercier G., Hubert-Moy L. and **Houet T.**, 2005. "Assessing winter vegetation cover change with fusion of SPOT Vegetation and SPOT XS/Xi images", *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 43, n°2, February, pp. 348-354.

2004

Houet T., Hubert-Moy L., Mercier G., 2004, "A neural network method to model spatial and temporal changes in remote sensing: a case study on the winter land cover in Brittany", *Cybergéo*, n°271 <http://www.cybergeo.eu/index3617.html#texte>