Dr. Pierre-Alexandre Balland

Associate Professor of Economic Geography
Department of Human Geography and Planning

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Academic appointments

2021 - present	Associate Professor of Economic Geography Department of Human Geography and Planning, Utrecht University	
2014 - 2020	Assistant Professor of Economic Geography Department of Human Geography and Planning, Utrecht University	
2019 - present	Member of the ESIR Expert Group on Innovation and Digital Transformation Directorate-General for Research and Innovation, European Commission	
2017 - present	Research Fellow in Complex Systems Fellow at the Center for Complex Systems Studies, Utrecht University	
2018 – 2019	Visiting Professor Media Lab - Massachusetts Institute of Technology	
2013 - present	Deputy-Head of the Research Programme in Economic Geography Department of Human Geography and Planning, Utrecht University	
2016	Visiting Professor Department of Geography, University of California, Los Angeles	
2014 - 2016	Research Associate in Data Science for Innovation Studies CIRCLE, Lund University	
2010 - 2014	Post-doctoral researcher in Economic Geography Department of Human Geography and Planning, Utrecht University	
2013 - 2013	Visiting Scholar Department of Geography, University of California, Los Angeles	
2010 - 2013	Research Associate in Innovation Studies Eindhoven University of Technology	
2007 - 2010	Research and Teaching Assistant University of Toulouse	

Education

2010	Ph.D. in Economics, University of Toulouse
2007	M.Sc. in Development Economics, University of Toulouse
2005	B.Sc. in Economics, University of Toulouse

Grants, Honor and Awards

2019 - 2023	Marie Skłodowska-Curie fellow, TREND Project, Horizon 2020
2017	Big Data Grant, Utrecht University

2017	Big Data Grant, Utrecht University
2017	Smart Specialization Project, European Commission
2016	Strategic Collaboration Programme, Utrecht University & UCLA
2015	Early Career Award, Regional Studies Association
2015	Workshop Grant, Complex Systems Focus Area, Utrecht University
2015	Strategic Collaboration Programme, Utrecht University & UCLA
2014	JPI Urban Europe (co-app), European Commission
2014	Seed Money Program, Faculty of Geosciences, Utrecht University
2007 - 2010	Full Doctoral Fellowship, French Ministry of Higher Education and Research
2005 - 2007	Master Scholarship, Midi-Pyrénées Centre for Higher Education

Research Areas

Economic Geography	Innovation Studies	Science and Innovation Policy
Complex Systems	Sustainable Cities	Structural and Dynamic Network Analysis

Keynotes

Research and Innovation Days of the European Commission (Online, 3000 people)

European Regional Science Association Annual Conference – ERSA (Online)

Research and Innovation Days of the European Commission (Brussels, 3000 people)

Asian Real Estate Society International Conference (Shenzhen, 2019, 600 people)

MIT China Future City Lab Conference (Hangzhou, 2019, 200 people)

Future city innovation (Tianjin, 2019, 200 people)

Geography of Innovation and Complexity (Utrecht, 2019, 200 people)

Institute for New Economic Thinking (Urban and Regional Economics Webinar Series, 2019)

World Real Estate Forum (Boston, 2018 – 400 people)

MIT Workshop on Economic Complexity (Boston, 2018 – 200 people)

Institute for New Economic Thinking (Urban and Regional Economics Webinar Series, 2017)

Regional Studies Association Annual Conference (Dublin, 2017 – 600 people)

TED Talk - TEDx University of Bordeaux (Bordeaux, 2015 – 100 people; > 5000 views)

Cluster and Networks Annual Conference (Castelló de la Plana, 2013 – 80 people)

Invited Talks

World Bank conference of The Promise of Digital Transformation (Vienna, 2019)

Directorate General for Regional and Urban Policy (DG REGIO) (Brussels, 2019)

Evaluation Conference of EU Cohesion Policy (Bucharest, 2019)

World Bank show and tell seminar (Washington, DC, 2019)

Chinese Academy of Science (Beijing, 2019)

Peking University (Beijing, 2019)

Directorate General for Research and Innovation Policy (DG RTD) (Brussels, 2019)

INGENIO, University of Valencia (Valencia, 2019)

Joint Research Centre (JRC) of the European Commission (Sevilla, 2019)

Ministry of Economy and Finance of Morocco (Rabat, 2019)

University Sidi Mohamed Ben Abdellah (Fès, 2019)

Stavanger Business School (Stavanger, 2018)

HEC Montréal (Montréal, 2018)

Media Lab, Massachusetts Institute of Technology (Boston, 2018)

University of Pisa (Pisa, 2018)

University of California, Los Angeles (Los Angeles, 2018)

University of Florence (Florence, 2017)

Media Lab, Massachusetts Institute of Technology (Boston, 2017)

John F. Kennedy School of Government, Harvard University (Boston, 2017)

University of Pisa (Pisa, 2017)

Organisation for Economic Co-operation and Development - OECD (Paris, 2017)

University of California, Los Angeles (Los Angeles, 2017)

Barcelona Workshop on Regional and Urban Economics (Barcelona, 2016)

University of Toulouse (Toulouse, 2016)

University of Pisa (Pisa, 2016)

Growth Lab Seminar - John F. Kennedy School of Government, Harvard University (2015)

Institutskolloquium - Karlsruhe Institute of Technology (2015)

ISEG Lecture - University of Hanover

Research Seminar - University of Pisa (2015)

Research Seminar - University of Bordeaux (2015)

Visiting Scholars Seminar - Swinburne University of Technology, Melbourne (2014)

Cluster and Networks Seminar - Universitat Jaume I de Castelló, Spain (2013)

International Workshop on Regional Development - INRA Paris (2011)

Regional Innovation and Growth - University of Pécs, Hungary (2011)

Short-term visits

Chinese Academy of Science (July 2019)

University of Paris (June 2019)

University of Pécs (July 2017)

Media Lab, Massachusetts Institute of Technology (April-May 2017)

University of Florence (Feb. 2017)

University of Toulouse (Nov. 2016)

University of Pisa (Feb. 2016)

John F. Kennedy School of Government, Harvard University (May 2015)

Swinburne University of Technology in Melbourne (Dec. 2014 – Jan. 2015)

Articles published in Peer-Reviewed Journals

25. Balland, P.A., Jara-Figueroa, C., Petralia, S., Steijn, M., Rigby, D., and Hidalgo, C. (2020) Complex Economic Activities Concentrate in Large Cities, *Nature Human Behavior*, **4**: 248–254.

24. Ascani, A., Bettarelli, L., Resmini, L., and Balland, P. A. (2020) Global networks, local specialisation and regional patterns of innovation, *Research Policy*, 49 **(8)**.

- 23. Ascani, A., Balland, P.A., and Morrison, A. (2020) Heterogeneous foreign direct investment and local innovation in Italian Provinces, *Structural Change and Economic Dynamics*, **53**: 388-401.
- 22. Balland, P.A., Boschma, R., Crespo, J. and Rigby, D. (2019) Smart Specialization policy in the EU: Relatedness, Knowledge Complexity and Regional Diversification, *Regional Studies*, **53** (9): 1252-1268.
- 21. Balland, P.A., Boschma, R., and Ravet, J. (2019) Network dynamics in collaborative research in the EU, 2003–2017, *European Planning Studies*, **27** (9): 1811-1837.
- 20. Ascani, A., Balland, P.A., and Morrison, A. (2019) Heterogeneous foreign direct investment and local innovation in Italian Provinces, *Structural Change and Economic Dynamics, forthcoming*.
- 19. Fernandes, T., Balland, P.A., Morrison, A., and Boschma, R. (2019) What drives the geography of jobs in the US? Unpacking relatedness, *Industry and Innovation, forthcoming*.
- 18. Giuliani, E., Balland, P.A., and Matta, A. (2019) Straining but not thriving: Understanding network dynamics in underperforming industrial clusters, *Journal of Economic Geography*, **19** (1): 147–172.
- 17. Hidalgo, C., Balland, P.A., Boschma, R., Delgado, M., Feldman, M., Frenken, K., Glaeser, E., He, C., Kogler, D., Morrison, A., Neffke, F., Rigby, D., Stern, S., Zheng, S., and Zhu, S. (2018) The Principle of Relatedness, *Unifying Themes in Complex Systems* (**1X**): 451-457.
- 16. Vicente, J., Balland, P.A., and Crespo, J. (2018) Les fondements micro du changement structurel régional: Que nous enseignent 25 ans de proximités?, *Revue d'Économie Régionale & Urbaine*, **5** (6): 1013-1041. [Abstract] [PDF]
- 15. Petralia, S., Balland, P.A., and Morrison, A. (2017) Climbing the Ladder of Technological Development, *Research Policy*, **46** (5): 956–969.
- 14. Balland, P.A., and Rigby, D. (2017) The Geography of Complex Knowledge, *Economic Geography*, **93** (1): 1-23.
- 13. Balland, P.A. (2017) A review of Why Information Grows? The Evolution of Order, from Atoms to Economies by César Hidalgo, *Journal of Economic and Social Geography (TESG)*, **108** (2): 258–260.
- 12. Heimeriks, G., and Balland, P.A. (2016) How Smart is Specialisation? An Analysis of Specialisation Patterns in Knowledge Production, *Science and Public Policy*, **43** (4): 562-574.
- 11. Balland, P.A., Belso-Martinez, J.A., and Morrison, A. (2016) The Dynamics of Technical and Business Knowledge Networks in Industrial Clusters: Embeddedness, status or proximity?, *Economic Geography*, **92** (1): 35-60.
- 10. Petralia, S., Balland, P.A., and Rigby, D. (2016) Unveiling the geography of historical patents in the United States from 1836 to 1975, *Scientific Data*, **3** (160074): 1-14.
- 9. Balland, P.A., Rigby, D., and Boschma, R. (2015) The Technological Resilience of U.S. Cities, *Cambridge Journal of Regions, Economy and Society*, **8** (2): 167-184.
- 8. Balland, P.A., Boschma, R. and Frenken, K. (2015) Proximity and Innovation: From Statics to Dynamics, *Regional Studies*, **49** (6): 907-920.
- 7. Boschma, R., Balland, P.A. and Kogler, D. (2015) Relatedness and Technological Change in Cities: The rise and fall of technological knowledge in U.S. metropolitan areas from 1981 to 2010, *Industrial and Corporate Change*, **24** (1): 223-250.

- 6. Broekel, T., Balland, P.A., Burger, M. and van Oort, F. (2014) Modeling Knowledge Networks in Economic Geography: A Discussion of Four Empirical Strategies, *The Annals of Regional Science*, **53** (2): 423-452.
- 5. Boschma, R., Heimeriks, G. and Balland, P.A. (2014) Scientific Knowledge Dynamics and Relatedness in Bio-Tech Cities, *Research Policy*, **43** (1): 107-114.
- 4. Balland, P.A., de Vaan, M. and Boschma, R. (2013) The Dynamics of Interfirm Networks along the Industry Life Cycle: The Case of the Global Video Games Industry 1987-2007, *Journal of Economic Geography*, **13** (5): 741-765.
- 3. Balland, P.A., Suire, R. and Vicente, J. (2013) Structural and Geographical Patterns of Knowledge Networks in Emerging Technological Standards: Evidence from the European GNSS Industry, *Economics of Innovation and New Technology*, **22** (1): 47-72.
- 2. Balland, P.A. (2012) Proximity and the Evolution of Collaboration Networks: Evidence from Research and Development Projects within the Global Navigation Satellite System (GNSS) Industry, *Regional Studies*, **46** (6): 741-756.
- 1. Vicente, J., Balland, P.A. and Brossard, O. (2011) Getting into Networks and Clusters: Evidence from the Midi-Pyrenean Global Navigation Satellite Systems (GNSS) Collaboration Network, *Regional Studies*, **45** (8): 1059-1078.

Articles under review in Peer-Reviewed Journals

- 4. Balland, P.A., and Boschma, R. (2019) Mapping the potential of EU regions to contribute to Industry 4.0, Industry and Innovation (minor revision)
- 3. Dong, Z., Li, Y., Balland, P.A., and Zheng, S. (2019) Industrial Land Policy and Economic Complexity of Chinese Cities, Land Use Policy (minor revision)
- 2. Uhlbach, W.H., Balland, P.A., and Scherngell, T. (2019) R&D Policy and Technological Trajectories of Regions: Evidence from the EU Framework Programmes, Industrial and Corporate Change (major revision)
- 1. Steijn, M., Balland, P.A., Boschma, R., Rigby, David (2019) Technological Diversification of U.S. Cities during the Great Historical Crises, Industrial and Corporate Change (revise and re-submit)

Book Chapters

- 6. Balland, P.A. (2016) Relatedness and the Geography of Innovation, in: R. Shearmur, C. Carrincazeaux and D. Doloreux (eds) *Handbook on the Geography of Innovation*. Northampton, MA: Edward Elgar.
- 5. Crespo, P.A.., R. Boschma and P.A. Balland (2016) Resilience, networks and competitiveness: a conceptual framework, in: R. Huggins and P. Thompson (eds.) *Handbook of Regions and Competitiveness*. Cheltenham: Edward Elgar, forthcoming.
- 4. Boschma, R., P.A. Balland and D. Kogler (2015) The geography of interfirm knowledge spillovers in bio-tech, in: F. Crespi and F. Quatraro (eds) *The Economics of Knowledge, Innovation and Systemic Technology Policy.* London/New York: Routledge.
- 3. Vicente, J., Balland, P.A. and Suire, R. (2013) The structure and geography of collaboration networks in the European GNSS industry: a 1-mode and 2-mode network analysis, in T. Scherngell (ed.) The

geography of networks and R&D collaborations. New York, NY: Advances in Spatial Science Springer Series.

- 2. Boschma, R., Balland, P.A. and de Vaan, M. (2014) The Formation of Economic Networks: A Proximity Approach, in A. Torre and F. Wallet (eds.) *Regional Development and Proximity Relations*. Northampton, MA: Edward Elgar.
- 1. Balland, P.A., Boschma, R. and Frenken, K. (2013) Proximity and Innovation Networks: An Evolutionary Approach, in: P. Cooke (ed.) *Re-framing Regional Development: Evolution, Innovation and Transition*. New York, NY: Routledge.

Policy Reports

- 4. Dixson-Declève, S., Balland, P.A. et al. (2020) Protect, prepare and transform Europe Recovery and resilience post COVID-19, *European Commission's Directorate-General for Research and Innovation*, Brussels.
- 3. Balland, P.A., and Ravet, J. (2018) Dynamic Network Analysis of the EU R&I Framework Programme, Monitoring Flash for the *European Commission's Directorate-General for Research and Innovation*, Brussels.
- 2. Boschma, R., Balland, P.A., Crespo, J., and Rigby, D. (2017) Linking impacts to open innovation: increasing local impact using the related variety and knowledge complexity concepts: empirical findings of regions patent data, *Report for the RISE group, European Commission's Directorate-General for Research and Innovation*, Brussels.
- 1. Levy, R., Massard, N., and Balland, P.A. (2010) Quelles collaborations entre acteurs du processus d'innovation?, scientific report on the French cluster policy for the French Ministry of Economy, Finance and Industry (Direction générale de la compétitivité, de l'industrie et des services).

Data and Softwares

- 2. Balland, P.A. (2016) EconGeo: Computing Key Indicators of the Spatial Distribution of Economic Activities, *R package*: https://github.com/PABalland/EconGeo
- 1. Petralia, S., Balland, P.A., and Rigby, D. (2016) HistPat Dataset, *Harvard Dataverse*, doi: 10.7910/DVN/BPC15W

PhD Thesis

Balland, P.A. (2010) *Proximity and the Structure of Knowledge Networks: Evidence from the GNSS industry.* Ph.D. Thesis, University of Toulouse.

Supervision of Ph.D. students

Arnault Morisson (2015 – 2019) – Policy Analyst, *Interreg Europe Policy Program*Sergio Petralia (2013 – 2017) – Post-Doc, *London School of Economics & Harvard University*Matthias Brachert (2012-2016) – Post-Doc, *Halle University*

Teresa Farinha Fernandes - Utrecht University (since 2014)

Mathieu Steijn - Utrecht University (since 2014)

Alje van Dam – Utrecht University (since 2017)

Lars Mewes - Utrecht University & University of Hanover (since 2016)

Sándor Juhász - Utrecht University & Hungarian Academy of Sciences (since 2016)

Diego Osorio - Utrecht University & Wageningen University (since 2016)

Media

"The EU needs to fix the east – west innovation gap", by Florin Zubaşcu in Science Business. Retrieved from https://sciencebusiness.net/news/eu-needs-fix-east-west-innovation-gap (Sept. 26, 2019).

"How Regions Can Re-invent Themselves", Institute for New Economic Thinking Webinar by Pierre-Alexandre Balland. [Video file]. Retrieved from https://www.youtube.com/watch?v=BmMTvj6IWRk (July 2, 2019).

"Knowledge complexity and spatial inequality", Institute for New Economic Thinking Webinar by Pierre-Alexandre Balland. [Video file]. Retrieved from https://www.youtube.com/watch?v=huHYx5PD5ng (Sept. 11, 2017).

"Technology as an urban solution to economic decline", by Rachel Gordon in the *Chicago Policy Review*. Retrieved from http://chicagopolicyreview.org/2016/05/06/technology-as-an-urban-solution-to-economic-decline (May 6, 2016).

"Créer un observatoire de l'innovation pour cartographier les compétences des régions", Interview of Pierre-Alexandre Balland by Paul Périé in *La Tribune*. Retrieved from http://toulouse.latribune.fr/innovation/2016-01-27/-creer-un-observatoire-de-l-innovation-pour-cartographier-les-competences-des-regions.html (January 27, 2016).

"Socio-economic and technological flexibility is key to the resilience of American cities in times of crisis", by Pierre-Alexandre Balland, David Rigby, and Ron Boschma in *United States American Politics and Policy*, London School of Economics United States Centre. Retrieved from http://blogs.lse.ac.uk/usappblog/2015/09/30/socio-economic-and-technological-flexibility-is-key-to-the-resilience-of-american-cities-in-times-of-crisis/ (September 30, 2015).

"Knowledge and the city: the digital age paradox", TEDx Talk by Pierre-Alexandre Balland. [Video file]. Retrieved from https://www.youtube.com/watch?v=bKbTg7hCMeE (March 21, 2015).

Contribution to Discipline

Member of the research committee of the Regional Studies Association

Main Organizer of Academic Events

Geography of Innovation and Complexity, Utrecht, 200 participants (2019) Geography of Networks Workshop - AAG Annual Meeting, Boston, 15 participants (2017) Network Analysis and Innovation Studies, Lund, 30 participants (2016)

Economic Geography Research Seminars - Utrecht, 40 participants (since 2013 - monthly seminars)

Geography of Networks Workshop - AAG Annual Meeting, Chicago, 25 participants (2015)

Complexity Science and Economic Geography - Utrecht, 70 participants (2015)

Introduction to Network Analysis - Los Angeles, 10 participants (2015)

Second Geography of Innovation Conference - Utrecht, 400 participants (2014)

Networks and Economic Geography, Utrecht, 40 participants (2014)

Regional Resilience Workshop, Utrecht, 40 participants (2014)

Network Analysis and Innovation Studies, Lund, 30 participants (2014)

Geography of Networks Workshop - AAG Annual Meeting, Tampa, 15 participants (2014)

Networks and Economic Geography - Utrecht, 40 participants (2013)

Regional Resilience Workshop - Utrecht, 40 participants (2013)

Networks and Economic Geography - Utrecht, 30 participants (2013)

Regional Resilience Workshop - Utrecht, 25 participants (2012)

Social Network Analysis Seminar - Toulouse, 50 participants (2009)

Member of Organizing Committees of Major Academic Events

Fourth Geography of Innovation Conference, Barcelona, 350 participants (2018)

Third Geography of Innovation Conference, Toulouse, 350 participants (2016)

10th Regional Innovation Policies Conference, Karlsruhe, 100 participants (2015)

International Ph.D. School in Economic Geography, Utrecht, 45 participants (2016)

International Ph.D. School in Economic Geography, Utrecht, 40 participants (2014)

Regional resilience and Innovation Policy workshop, Toulouse, 50 participants (2014)

International Ph.D. School in Economic Geography, Utrecht, 35 participants (2012)

Economists in the City Conference, Toulouse, 50 participants (2010)

French Cluster Policy Conference, Toulouse, 100 participants (2009)

Referee Activities

Journal Referee for African Journal of Business Management, Computers and Geosciences, Ecological Economics, Economic Geography, Economics of Innovation and New Technology, Environmental Innovation and Societal Transitions, European Planning Studies, Geoforum, Growth and Change, Industrial and Corporate Change, Journal of Economic and Social Geography, Journal of Economic Geography, Journal of Informetrics, Journal of Regional and Urban Economics, Letters in Spatial and Resource Sciences, Nature Climate Change Review, Nature Communications, Papers in Regional Science, PLoS One, Regional Studies, Industry and Innovation, Research Policy, L'Actualité Économique, Scientometrics, The Annals of Regional Science, Technological and Economic Development of Economy, Technological Forecasting and Social Change, and Urban Geography.

Manuscript reviewer: Routledge (Taylor & Francis Group)

Conference reviewer: DRUID Summer Conference, Geography of Innovation Conference, Regional Innovation Policies Conference

Participation in International Collaboration Projects

TREND project (Transition with Resilience for Evolutionary Development), Horizon 2020 (2019-2023)

Relatedness, knowledge complexity and technological opportunities of regions: A framework for smart specialisation, *Regional Studies Association* (2016-2017)

Resilient Cities Project: Industrial Network and Institutional perspectives on Economic Growth and Well-Being, *JPI Urban Europe* (2014-2017)

T-RES Project: Territories and technologies in an unstable knowledge economy: An evolutionary framework of regional resilience, *Open Research Area funding programme* (2011-2014)

EURODITE Project: Regional Trajectories to the Knowledge Economy: A Dynamic Model, *Sixth Framework Program of the European Union* (2007-2010)

Presentations at International Conferences

European Policy for Intellectual Property conference - Bordeaux (2017)

Annual Meeting of the Association of American Geographers - Boston (2017)

First Regional Economic Development and Innovation Workshop - Los Angeles (2016)

Geography of Innovation conference - Toulouse (2016)

Annual Meeting of the Association of American Geographers - Chicago (2015)

Regional Innovation Policies Conference - Stavanger, Norway (2015)

Regional Studies Association European Conference - Izmir, Turkey (2015)

Annual Meeting of the Association of American Geographers - Tampa (2014)

Regional Resilience Workshop - Toulouse (2014)

Geography of Innovation Conference - Utrecht (2014)

Regional Studies Association Conference - Los Angeles (2013)

OECD conference on patents for policy makers - Rio de Janeiro (2013)

Industrial Relatedness and Economic Growth - Utrecht (2013)

Annual Meeting of the Association of American Geographers - Los Angeles (2013)

Research and Innovation workshop - Eindhoven (2012)

Regional Resilience Workshop - Utrecht (2012)

Network Dynamics and the Geography of Innovation - Utrecht (2012)

Interdisciplinary Workshop on Networks - Utrecht (2012)

Regional Studies Association European Conference - Delft (2012)

Annual Meeting of the Association of American Geographers - New-York (2012)

First Geography of Innovation conference - Saint-Etienne (2012)

Formalization and dynamics of complete networks - Toulouse (2011)

Atlanta Conference on Science, Technology, and Innovation Policy - Atlanta (2011)

Workshop on Innovation, Evolution, and Networks - Eindhoven (2011)

Dynamics and Multiplexity of Networks - Toulouse (2010)

Sunbelt Conference of the International Network for Social Network Analysis - Riva Del Garda (2010)

EUROLIO Conference on Localized Innovation Indicators - Toulouse (2010)

Social Network Conference of the French Association of Sociology - Toulouse (2010)

Workshop Proximity and Innovation: Empirical Issues - Toulouse (2010)

Workshop on Social Network Analysis - Toulouse (2010)

Sixth Proximity Congress - Poitiers (2009)

French competitiveness clusters policy - Toulouse (2009)

Regional Studies Association International Conference (2008)

Teaching

Teaching qualifications

Teaching certificate from the French ministry of higher education (2010)

Teaching certificate from Utrecht University (Basiskwalificatie Onderwijs - 2014)

Ph.D. Level

Economic Geography in R - Utrecht University (since 2016)

Networks and Economic Geography - Utrecht University (since 2012)

Innovation Networks - Norwegian Business School (since 2014)

Network Analysis and Innovation Studies - Lund University (since 2014)

Introduction to Network Analysis - Universidad Miguel Hernández de Elche (since 2016)

Networks and Economic Geography - Utrecht University (since 2012)

M.Sc. Level

The New Science of Cities - Utrecht University (since 2016)

Urban Resilience - Utrecht University (since 2015)

Economic Geography Field Trip (1 week abroad) - Utrecht University (since 2015)

Quantitative Urban & Economic Analytics - Utrecht University (since 2014)

The Geography of Innovation, Networks, and Technological Change - University of Hannover (2015 - 2016)

B.Sc. Level

Network Science - Utrecht University (since 2010)

Economic Evolution of Cities and Regions - Utrecht University (since 2013)

Applied Economics Research Course - Utrecht University (since 2015)

Geography of Networks, University of California, Los Angeles (2015-2016)

Organizational Theory, University of Toulouse (2007-2010)