

Céline ROZENBLAT

Professor - University of Lausanne



Co-director of the Institute of Geography and sustainability (IGD) – University of Lausanne

- President of the Urban commission - International Geographical Union (IGU) 2012-2016 and 2016-2020
- International Council for science (ICSU) : Member of the Scientific Committee for Health and Wellbeing in the Changing Urban Environment 2016...
- Member of the council of the Complex Sciences Society 2015...
- Coordinator of the Territorial e-departement in the UNESCO Unitwin CS-DC (Complex Sciences Digital Campus)
- Member of the council of the University of Lausanne 2016-2020

Institut de géographie et de durabilité

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Born October 20th 1965 in Paris – French citizenship

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Scientific domains: Urban networks and systems of cities, multi-level urban approaches, urban geography, regional science, multinational firms, Europe, world, spatial analysis, quantitative and qualitative models, networks and graph, complex systems.

Academic website: <http://www.unil.ch/unisciences/celinerozenblat>

BLOG CITADYNE “CITies and DYnamics of NEworks”: wp.unil.ch/citadyme-news/

Education, positions and awards

2006	Award of “Famille Sandoz” foundation for a Tenure Track Professor position in Lausanne university.
2004	“Habilitation to supervise Researches” HDR « <i>Tissus de villes. Réseaux et systèmes urbains en Europe</i> ». Univ. Montpellier III.
1992-2006	Assistant professor University Montpellier III
1992	Award of Philippe Aydalot Regional science prize (GREMI - ASRDLF)
1992	PhD thesis in geography « <i>The network of multinational firms in the system of European cities</i> » (University Paris I) directed by Denise Pumain. Higher mention
1991-1992	Assistant professor for Temporal time University Paris I
1988-1991	PhD assistant MRT-DATAR – teaching at University Paris I
1987-1988	M.A. 2 - Theoretical and epistemologic analysis in Geography (ATEG) directed by Denise Pumain, « <i>European cities: bibliography and sources</i> », Univ. Paris VII, higher mention
1986-1988	M.A. 1 in Geography « <i>Social heterogeneity of Parisian People</i> » directed by François Durand-Dastès and Léna Sanders, University Paris VII, higher mention
1983-1986	Licence of Geography University Paris VII
1983	Baccalaureat C serie (Mathematics), Lycée Jacques Decour (Paris)

Research projects since 2009

European projects:

- 2016-2017 Indo-Swiss Research Programme : SIRIUS
- 2015-2018 Europ'Aid partnership UE-China : Medium project on medium Chineses cities
- 2012-2016 FP7 FET MULTIPLEX coordinated by Guido Caldarelli (Lucca, Italy) (total support 3 millions €, Lausanne IGD : 100.000 €)
- 2012-2016 ERC GeoDiverCity coordinated by Denise Pumain (Univ. Paris 1) IGD: 25 000 €
- 2010-2014 FP7 ICT- INSITE : « The Innovation Society, Sustainability, and ICT». Coordinating Action : coordinated by David Lane (Università Ca' Foscari Venezia, Economy). *Participation* to WP7 with CNRS-Paris, Cities and ICT, and *transversal expertise* for every activities of INSITE with Noshir Contractor and Guy Mélançon on « network analysis, dynamics and visualization » (total support 1 million €, Lausanne IGD : 30.000 €)
- 2009-2011 FOCI: Future Orientation of Cities in Europe, coord. Moritz Lennert, Free Univ. Brussels, ESPON – European Spatial planning organization Network (total support 1 million €, Lausanne IGD : 100.000 €)

National research projects as main applicant (FNS):

- 2015-2018 LOGIICCS: Likelihood of Orientations of the Global Integration of Indian and Chinese Cities' Systems <http://wp.unil.ch/citadyne-news/logiiccs-fns/>
- 2009-2013 SCANLA: Swiss Cities Attracting Networks firms' Locational Anchors in collaboration with Olivier Crevoisier (Univ. Neuchâtel) and Christian Zeller (Univ. Salzburg)

Other research projects

- 2014-2015 Aix-Marseille Provence Metropole in the innovative and multinational firms' global networks, with DATAR/CGET
- 2012-2013 Paris in the flow of multinational firms with Institute of planning-PARIS (IAU)
- 2010-2012 DATAR: **Les villes Européennes** in collaboration with Ludovic Halbert (Univ. Paris-Est) Denise Pumain (univ. Paris), Didier Peters (Free Univ. of Brussels)
- 2009-2013 SCANLA: Swiss Cities Attracting Networks firms' Locational Anchors in collaboration with Olivier Crevoisier (Univ. Neuchâtel) and Christian Zeller (univ. Salzburg)
- 2005-2008 SPANGEOP – Spatial Networks in Geography », co-coordination with Guy Mélançon (LIRMM and Labri, Computer science, Bordeaux-France). 5 supported French teams, and 5 foreign teams associated to the project: Utrecht, Rotterdam, Thessaloniki, Turin, Luxembourg. Publication of a book in progress. Program support: 250.000 €
- since 2005 MoDyS : models and spatial dynamics, Multi-disciplinary network of Research (RTP) of CNRS (France) including archeology and geography. Several meetings and publications <http://modys.univ-tours.fr>
- since 2004 SIMPOP 2 (UMR Géographie-cités) Dynamic models and simulations of urban systems with Multi-agents systems (MAS)
- 2004-2005 Comparing port cities in Europe. *Institut of industrial and technological studies (IRSIT)*, Le Havre, France
- 2002 Biotechnologies in Europe. *Technological Park Padano* (Lodi - Milan). (with P.Cicille)
- 2002 European cities : comparative analysis. DATAR, 95 p. (with P.Cicille)
- 2001 Regional demographic prospective in Languedoc-Roussillon Region. *Regional Direction of Equipment of Languedoc-Roussillon*, 120 p.
- 2001 European cities : comparative analysis. Euromediterranee, Marseille, 105 p. (with P.Cicille)
- 1994 Justice and Territories : distance and access to services, Justice Ministry of France, convention ET.92.3, 70 p.
- 1994 Study on the multi-polar Urban Region Rennes-Nantes-St-Nazaire-Angers *Prefecture de la region des Pays de la Loire*, 80 p.
- 1991 The concept of city in Europe, European Commission, Luxembourg, 72 p. (with Pumain D.,

- Saint-Julien Th., Cattan N.)
1991 **Comparing European Cities**, European Commission, Luxembourg, 72 p. (with Pumain D., Saint-Julien Th., Cattan N.), Equipment ministry of France, Paris.

Organization of regular seminars and research groups

- 2016 Colloquium of Complex science – Amsterdam: Organization of 1 day satellite meeting: <http://www.ccs2016.org/>
2015 Colloquium of Complex science – Phoenix : Organization of 1 day satellite meeting in streaming and archived videos
2010-2014 coordination of SPANGE02 group (spatial Networks in Geography) of European Research Group S4 CNRS: Workshop and colloquium in Lausanne, June 2010.
2006-2014 GAME group (Geographical Analysis for Modeling Europe) du GDRE S4 CNRS: coordination of researches on « Europe, cities and regions ». 2 seminars per year of 1 day: <http://s4.parisgeo.cnrs.fr/game.htm>
2005-2009 SPANGE0 group (spatial Networks in Geography) ERG S4 CNRS : 2 seminars per year of 3 days, workshops : <http://s4.parisgeo.cnrs.fr/spangeo.htm>
2002-2004 House of Social and Human Sciences (Montpellier): “Interactions”, transversal and multi-disciplinary seminar (10 seminars in 2 years)

Organization of colloquiums and workshops

- 2010 Coordination with Itzhak Schnell and Christian Matthiessen of the *IGU Urban commission annual meeting*, Tel-Aviv - Israel, July 11th to 15th
2010 Colloquium of the Geoscience Faculty, UNIL (collaboration with Mikhail Kanevski, remote sensing and geomatics), Lausanne, June 10th - 11th: « *Spatial Simulations for Social Sciences – Multidisciplinary approaches of complexity, networks, geosimulations* », Co-Supported by GSE Faculty-UNIL, Multi-disciplinary program Anthropos-UNIL, ERG-S4 in Paris, Institute of geography-UNIL : Budget 30.000 CHF
The aim of the colloquium was to bring together 3 communities: (1) « Network Analysis » (Noshir Contractor, communication science, NorthWestern Univ. ; Marco Tomassini, Informatics, UNIL ; Roger Guimera et Marta Sales, Bio-physics, Tarragona Univ., Stefano Battiston, physics, ETH Zurich, Gérard Weisbush, Physics, ENS, Paris). (2) Spatial analysis (Itzhak Benenson, Geography - GIS, Tel-Aviv univ. ; Léna Sanders, Geography - Statistics, CNRS-Paris). (3) Sciences of complexity (Peter Allen, management – Systems theories, Scranfield univ. ; David Lane, Economy, Complex systems and emergence, univ. Venise).
http://www.unil.ch/citadyne/page75297_fr.html
Conferences videos, Itunes-U : http://www.unil.ch/citadyne/page78227_fr.html
S4 general assembly, videos, Itunes-U :
<http://www.unil.ch/citadyne/page78834.html>
Photos : <http://www.unil.ch/citadyne/page78734.html>
2010 SPANGE0 2 (spatial Networks in Geography) du GDRE S4 CNRS : 2 workshops :
- Lausanne June 9th (in collaboration with M. Tomassini, A. Banos, D. Ietri, F. Daolio) : « *Geosimulations on/of networks* »
- Paris, February 3rd (in collaboration with C. Ducruet) : « *multi-level networks* » - Budget 2.000 €
2010 Co-organization with C. Ducruet and D. Ietri of a AAG special session (American Association of geographers)- Washington (April 15th) : « ***Dynamic of networks and system of cities' evolution*** »
2009 Co-organization with Geetha Reedy and Christian Matthiessen of the *IGU Urban commission annual meeting, Hyderabad, India*
2008 Co-organization with Gerhard Braun of the *IGU Urban commission annual meeting, Tunis*
2008 Co-organization with Franck Witlox and Ben Derruder of three AAG special sessions in

- Boston on « World cities and Global Value chain ».
- 2007 Organization of the Workshop «**Visualization Tools for Geographical Data**», **GDRE S4**
Pisa Università degli Studi di Pisa, Dipartimento di Ingegneria Civile, April 26th
Workshop bringing together the SPANGEO group with CASA (UCL Centre for
ADVANCED SPATIAL ANALYSIS, London), Dynamic cartography UMR Geographie-Cités
(Paris), CERMA of Architecture school in Nantes and ESL (Environmental simulation
laboratory) Tel Aviv University.
- 2007 Co-organization with Géraldine Pfleiger (EPFL) of a trans-disciplinary Workshop
«Urban Networks and Network Theory»
University of Lausanne - June 8th 9th
International participants: Manuel Castells (USC), Peter Taylor (Loughborough),
Denise Pumain (Paris), Noshir Contractor (Chicago), John Allen (London), Federico
Casalegno (MIT)
=> Streaming diffusion and videos

Regular participation to international meetings

- since 2015 Complex Science Digital Campus - CSDC (annual)
- since 2008 Colloquium of Complex Science CCS (ECCS till 2014) (annual)
- since 2007 Sunbelt of social Networks (annual)
- since 2006 meetings GDRE S4 (annual)
- since 2006 Network of networks seminars (USC Annenberg school, North Western univ., UNIL)
- since 2005 American Association of Geography - AAG (annual)
- since 1992 IGU Urban commission (annual)
- since 1990 European Colloquium of Theoretical and Quantitative Geography (biannual)
- since 1989 Association of Regional science of French language - ASRDLF (annual)

Editorial activities

Director of the collection « *Dynamiques du territoire* » Documentation Française since 2012

Redaction Committees :

- CYBERGEO
- M@ppemonde
- Mathématiques et Sciences sociales, EHESS, Paris

Editor activities PLOS-ONE

Referee for journals :

- Canadian Geographer
- Regional Studies
- Urban Studies
- Economic Geography
- Geographical Analysis
- GeoJournal
- Revue d'économie régionale et urbaine
- Les Annales de Géographie
- Cahiers scientifiques des transports
- Geographica Helvetica
- Netcom

Diffusion of scientific information

Animation-moderation of diffusion lists:

- GEOTAMTAM@unil.ch : General information on Geography (French - English – 2.600 members)
- EUROTQG@unil.ch: Information on Theoretical and Quantitative geography (English - 750 members)
- IGUURBAN@unil.ch : Information on Urban Geography (English - 400 members)
- DUPONT@unil.ch: internal information of Groupe Dupont (62 francophone members)

Website management:

UGI Urban Commission: <http://www.unil.ch/igu-urban>

Research projects, activities: <http://www.unil.ch/citadyne>

Commissions and administration

2012-2016	President of the Urban Commission of IGU – http://www.unil.ch/igu-urban
2012-2015	Vice president of the University of Lausanne council
2010-2014	President of the scientific committee of European Research Group Spatial Simulations for Social Sciences (ERG S4)
2006 -...	Member of the Geoscience and environment Faculty council – University of Lausanne
2007-...	International mobility of Students, responsible of the Institute of geography – University of Lausanne
2007-2008	Commission of French National Center of Research (CNRS), Interdisciplinary Section 46 : « <i>Environmental risks and society</i> »
2005-2006	Director of the “Maison de la Géographie de Montpellier” (MGM), UMR ESPACE – CNRS
2003-2006	Member of French National Commission of Universities (CNU - Geography), France
1998-2002	Vice-President of French National Commission of Universities (CNU - Geography), France

Position in the scientific community

Erdős number : 3	publication in 2005 with Douglas R. White who published with Franck Harary who published in 1965 with Paul Erdős
Harzing.com	2007 : H index : 2, G index 3
(effectué sur « Celine Rozenblat »)	2010 : H index : 5, G index 10 2013 : H index : 12, G index 23 2016 : H index : 19, G index 35
Google Scholar	2007 : 89 références, 53 citations max. 2010: 195 références, 120 citations max. 2013: 366 références, 142 citations max. 2016: 389 références, 191 citations max.

Languages

French	Native tong
English	C2 - read, speak, write
Spanish	C2- read, speak, write
German	A2 - read
Italian	A2 - read
Portuguese	A2 - read
Hebrew	A2 - read

Editorial activities

Director of the collection « *Dynamiques du territoire* » Documentation Française since 2012

Journal Committees : CYBERGEO, *Mathématiques et Sciences sociales*

Editor activities : PLOS-ONE

Referee for journals : Canadian Geographer, Regional Studies, Urban Studies, Economic Geography, Geographical Analysis, GeoJournal, Revue d'économie régionale et urbaine, Les Annales de Géographie, Cahiers scientifiques des transports, Geographica Helvetica, Netcom

Diffusion of scientific information

Animation-moderation of diffusion lists (sympa):

- GEOTAMTAM@unil.ch : General information on Geography (French - English – 2,100 members)
- EUROTQG@unil.ch: Information on Theoretical and Quantitative geography (English - 700 members)
- IGUURBAN@unil.ch : Information on Urban Geography (English - 500 members)
- DUPONT@unil.ch: internal information of the Groupe Dupont (62 francophone members)

Website management:

UGI Urban Commission: <http://www.unil.ch/igu-urban>

Research projects, activities: wp.unil.ch/citadyne-news/

Courses

University of Lausanne (2006-2016)

2015-2018: Participation to the Erasmus KA+ MGM: Moocs of Geographical Modelling (9 European Universities)

2012-2014: Foundation and coordination of the Erasmus + MGM: Master of Geographical Modelling (8 European Universities)

- URBAN GEOGRAPHY: Theories and cases L2 /L3 (56h)
- BUILDING EUROPES: L2 / L3 (56h)
- SURVEYS. L2 (28h)
- NETWORKS ANALYSIS AND VISUALIZATION: Master

University of Montpellier III (1992-2006)

URBAN GEOGRAPHY	L2 (28h), Masters (10h), agrégation (6h)
REGIONAL SCIENCE	L2 (responsable) (28h)
ORGANISATION OF SPACE	L3 (responsable) (36h)
MODELISATION	L3 (responsable) (36h)
SYSTEMIC APPROACH	M2 (responsable) (10h)
STATISTICS	L2, L3, M1, M2 (168 h)
CARTOGRAPHY	L3, M1, M2 (responsable)
NEW TOOLS AND METHODS IN GEOGRAPHY	(GIS, dynamic models, Geostatistics, ...) M1 (14h)

Other university courses

1995-1997	CITIES' DYNAMICS Workshop for M2 (30 h)
1991-1992	Humaine Geography L2 (Un. Paris 1, 42 h)
1988-1992	Statistics in Géographie L1 (Un. Paris 1 with Th. Saint-Julien) (42 h)

Organisation of field trips

- 2008 in Urban geography course L2/L3 : Vevey, Zurich, La Chaux de Fonds
1998-2003 in Urban geography course L2/L3 : around Béziers region
1988-1992 in Statistics course L1 : (Univ. Paris 1)

Upgrade students (2006-2016)

Supervisions of PhD

- 2013- Antoine Bellwald (PhD Assistant University of Lausanne):
Multiplex networks modeling in Urban systems
2013-2016 Nora Stambolic (PhD FNR Luxembourg - University of Lausanne):
Cross border networks and cities in Europe
2012-2016 Charles Bohan ((PhD Assistant University of Lausanne):
Multinational firms in automobile sector in Central Europe
2009-2012 Bérengère Gautier (PhD Assistant University of Lausanne) : *Agro-food multinational Firms and Urban development in Mediterranean regions*

Assistants Post-doctorant

- September 2015 – August 2016 Paul Chapron, Computer science (Database management networks simulations, building FNS proposal).
August 2015 ... Elfie Swerts, FNS LOGIICCS project
September 2009 – August 2010 Daniele Ietri, PhD de Turin, cities and networks simulations, building FP7 proposal.
September 2007 – August 2009 Gwénaëlle Benet : harmonization of urban data in European countries. The role of audit firms in Urban attractiveness
April 2007 – September 2007 Dr. Jean-Christophe Loubier. Consolidation of database, Workshop UNNT. Now engaged as Assistant prof in Neuchâtel. univ.
September 2006 - February 2007 Dr. Patrice Tissandier. Study on urban polycentrism according to commuters graphs. Swiss and French urban system. Now engaged as Assistant prof. in Besançon univ.

Participation to PhD committees:

- 2014... Nathalia Zdanovska (PhD in geography with Anne Bretagnolle, Univ. Paris 1).
- 2010-2014 Veronika Killer (PhD in transportation with Kay W. Axhausen, ETH Zürich).
- 2009-2013 Marco Salvini (PhD in geovisualisation with Sara Fabrikant, University de Zürich).
- 2008-2010 Gwénaëlle Benet (PhD in Economy with Jean-Marie Huriot and Lise Bourdeau Lepage, University of Bourgogne)

Participation to PhD and HDR juries:

- July 2015 **PhD Urban Geography.** Univ. of Paris 1, Antonio Cosmo Ignazzi
Supervision by Denise Pumain, *The Brazilian Urban System*
- December 2014 **PhD Transport.** ETHZ - Zürich. Veronika Killer, supervision
by Kay Axhausen, *Understanding spatial interaction in models of
commuting behaviour*
- December 2013 **PhD Urban Geography.** Univ Paris 1. Elfie Swerts, supervision by
Denise Pumain and Eric Denis, *Les Systèmes de Villes en Inde et en
Chine*
- June 2013 **PhD Geomatics- Representation.** University of Zürich.
Marco Salvini, supervision by Sara Fabrikant, *Spatialization von
nutzergenerierten Inhalten für die explorative Analyse des globalen
Städtenetzes*
- December 2012 **PhD Geography.** University of Paris 7 - Diderot. Laurent
Beauguitte, *Political networks in the UN*
- December 2011 **PhD Geography.** University Paris 1. Marie-Noelle Comin,
supervision by Denise Pumain, *Innovation networks between
European cities*
- December 2010 **PhD Urbanism – and Transport.** Ecole des Ponts et Chaussées –
Paris. Catharina Horn, supervision of Michel Savy, *Airports as
territorial actors for cities' development*
- November 2010 **PhD Computer science.** Labri, Bordeaux, France. Faraz Zaidi,
supervision of Guy Melancon, *Analyse, structure and dynamics of
complex networks*
- July 2010 **HDR Urbanism – Architecture, Lyon School of Architecture,**
Chantal Berdier, supervision of Monique Zimmerman : Urban
engineering for sustainable development of cities
- December 2009 **HDR Archeology** – Pierre Garmy Director of archeological center
of Montpellier, *Cities, networks and Urban systems: contribution
of Arrcheology*
- November 2009 **PhD computer science.** Labri, Bordeaux, France. Pierre-Yves
Koenig, supervision of Guy Melancon : *Visualization of graphs*
- April 2009 **PhD Geography** – Marie-Noëlle Comin, supervision of Denise
Pumain, UMR Géographie-Cités, Paris 1 : *Networks of researches
in converging technologies and European urban development*
- December 2008 **PhD Spatial Economy** – Louafi Bouzouina, supervision of
Dominique Mignot, LET, Lyon 2 Spatial social *Segregation and
metropolitan dynamics*
- November 2008 **PhD Thesis, computer science.** Labri, Bordeaux, France. Fanny
Chevalier, supervision of Maylis Delest, Labri – Bordeaux
1, *Visualisation of graphs, hierarchies and space*
- November 2007 **PhD Urbanism – Architecture, Lyon School of Architecture,** -
Ileana Blum, supervision of Monique Zimmerman, INSA – Lyon
Regeneration of down-towns in Romanian cities
- December 2005 **HDR of Spatial Economy**, Lise Bourdeau-Lepage, supervision of
Jean-Marie Huriot, Dijon – *Est to West: recomposition of economic
and urban territories*
- April 2005 **PhD Geography** – Céline Vacchiani, supervision of Denise
Pumain, UMR Géographie-Cités, Paris 1, *The South African urban
system*

Other supervision of students

Master thesis: 2 to 4 per year

Bachelor thesis: 5 to 10 per year

Part-time assistants for research projects:

DATAR European Cities Project:

- 2010 -2012 - 2 assistant- students of Master 20%
 - 10 assistant-students of Bachelor 20% or 40%

FNS SCANLA Project:

- 2009 -2010 - 3 assistant- students of Master 20%
 - 14 assistant-students of Bachelor 20% or 40%

ESPON FOCI Project:

- 2009 -2010 - 2 assistant- students of Master 40%.
2008 -2009 - 3 assistant- students of Master (2 40%, 1 20%)
 - 10 assistant- students of Bachelor 20% or 40%

ANR SPANGEO project:

- 2007 -2008 Charles Bohan & Pierre-Yves Koenig : Organization of database
2006-2007 Laurent Perrier : Extraction of database ORBIS (BVD)
2006-2007 Carine Discazeaux: SPANGEO and INRS Montreal analyze of air
 transport networks

Organization of scientific training

- 2010 GDRE-S4, Workshop « Spatial networks' dynamics » (2* 8h.)
2003 Workshops of statistics and cartography UMR ESPACE, site of Montpellier (15h.)
2001 Thematic School CNRS «Simulations and models in spatial analysis» - September, 30
 speakers, 50 attendants <http://www.mgm.fr/libergeo>
1999-2001 Tour de France of models: 12 workshops organized in different universities of
 France
1995 Thematic School CNRS., « Spatial Analysis», September, Montpellier.

Organization of training for decision-making actors

- 2000 Organization and animation of a workshop for IHEDAT (Institut des Hautes Etudes pour le
 Développement et l'Aménagement du Territoire, DATAR) on the theme of Metropolization
 training for high functionaries (Deputies, prefects, chiefs of ministries' cabinets etc.).
 Program of 1 year (5 sequences of 2 days). Field trip in Toulouse and Milan.

Continuing education: attending at workshops or schools

- 2013 ORA – Network analysis and GIS (Sunbelt of Social networks, Hamburg)
2013 ERGM – Network statistics (Sunbelt of Social networks, Hamburg)
2009 Dynamics of networks structures – STAT-NET / ERGM (North Western Univ., Chicago)
2009 Multi-agent systems- NETLOGO Software (North Western Univ., Chicago)

Curriculum Vitæ

2009	Multi-agent systems- NETLOGO Software (Strasbourg CNRS)
2008	Social Networks analysis, UCINET Software (Sunbelt of social networks, St Petersburg, Florida)
2007	Social networks dynamics. SIENNA Software (Univ. Zurich)
2006	<i>"Machine Learning Algorithms for Spatial Data"</i> - IGAR –FGSE UNIL
2001	Simulations and models in spatial analysis, Montpellier
1999	Modelizing Cities, Nantes
1997	Data analyses in Ecology, Garchy
1995	Spatial Analysis, Montpellier
1994	Statistics and urbanisation forms, St-Quentin en Yvelines, Cargese (Corse)
1994	Modelisation of dynamics in geography, Garchy
1993	GIS, Montpellier
1989	Expert Systems in geography, Grenoble
1987	1 year stage at the National Institute of Demographic Studies (INED), Paris
1986	1 year stage at the Gerontology Laboratory, F.Cribier, S.A.S., Paris