

GEOFFREY CARUSO,

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Born in Namur (BE), April 15th 1976. Citizenship: Belgian. Married, 3 children

EMPLOYMENT

since 2017 Professor, University of Luxembourg and Luxembourg Institute of Socio-Economic Research, Luxembourg - Joint Chair in urban Analysis and Modelling

2007-2017 Associate Professor, Institute of Geography and Spatial Planning, University of Luxembourg, Luxembourg

2006-2007 Research Associate, Fonds National de la Recherche Scientifique (FNRS). Centre for Operations Research and Econometrics (CORE), Université catholique de Louvain, Belgium

2005-2006 Research Associate, Martin Centre for Urban and Architectural Studies, University of Cambridge, United Kingdom

1998-2004 Research and teaching Assistant, Department of Geography, Université catholique de Louvain, Belgium

EDUCATION

02/2005 PhD in Geographical Science, Université catholique de Louvain, Belgium

09/1998 MSc in Geography, Université catholique de Louvain, Belgium

06/1996 BSc in Geography, University of Namur, Belgium

PROJECTS AND GRANTS

Competitive project funding

SCALE-IT-UP (2018-2022). PI. *Scaling of the Environmental Impacts of Transport and Urban Patterns*. Funding 573 000€ (source: FNR(Fonds National de la Recherche, Luxembourg) CORE programme).

FNR PRIDE programme (Grouped PhD Programme) –1 PhD grant in Digital Humanities/Geography

FNR AFR-PhDs. Since 2009, 6 PhD grants (4 years funding) obtained as supervisor (see PhD topics).

(source: Fonds National de la Recherche, FNR) – NB: All individual PhD projects I submitted were granted.

MGM+e (2015-2018). PI (Lead of 9 EU partner universities). *MGM+e: Master in Geographical Modelling: Moocs and Workshops*. Funding: 250 000 € (source: EU ERASMUS KA2)

SOSBUGS (2015-2018). Co-PI with P. Picard (UL/CREA). *Spatial Optima and the Social Benefits of Urban Green Space*. Funding 400 000€ (source: University Project Funding Scheme)

ALONSO-EC (2015-2017). *Systematic land use calibration of Alonso-based urban models on European cities*. Postdoc Rémi Lemoy. (source: FNR AFR PostDoc)

TRUSTEE (2013-2016): *Towards RUrual Synergies and Trade-offs between Economic development and Ecosystem services*. Lead: C. Détang-Dessendre, INRA Dijon. Share of funding at University of Luxembourg (G Caruso) 12 000 € (source: ERA-NET Ruragri, FP7)

ODIT-CEUP (2012-2015): Observatoire des dynamiques industrielles et territoriales - *Construction de l'espace urbain et périurbain*. Lead: C Tannier, University Besançon. Non contracting (source: European Regional Development Fund & Franche-Comté Region)

MOEBIUS (2009-2013). Lead P. Gerber LISER. *Mobilities Environment and Behaviour in Urban Simulation*. Share of funding at University of Luxembourg (PI : G Caruso) 137 000 € (source: FNR CORE)

WEBATLAS (2010-2012) Co-PI with M. Pauly (UL/IPSE/History). *Interactive web-atlas for the Greater-Region*. Funding: 432 000 € (source: University Project Funding Scheme) 5000 € (source: Forum Europa)

ESPON DATABASE 2013 (2008-2011). Lead: C. Grasland, University Paris 7. *ESPON DATABASE 2013*. Share of funding at University of Luxembourg (PI: G Caruso) 100 000 € (source: EU, ESPON program)

Dynamics of urban and periurban structures (2006-2007). PostDoc Research grant from the Fonds National de la Recherche Scientifique (FNRS, BE)

Other funding and grants

Supervisor of 2 PhD grants from the University of Luxembourg, 1 PhD grant from LISER

ERSA Summer (2011) (PI with L. Bertinelli, UL/CREA). Organisation of the European Regional Science Association PhD Summer School 2011 in Luxembourg. Funding: 15000 € (source European Investment Bank)

S-GHOST (2007-2012) with Cavailhès J. (INRA, Dijon), Frankhauser P. and Vuidel, G (University of Besancon), Peeters D. and Thomas I. (UCL, BE). *Self-Generating Housing, Open Space and Transportation in a city*. Funded by University of Luxembourg (starting scheme) and INRA via CORE/UCL (BE)

MST-LISA (2007-2012). With Hilal M. (INRA, Dijon) and Thomas I. (UCL, BE). *Using minimum spanning tree and local spatial autocorrelation to define multi-level urban clusters*. Funded by University of Luxembourg (starting scheme) and INRA via CORE/UCL (BE).

Micro-economic foundations of a periurban cellular automata model (01/2004-04/2004). Research stay (3 months) at the Centre d'Economie et Sociologie Appliquées aux Espaces Ruraux (CESAER) (Dir. J. Cavailhès). Research grant from Fonds National de la Recherche Scientifique (FNRS) and from the Institut National de Recherche Agronomique (INRA).

Complexity in Social Science (07/2002). Summer school organised by the COSI European Network.

Chania (Greece). Travel grant from the Communauté Française de Belgique. 07/2002.

Cellular Automata, Neural Networks and Multi-Agent Systems. International Workshop. Milan, 10/12/2001. Grant from UCL, BE.

Project participations as researcher

Espace et extension des villes (2004-2007). Coordinated by J. Cavailhès. Action Concertée Incitative (ACI) Espaces et Territoires. Funded by Ministère de la Recherche, France.

SOLUTIONS (01/2005-10/2006). Coordinated by M. Echenique (University of Cambridge) and H. Barton (University of Bristol). *Sustainability of Land Use and Transport in Outer Neighbourhoods*. Project funded by the Engineering and Physical Science Research Council (EPSRC). <http://www.suburbansolutions.ac.uk>.

LASERE (2000-2004) (Laboratoire d'Analyse Spatiale et Régionale Européenne). Participation to research group. UCL, BE.

Etat de la périurbanisation en Europe (2000-2002). Funded by the DATAR, France. Coordinators: I Thomas, J Cavailhès)

GEOSYSTRANS1: Geomatic database on European transport. 1998-1999. Coordinated by M. Chesnais. Funded by EU FP4.

Cartographie de l'accessibilité routière et des aires d'influence des aéroports de Bruxelles, Liège et Charleroi. (2004) Funding: Direction de l'aéroport de Liège. 2004. Coord. J. Charlier (UCL, BE)

Cellular Automata Tool for Arcview 3.2 (2000-2002). Development and test of a dynamic modelling tool integrated within a GIS environment. Collaboration with G. Cojocar and M. Rounsevell.

PHD SUPERVISION

Supervisor

Ongoing

Tsiopa, A. *The residential and commuting distance nexus across borders*. To be started on 09/2019. (funding: LISER, pending at FNR AFR programme)

Wei, Y. *Internal urban profiles and the environmental performance of cities*. Ongoing since 12/2018. University of Luxembourg (funding: FNR CORE programme)

Mennicken, E. *Urban Form, Road Networks and Pollution Exposure in Europe*. Ongoing since 10/2017. University of Luxembourg & LISER (funding: LISER)

Sikk, K. *Spatial analysis and agent-based modelling (ABM) of settlement and mobility in the aquatic neolithic*. Ongoing since 03/2017. University of Luxembourg (funding: FNR Pride)

Boura, M. *Cities as carbon sinks: intra-urban analysis*. Ongoing since 01/2017. University of Luxembourg (funding: University of Luxembourg)

Defended

Sprumont, F. (Co-Supervisor with F. Viti) *Sustainable Transport behaviour considering Activity chains of BelvaL commuters*. University of Luxembourg (funding: FNR AFR). Defended 29/08/2017.

Schindler, M. *Analysing the Impacts of Residential choices on Emission and Exposure Distributions*. Ongoing 11/2012-10/2016. University of Luxembourg (funding: University of Luxembourg). Defended 05/10/2016.

Médard de Chardon, C. *Mixed method analysis of bike-share systems*. Ongoing 11/2012-10/2016. University of Luxembourg and Université catholique de Louvain (funding: FNR AFR (partim) co-tutelle with I Thomas). Defended 05/10/2016.

Glaesener, M.L. *Geographical Determinants of Residential Land Values in Luxembourg*. Defended 23/09/2014. University of Luxembourg (funding: FNR AFR).

Le Texier, M. *Spatial diffusion of euro coins*. Defended 30/01/2014. University of Luxembourg and Université Paris VII (funding: FNR AFR).

Pavlinova, O. *Structure and Determinants of urbanization change around Moscow 1991-2010*. Defended 13/09/2012. University of Luxembourg (funding: FNR AFR).

Advisor (committee member)

Ongoing

Ros Cuellar, J. *Assessing the sustainable integrity of socio-ecological systems: A comparative analysis of three Mexican sub-watersheds for integral and coherent management*, University of Luxembourg (Supervisor: H Koff)

Trabelsi, S. *Green space and health impacts in Belgium*. Ongoing since 09/2015, Université catholique de Louvain (funding: Belspo PhD grant, Supervisor: I Thomas).

Defended

Delloye, J. *Three-dimensional morphodynamics of a developers-conducted urban densification*. Ongoing since 01/2015. Université catholique de Louvain (funding: FNRS FRESH, supervisor: I Thomas, D Peeters)

Jones J. *Spatial challenges in Land Use Transport Interaction Models*. Defended 22/06/2016. Université catholique de Louvain (supervisor: D Peeters).

Alleluia Reis, L. *Development and Application of an Asymptotic Level Transport Pollution Model for Luxembourg Energy Air Quality Project*. Defended 28/01/2013. University of Luxembourg (funding: FNR AFR, supervisor Peters B, Zachary D)

MEMBERSHIPS

Member of Association de Science Régionale de Langue Française (ASRDLF); European Regional Science Association (ERSA) (Executive committee 2010-2012), Benelux Interuniversity Association of Transport Researchers (BIVEC)

EDITORIAL, REFEREE AND EVALUATION SERVICES

Editorial functions

Associate Editor (2016-) *Journal of Regional and Urban Economics (Revue d'Economie Régionale et Urbaine)*

Guest editor of special issue

(with M Hesse) in *Urban Planning*

(with M Hesse, P Gerber, F. Viti) in *European Journal of Transport Infrastructure Research*

Co-editor (with M. Helfer and M. Pauly) of the Greater-Region Atlas Paper Series. University of Luxembourg

Refereeing (alphabetical order)

Agricultural and Resource Economics Review; Computers, Environment and Urban Systems; Cybergeog, European Journal of Geography; Environment and Planning A; Environment and Planning B; European Journal of Transport Infrastructure Research; International Regional Science Review; Journal of Economic Geography; Journal of Maps; Journal of Regional and Urban Economics (Revue d'Economie Régionale et Urbaine); Landscape and Urban Planning; Local Environment; PLOSone; Regional Science and Urban Economics; Remote Sensing of Environment; Revue Internationale de Géomatique, Transportation Research Part C, Transportation Research Part D, Urban Greening and Urban Forestry

Evaluation for funding agencies

Agence Nationale de Recherche (France) 2010, 2015

Member of Scientific Committee of international conferences and workshops

European Colloquium on Theoretical and Quantitative Geography, 2019 - Chair of Scientific Committee

International Geographic Union - Urban Commission Conference, Luxembourg 08/2019.

Rencontres Francophones Transport Mobilité 2019, 2018

Exploring Old Maps (EOM) conference 2016, Luxembourg

International Symposium on Cellular Automata Models for Urban and Spatial Systems (CAMUSS), Québec 11/2016.

BIVÉC-GIBET Benelux Transport Research Days 2013. Luxembourg

International Symposium on Cellular Automata Models for Urban and Spatial Systems (CAMUSS), Porto 11/2012.

7th Virtual Cities and Territories Conference, Lisbon 11-13/10/2011.

9e Colloque Mobilités Spatiales et Fluidité Sociale de l'Association Internationale des Sociologues de Langue Française. Luxembourg. 03/2009

Rencontres Théoquant: Nouvelles approches en géographie théorique et quantitative. Besançon. 02/2009.

Interdisciplinary Conference Revisiting the Urban and the Rural: Spatial Representations and Practices organised by Les Humanités Associées. Luxembourg. 03/2008.

PhD jury member (other than PhD as supervisor or advisor, see above)

Mc Donough, E. Global flows, local conflicts and the challenge of urban governance: managing the urban-airport interface in London and the South East. (09/01/2018) University of Luxembourg – (role: President of the jury)

Iraqi, M. Modèles économétriques théoriques pour une optimisation géométrique des formes urbaines. Vers l'aménagement fractal de la ville. (24/11/2017) University of Franche Comté, Besançon (role: External examiner ('rapporteur'))

Bourgeois, M. Impacts écologiques des formes d'urbanisation. (11/12/2015) University of Franche

Comté, Besançon (role: External examiner ('rapporteur'))

Evrard, E. Suprarégionalisation Transfrontalière? Grande Région Saar-Lor-Lux. (26/03/2013) University of Luxembourg – (role: President of the jury)

Kamps, S. Dual-agent simulation model of the residential development process: an institutional approach to explaining the spatial patterns of residential developments. (22/02/2013) University of Franche Comté, Besançon (role: External examiner ('rapporteur'))

Yousseoufi, S. Satisfaction résidentielle et configurations spatiales en milieu périurbain. (09/12/2011) University of Franche Comté, Besançon - (role: External examiner ('rapporteur'))

Pérez Ximénez-de-Embún, D. Essays in Economic Geography: Service Location, Urban Concentration and Economic Growth. (04/10/2011) Universidad Zaragoza. (role: External examiner)

Research 'Habilitation' jury member

Bonin, O. Donner du sens à l'espace dans les modèles. (27/05/2019) University of Franche Comté, Besançon - (role: examiner and chair)

Academic recruitment jury member

Lecturer position (Maître de Conférence) in Human Geography: statistics and spatial analysis. University Paris 7.

Lecturer position (Chargé de Cours) in Geography. University of Namur.

ORGANISATION OF SCIENTIFIC EVENTS

European Colloquium on Theoretical and Quantitative Geography, 2019, Mondorf-les-Bains, Luxembourg. www.ectqg.eu

Organisation of intensive learning workshop in Geographical Modelling in Luxembourg (MGM+e ERASMUS+ KA2) project. 45 Students, 12 instructors, 10 days.

Co-Organisation (with M Hesse, P Gerber (CEPS/INSTEAD) & F Viti) of the BIVÉC-GIBET Benelux Transport Research Days 2013. Walferdange, Luxembourg.

Co-organisation (with A. Marvuglia (LIST) of S4 international workshop MODUS-ENVISA: Managing Complexity in Land Use and Environmental Impacts Modelling. 14/05/2012. Luxembourg.

Co-Organisation (with P. Gerber (CEPS)) of 2nd workshop: Mobilities, Environment Integrated in Urban Simulation (MOEBIUS). 30/05/2012. Luxembourg

Organisation of the 24th European Regional Science Association (ERSA) Summer School: Modelling Cities and Urban Dynamics. Luxembourg 4-13/07/2011.

Organisation of the 2nd S4 international workshop MODUS: Measuring urban forms and evolution – revealing the socio-economic processes and design issues that shape urban forms. Louvain-la-Neuve, 09/11/2007.

Organisation of the research seminars of the axis Déterminants de la périurbanisation of the ACI project Espace et extension des villes. 12/2004-12/2007.

Co-organisation (with J. Cavailhès) of the international conference on The role of open-space amenities in the residential move from cities (Dijon 14-16/12/2005).

Co-organisation (with I. Thomas) of the Research day of the Belgian Committee of cartography & GIS (Louvain-la-Neuve, 30/04/2003.)

TEACHING ACTIVITIES

Master in Geography and Spatial Planning

(from 09/2007 to 08/2017 – 150 to 180h/year, since 2017: 90-120h/year):

Statistics and Econometrics for Geographical Data;	2007-2019
Exploratory Spatial Data Analysis and Geostatistics;	2007-2019
Geographical Information Systems: Analysis and Mapping;	2007-2012
WebGIS and Geoprocessing;	2007-2015
Optimal location and Transport Models	2007-2019
Project in Spatial Analysis and Modelling	2007-2017
Introduction to Doing Research	2007-2012
Urban fieldwork (partim)	2007-2015
Geographical Modelling	2007-2019
Direction of Master theses 3-4/year	

Other teaching activities at the University of Luxembourg:

Introduction à la représentation cartographique (Bachelor Cultures Européennes Histoire. Critique historique, 2008-2010);

Éléments de théorie des SIG - Formation Continue en Aménagement du Territoire (2008-2009)

Invited teaching activities:

Aménager des villes vertes (2h) – Master en Géographie. Université de Namur. 2018, 2019

QGIS and Point Pattern Analysis (16h, ULB, Brussels, Master in Agroecology, 2015 & 2016);

L'aménagement du territoire au Luxembourg et en Grande Région (2h) – Master en Géographie. Université de Namur. Since 2012-2017

Aides à la décision en géographie (25h, UCL, Louvain-la-Neuve, Master en Géographie. Professeur invité, 2009);

Introduction to cellular automata and agent-based models (14h). Invited Professor. Master universitario en Gestion y Valoraci_ón Urbana and Doctoral school seminars - Universitat Politècnica de Catalunya, Barcelona, 2009);

Géographie économique (Université de Namur, Bac 2 Géographie, 2007);

Automates cellulaires et modélisation dynamique (Université de Franche-Comté, Master 2 de Géographie, 2004).

MANAGEMENT AND ADMINISTRATION

Leadership activities

Study Director of the *Master in Geography and Spatial Planning* (2nd mandate). Since 2010.

Scientific Coordinator of the Urban Development and Mobility Department of LISER (Luxembourg Institute of Socio-Economic Research)

Coordinator of the *Quadrees.lu* initiative, University and LISER virtual lab on Quantitative Geography.

Lead of the *GIS and quantitative geography* team within the Institute for Geography and Spatial Planning (within IPSE) since 09/2007. The size of my team varied from 4 to 9 members depending on projects funding.

Deputy Head of the Institute of Geography and Spatial Planning. Since 2013.

Head ('faisant fonction') of the Institute of Geography and Spatial Planning in replacement of C. Schulz (parental leave (from 01/01/2010 and 30/06/2010)).

Other missions

LISER Positioning Committee member: The committee is responsible for the internal evaluation of all LISER researchers and advise the CEO and HR Dpt for promotions.

Belval Project Advisor: Responsible for strategy (staff perspective, user concepts for research and teaching facilities, negotiation with external bodies,...) and preparatory work (planning, communication,..) for the move of the Faculty (FLSHASE, i.e. +-380 staff) to the new city of Belval. 03/2010-07/2015

Member of internal boards/councils

Member of the board of Study Directors of the Faculty FLSHASE

Invited member at the Faculty Council of FLSHASE as responsible for Belval project

Member of the University Sustainability Cell (till 2015) for issues related to transport

Member of the Jury of the Master in Geography and Spatial Planning (since 2008)

PUBLICATIONS (free access to all publications on repository orbilu.uni.lu)

Journal articles

T. Cuignet, C. Perchoux, G. Caruso, O. Klein, S. Klein, B. Chaix, Y. Kestens, P. Gerber. "Mobility among older adults: Deconstructing the effects of motility and movement on wellbeing". *Urban Studies*. In press

C. Perchoux, R. Brondeel, R. Wasfi, O. Klein, G. Caruso, J. Vallée, S. Klein, B. Thierry, M. Dijst, B. Chaix, and Y. Kestens. "Walking, trip purpose, and exposure to multiple environments: A case study of older adults in Luxembourg". *Journal of Transport & Health*, 13 (2019): 170-184

J. Delloye, R. Lemoy, and G. Caruso. "Alonso and the Scaling of Urban Profiles." *Geographical Analysis* (February 6, 2019).

R. Lemoy and G. Caruso. "Evidence for the homothetic scaling of urban forms." *Environment and Planning B: Urban Analytics and City Science* (November 2018).

M. Le Texier, K. Schiel, and G. Caruso. "The provision of urban green space and its accessibility: Spatial data effects in Brussels." *PLoS ONE* 13, no. 10 (October 17, 2018): 0204684.

P. Gerber, G. Caruso, E. Cornélis, and C. Médard de Chardon. "A multi-scale fine-grained LUTI model to simulate land-use scenarios in Luxembourg." *Journal of Transport and Land Use* 11, no. 1 (2018): 255272.

I. Pigeron-Piroth, M. Le Texier, R. Belkacem, and G. Caruso. "Déterminants individuels et territoriaux des navettes internes ou transfrontalières des actifs résidant en France." *Espace, Populations, Sociétés* 2017, no. 3 (2018): 1-30.

M. Schindler and G. Caruso. "Emerging urban form – Emerging pollution: Modelling endogenous health and environmental effects of traffic on residential choice." *Environment and Planning B* (2018).

M. Schindler, M. Le Texier, and G. Caruso. "Spatial sorting, attitudes and the use of green space in Brussels." *Urban Forestry and Urban Greening* 31 (2018): 169-184.

I. Thomas, J. Jones, G. Caruso, and P. Gerber. "City delineation in European applications of LUTI models: review and tests." *Transport Reviews* 38, no. 1 (2018): 6-32.

G. Caruso, M. Hilal, and I. Thomas. "Measuring urban forms from inter-building distances: Combining MST graphs with a Local Index of Spatial Association." *Landscape & Urban Planning* 163 (July 2017): 80-89.

M. Le Texier and G. Caruso. "Assessing geographical effects in spatial diffusion processes: The case of euro coins." *Computers, Environment & Urban Systems* 61 (January 2017): 81-93.

C. Médard de Chardon, G. Caruso, and I. Thomas. "Bicycle sharing system 'success' determinants." *Transportation Research. Part A : Policy & Practice* 100 (2017): 202-214.

M. Schindler, G. Caruso, and P. M. Picard. "Equilibrium and first-best city with endogenous exposure to local air pollution from traffic." *Regional Science and Urban Economics* 62 (2017): 12-23.

C. Médard de Chardon, G. Caruso, and I. Thomas. "Bike-share rebalancing strategies, patterns, and purpose." *Journal of Transport Geography* 55 (July 2016): 22-39.

K. Schiel, O. Baume, G. Caruso, and U. Leopold. "GIS-based modelling of shallow geothermal energy potential for CO2 emission mitigation in urban areas." *Renewable Energy : An International Journal* 86 (February 29, 2016): 1023-1036.

G. Caruso, J. Cavailhès, D. Peeters, I. Thomas, P. Frankhauser, and G. Vuidel. "Greener and larger neighbourhoods make cities more sustainable! A 2D urban economics perspective." *Computers, Environment & Urban Systems* 54 (November 2015): 82-94.

M.-L. Glaesener and G. Caruso. "Neighborhood green and services diversity effects on land prices: evidence from a multilevel hedonic analysis in Luxembourg." *Landscape & Urban Planning* 143 (November 2015): 100-111.

C. Medard de Chardon and G. Caruso. "Estimating bike-share trips using station level data." *Transportation Research Part B: Methodological* 78 (August 2015): 260279.

D. Peeters, G. Caruso, J. Cavailhès, I. Thomas, P. Frankhauser, and G. Vuidel. "Emergence of leapfrogging from residential choice with endogenous green space: analytical results." *Journal of Regional Science* 55, no. 3 (June 2015): 491-512.

G. Caruso, J. Cavailhès, D. Peeters, I. Thomas, P. Frankhauser, and G. Vuidel. "Greener and larger neighbourhoods make cities more sustainable! A 2D urban economics perspective." *Computers, Environment & Urban Systems* (2015).

G. Caruso, J. Cavailhès, D. Peeters, I. Thomas, P. Frankhauser, and G. Vuidel. "Housing land transaction data and structural econometric estimation of preference parameters for urban economic simulation models." *Data in Brief* 5 (2015): 447-452.

G. Caruso, P. Gerber, M. Hesse, and F. Viti. "Editorial: Challenges, specificities and commonalities of transport research and policy within the BENELUX countries—the case of Luxembourg." *European Journal of Transport and Infrastructure Research* 15, no. 4 (2015): 501-505.

B. Quinn, K. Schiel, and G. Caruso. "Mapping uncertainty from multi-criteria analysis of land development suitability, the case of Howth, Dublin." *Journal of Maps* (November 2014)

M. Schindler and G. Caruso. "Urban compactness and the trade-off between air pollution emission and exposure: Lessons from a spatially explicit theoretical model." *Computers, Environment & Urban Systems* 45 (May 2014): 13-23.

F. Sprumont, F. Viti, G. Caruso, and A. König. "Workplace Relocation and Mobility Changes in a Transnational Metropolitan Area: The Case of the University of Luxembourg." *Transportation Research Procedia* 4 (December 2014): 286-299.

G. Caruso, G. Vuidel, J. Cavailhès, P. Frankhauser, D. Peeters, and I. Thomas. "Morphological similarities between DBM and a microeconomic model of sprawl." *Journal of Geographical Systems* 13, no. 1 (2011): 31-48.

G. Caruso, D. Peeters, J. Cavailhès, and M. Rounsevell. "Space – time patterns of urban sprawl, a 1D cellular automata and microeconomic approach." *Environment and Planning B* 36 (2009): 968-988.

G. Caruso, D. Peeters, J. Cavailhès, and M. Rounsevell. "Spatial configurations in a periurban city: a cellular automata-based microeconomic model." *Regional Science & Urban Economics* 37, no. 5 (2007): 542-567.

G. Caruso, M. Rounsevell, and G. Cojocar. "Exploring a spatio-dynamic neighbourhood-based model of residential behaviour in the Brussels periurban area." *International Journal of Geographical Information Science* 19, no. 2 (2005): 103-123.

Book chapters

M. Le Texier and G. Caruso. "Aggregate and disaggregate dynamic spatial interaction approaches to modelling coins diffusion." In *Spatial Analysis and Location Modeling in Urban and Regional Systems*. Edited by J.-C. Thill. Advances in Geographic Information Science. Berlin: Springer,

2018. 193-222.

D. Provitolo, P. Frankhauser, M. Morer, C. Enaux, D. Ansel, I. Agbossou, D. Peeters, and G. Caruso. "Modèles de comportements collectifs et coopératifs." In *La Décision d'Habiter Ici ou Ailleurs*. Edited by F. P. E. A. Dominique. Economica, 2012. 175-227.

G. Caruso and J. Cavailhès. "Formes paysagères dans les modèles théoriques d'économie et de géographie urbaine." In *Analyses Economiques du Paysage*. Edited by W. Oueslati. Update Sciences & technologies. Versailles, France: Editions QUAÉ, 2011. 63-85.

G. Caruso, J. Cavailhès, P. Frankhauser, D. Peeters, I. Thomas, and G. Vuidel. "S-GHOST: Un modèle d'auto-organisation de l'étalement urbain et du réseau de transport." In *Modéliser la ville: formes urbaines et politiques de transport*. Edited by J.-P. Antoni. Paris, France: Economica, 2011. 365-391.

J. Cavailhès, P. Frankhauser, G. Caruso, D. Peeters, I. Thomas, and G. Vuidel. "Morphological similarities between DBM and an economic geography model of city growth." In *Complex Sciences*. Edited by J. Zhou. Lecture notes of the International Institute for Computer Sciences, Social Informatics and Telecommunications. Springer, 2009. 417-428.

G. Caruso. "Un modèle cellulaire et dynamique de dispersion et ségrégation spatiale périurbaine." In *Concentration économique et ségrégation spatiale*. Edited by M.-A. Buisson and D. Mignot. Collection Economie, Société, Région. Bruxelles: De Boeck Universités, 2005. 67-85.

G. Caruso. "La diversité des formes de la périurbanisation en Europe." In *Repenser les campagnes*. Edited by P. Perrier-Cornet. Paris, France: Editions de l'Aube-Datar, 2002. 67-100.

Papers under review/resubmission (not available at orbilu.uni.lu)

F. Sprumont, F. Viti E. Cornelis and G Caruso. "Commuting tours, activity pattern and car use behaviour: a PLS-SEM approach".

M.-L. Glaesener and G. Caruso. "Heterogeneity in land-use and service diversity valuation: a spatial quantile application to Luxembourg residential land prices".

O. Pavlinova and G. Caruso "Spatial Determinants of Urban Land Use Change around Moscow, 1991-2010."

Books

M. Hesse, G. Caruso, P. Gerber, and F. Viti. *Proceedings of the BIVEC-GIBET Transport Research Days 2013*. Edited by Zelzate: University Press, 2013.

Articles in Conference Proceedings

M. Schindler and G. Caruso. "An agent-based model to simulate the feedback effect between traffic-induced air pollution and urban structure". In *Proceedings of the 2nd Symposium on Cellular Automata Models of Urban and Spatial Systems*. Québec 21-23/09/2016. Edited by Mostafavi, M-A and Pinto N. Portugal, 2016. 60-63.

P. Gerber, G. Caruso, E. Cornélis, C. Enaux, and D. Khadraoui. "Interactions between residential and daily mobility: Luxembourg case study in the MOEBIUS project (extended abstract)." In *Proceedings of the BIVEC-GIBET Transport Research Days 2013*. Edited by M. Hesse, G. Caruso, P. Gerber, and F. Viti. Zelzate: University Press, 2013. 397-399.

M. Schindler and G. Caruso. "On the impacts of transport policies and urban form on traffic-

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