**Dr. Pierre-Alexandre Balland**

Assistant Professor of Economic Geography E-mail: p.balland@uu.nl

Department of Human Geography and Planning Phone: +31 (0) 30 253 24 07

Utrecht University Fax: +31 (0) 30 253 20 37

Heidelberglaan 2, 3508 TC Utrecht Office: 623

The Netherlands Webpage: www.paballand.com

**Academic appointments**

July 2014 - present Assistant Professor of Economic Geography

*Department of Human Geography and Planning, Utrecht University*

March 2018 - July 2018 Visiting Professor

*Media Lab - Massachusetts Institute of Technology*

Oct. 2013 - present Deputy-Head of the Research Programme in Economic Geography

*Department of Human Geography and Planning, Utrecht University*

April. 2017 – June 2017 Visiting Professor

*Media Lab - Massachusetts Institute of Technology*

March 2016 – Sept. 2016 Visiting Professor

*Department of Geography, University of California, Los Angeles*

Apr. 2014 - Apr. 2016 Research Associate in Innovation Studies

*CIRCLE, Lund University*

Dec. 2014 - Jan. 2015 Visiting Professor

*Swinburne University of Technology, Melbourne*

Oct. 2010 - July 2014 Post-doctoral researcher in Economic Geography

*Department of Human Geography and Planning, Utrecht University*

Feb. 2013 - Apr. 2013 Visiting Scholar

*Department of Geography, University of California, Los Angeles*

Oct. 2010 - Oct. 2013 Research Associate in Innovation Studies

*Eindhoven University of Technology*

Sept. 2007 - Oct. 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

2005B.Sc. in Economics, University of Toulouse

**Grants, Honor and Awards**

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**

World Real Estate Forum (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; > 3000 views online)

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

**Invited Talks**

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**

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)

**Articles in Peer-Reviewed Journals (18)**

18. 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, *Proceedings of the 20th International Conference on Complex Systems, forthcoming.*

17. Balland, P.A., Boschma, R., Crespo, J. and Rigby, D. (2018) Smart Specialization policy in the EU: Relatedness, Knowledge Complexity and Regional Diversification, *Regional Studies, forthcoming.*

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, forthcoming.*

15. Giuliani, E., Balland, P.A., and Matta, A. (2018) Straining but not thriving: Understanding network dynamics in underperforming industrial clusters, *Journal of Economic Geography, forthcoming.*

14. Petralia, S., Balland, P.A., and Morrison, A. (2017) Climbing the Ladder of Technological Development, *Research Policy,* **46** (5): 956–969.

13. Balland, P.A., and Rigby, D. (2017) The Geography of Complex Knowledge, *Economic Geography,* **93** (1): 1-23.

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.

**Book Reviews (1)**

1. 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.

**Book Chapters (6)**

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.

**Working Papers and articles under review (5)**

6. Ascani, A., and Balland, P.A. (2018) Heterogeneous Foreign Direct Investment and Local Innovation in Italian Provinces, *Papers in Evolutionary Economic Geography*, 18 (20): 1-24 *(Submitted to Journal of Regional Science).*

5. Fernandes, T., Balland, P.A., Morrison, A., and Boschma, R. (2018) What drives the geography of jobs in the US? Unpacking relatedness, *Papers in Evolutionary Economic Geography*, 18 (13): 1-24. *(Submitted to Industry and Innovation).*

4. Uhlbach, W.H., Balland, P.A., and Scherngell, T. (2017) R&D Policy and Technological Trajectories of Regions: Evidence from the EU Framework Programmes, Papers in Evolutionary Economic Geography, 17 (22): 1-21 *(Submitted to Research Policy).*

3. Balland, P.A. (2017) Economic Geography in R: Introduction to the EconGeo Package, Papers in Evolutionary Economic Geography, 17 (09): 1-75.

2. Vicente, J., Balland, P.A., and Crespo, J. (2018) Les fondements micro du changement structurel régional: Que nous enseignent 25 ans de proximités?, SSRN Working Paper

1. Balland, P.A., Hidalgo, C.A., Jara-Figueroa, C., Petralia, S., Rigby, D., and Steijn, M. (2017) Economic Complexity and Urban Scaling.

**Policy Reports (2)**

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)**

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**

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)

Arnault Morisson – Utrecht University & Mediterranea University of Reggio Calabria (since 2016)

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

**Media**

"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=bKbTq7hCMeE> (March 21, 2015).

**Contribution to Discipline**

*Member of the research committee of the Regional Studies Association*

*Main Organizer of Academic Events*

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**

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*

Geography of Networks - 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)