

Juste Raimbault

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Education

- since Feb. 2015 **PhD in Geography**, *Géographie-Cités (UMR 8504 CNRS) / LVMT (UMR-T 9403 IFSTTAR)*, Paris, France.
Towards Models Coupling Urban Growth and Transportation Network Growth, *under the supervision of HDR A. BANOS and MCF F. LE NECHET*.
- June 2016 **SFI Complex Systems Summer School**, *Santa Fe Institute*, Santa Fe, USA.
- 2012–2014 **MSc Complex Systems Science**, *Ecole Polytechnique ParisTech*, Palaiseau, France.
Agent-based modeling, Evidence-based methods from Therapeutic Evaluation, Theoretical Analysis of Physical Complex Systems, Epistemology, Complex Networks, Datamining, Signal Processing
Memoire : Complex Network Analysis for Real-time Trend Detection in a Financial System
- 2013–2014 **MSc Urbanism, Environment, Transportation**, *Ecole Nationale des Ponts et Chaussées ParisTech*, Marne-la-Vallée, France.
Analysis of Territorial Systems, Management and design of Transportation Systems, Urbanism, History of Urbanism, Urban Economics, Environmental Planning and Design
Memoires : Application of Evidence-based Methods in Urban Planning and Architecture ; Discrete Choice Models for Bike-sharing Transportation Systems
- 2010–2012 **BSc**, *Ecole Polytechnique ParisTech*, Palaiseau, France.
Multidisciplinary scientific formation (mathematics, computer science, applied mathematics, physics, mechanics, biology, economics)

Publications

- Bergeaud A., Potiron Y., Raimbault, J. (2017). Classifying Patents based on their Semantic Content, forthcoming in *PlosONE*. arxiv:1612.08504
- Raimbault, J. (2017). A Discrepancy-Based Framework to Compare Robustness Between Multi-attribute Evaluations. In *Complex Systems Design & Management* (pp. 141-154). Springer International Publishing.
- Raimbault, J. (2016). Investigating the Empirical Existence of Static User Equilibrium, *forthcoming in EWGT 2016 proceedings, Transportation Research Procedia*. arxiv:1608.05266
- Raimbault, J. (2016). Generation of Correlated Synthetic Data, forthcoming in *Actes des Journées de Rochebrune 2016*.
- Raimbault, J. (2015). Models Coupling Urban Growth and Transportation Network Growth: An Algorithmic Systematic Review Approach, forthcoming in *ECTQG 2015 proceedings*. arxiv:1605.08888
- Raimbault, J. (2014). User-Based Solutions for Increasing Level of Service in Bike-Sharing Transportation Systems. In *Complex Systems Design & Management* (pp. 31-44). Springer International Publishing. **Best Student Paper Award at CSDM 2014.**
- Raimbault, J., Banos, A. & Doursat, R. (2014) A Hybrid Network/Grid Model of Urban Morphogenesis and Optimization. *Proceedings of the 4th International Conference on Complex Systems and Applications (ICCSA 2014)*, June 23-26, 2014, Université de Normandie, Le Havre, France; M. A. Aziz-Alaoui, C. Bertelle, X. Z. Liu, D. Olivier, eds.: pp. 51-60.
- Raimbault, J. & Marandon E. (2016). Optimizing the Extraction of Information from a Complex System, *submitted to EPJ Data Science*.

Communications

- Towards a Theory of Co-evolutive Networked Territorial Systems: Insights from Transportation Governance Modeling in Pearl River Delta, China. *Medium Seminar-Urban Sustainable Development in Zhuhai, Guangzhou, December 2016*
- Models of growth for system of cities : Back to the simple, *Conference on Complex Systems 2016, Amsterdam, Sep 2016*.
- Raimbault J., Bergeaud A. and Potiron Y. (2016). Investigating Patterns of Technological Innovation. *Conference on Complex Systems 2016, Amsterdam, Sep 2016*.

For a Cautious Use of Big Data and Computation. *Royal Geographical Society - Annual Conference 2016 - Session : Geocomputation, the Next 20 Years (1)*, London, Aug 2016.

Indirect Bibliometrics by Complex Network Analysis. *20e Anniversaire de Cybergeog, Paris, May 2016*.

Raimbault, J. & Serra, H. (2016). Game-based Tools as Media to Transmit Freshwater Ecology Concepts, *poster corner at SETAC 2016 (Nantes, May 2016)*.

Le Nechet, F. & Raimbault, J. (2015). Modeling the emergence of metropolitan transport authority in a polycentric urban region, *ECTQG 2015, Bari, Sep 2015*.

Hybrid Modeling of a Bike-Sharing Transportation System, *poster presented at ICCSS 2015, Helsinki, June 2015*.

Raimbault, J. & Gonzales, J. (2015). Application de la Morphogénèse de Réseaux Biologiques à la Conception Optimale d'Infrastructures de Transport, *poster presented at Rencontres du Labex Dynamite, Paris, May 2015*.

Loeve, S., Raimbault, J. & al. (june 2014). Student Event, at *Workshop Worldviews and Values in Synthetic Biology, University Paris 1 Sorbonne, June 6-7, 2014* (<http://synenergene.eu/resource/student-event-paris-workshop-worldviews-and-values-synthetic-biology>).

When Open Data are Incomplete : Inference of Missing Data for Model Parameterization, *lightning talk at Scientific Open Data Conference (St Mandé, March 2014)*.

Grants and Award

MEDIUM mobility grant, Young Researcher mobility grant for China, in the frame of the MEDIUM project (<http://mediumcities-china.org/>).

PhD grant, *allocation doctorale AMX* for three years from Graduate School, Ecole Polytechnique.

Best Student Paper Award at Conference Complex Systems Design and Management, Paris, December 2014.

Teaching

- Spring 2017 **Teaching Assistant**, *Université Paris 7*, Paris, France.
Teaching Assistant in *Statistics and Cartography, Spatial Analysis* courses and *Professionalization for Geographers*.
- February 2016 **Seminar Geography and Big Data**, *Université Paris 1 Sorbonne*, Paris, France.
Presentation at *Géoprisme* Master Seminar
- Fall 2015 **Teaching Assistant**, *Université Paris 7*, Paris, France.
Teaching Assistant in *Introduction to Geography* and *Introduction to GIS* courses.

Scientific Activity

- September 2017 ECTQG 2017 : Organisation of session *Bridges between Economics and Geography*
- June 2017 Medium Conference : Organisation of session *Modeling Medium Sized Cities*
- June 2014 EMCSS Seminar : Comparing Top-down and Bottom-up approaches to Urban Systems

Research experience

- Aug.-Dec. 2014 **Research internship**, *L2 Technologies*, Paris, France.
Complex Systems approaches to foreign exchange financial markets
- April-Sept. 2013 **Research internship**, *Chalmers University of Technology, Department of Architecture*, Göteborg, Sweden.
Interdisciplinary approaches of modeling and simulations in urban planning and architecture
- July-Sept. 2012 **Research internship**, *The Kube SA*, Paris, France.
Machine Learning and Artificial Intelligence : Design and implementation of an intelligent matching algorithm

Computer skills

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|-------------|--|------------|---|
| OS | Unix (OSX, CentOS) | Scripts | Shell, AppleScript |
| Programming | JAVA, Python, Scala, C/C++, OCaml | Typography | L ^A T _E X, API OO.org |
| Web | php, XHTML, CSS, AJAX | Database | MySQL, MongoDB, PostgreSQL |
| Scientific | R, NetLogo, Gama, OpenMole, Scilab, Matlab, Gephi, Freefem++ | GIS | QGIS, PostGIS, TransCAD, Ocad |

Languages

French, *Native*

German, *Fluent, European Baccalaureate*

English, *Fluent*

Mandarin, *Notions, level HSK1*