JULIEN RANDON-FURLING

PhD (Orsay / Paris-Saclay, France), B.A. & M.Math (Cambridge, UK)

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Nationality French

Date of Birth 4 oct. 1982

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Work experience

Sept. 2010 – ...	**Associate Professor** Université Paris 1 Panthéon Sorbonne Faculty of Mathematics & Computer Science, Dpt SAMM (*Statistics, Analysis, Multidisciplinary Modeling*)
	Adjunct Professor PSL (*Paris Sciences & Lettres Research University*)
	European Union Mobility Professorships Univ. Ca' Foscari (Venice, Italy) - Univ. Federico II (Naples, Italy)
Sept. 2009 – 2010	**Postdoctoral Researcher** German National Research Agency (*DFG*) Team of Prof. Heiko Rieger *Complex Systems & Statistical Physics*, Universität des Saarlandes (Saarbrücken, Germany)
Sept. 2006 – 2009	**Doctoral Researcher** *Laboratoire de Physique Théorique et Modèles Statistiques* (LPTMS), Univ. Paris-Saclay (Orsay)
Juil. 2005 –	**Science Publishing** Translator and Advisor for Dunod (Paris) & Éditions Markus Haller (Geneva)
Sept. 2006 – 2009	**Science Demonstration** Palais de la Découverte / Universcience (National Science Museum), Paris

Education

2006 – 2009	**PhD (Orsay / Paris-Saclay)** "Extreme value statistics of Brownian motion" (adv. : S. N. Majumdar, A. Comtet) *Très honorable et Félicitations du Jury – Summa cum laude*
2002 – 2006	**Master of Mathematics & Mathematical Sciences, Univ. of Cambridge** England, United Kingdom BA Mathematics + "Part III Maths" (M.Math) *1st class honours*
2000 – 2002	*Classes Préparatoires aux Grandes Écoles* (Maths & Physics - MPSI, MP*) **Lycée Louis-le-Grand**, Paris
1997 – 2000	Baccalauréat (Sc.) *Très Bien & Félicitations du Jury - Summa cum laude* Lycée européen Charles-de-Gaulle, Dijon, France Awarded a prize at **Concours Général** (France's oldest nationwide competition for high school students, created in 1747)

Scientific Activity

Main research interests:

Stochastic processes: Brownian motion, Lévy processes, extreme-value problems, ...
Multidisc. modeling: Complex systems, Interacting particle systems, Agent-based models
Epistemology, history and philosophy of mathematics and science

Selected Communications & Participations at Peer-Reviewed Conferences and Workshops:

May	2018	*Stochastic Geometry Days*, Paris, France (invited plenary speaker)
Feb	2018	BiFi *International Conf. on Complex Systems*, Zaragoza, Spain (communication)
Sept.	2017	IEEE *International Conf. on Time Series*, Granada, Spain (comm. & proceedings)
June	2017	IEEE *Workshop on Self-Organizing Maps*, Nancy, France (comm. & proceedings)
May	2017	*Journées de Probabilités*, Aussois, France (communication)
Sept.	2016	*Principes & Incertitudes de la Physique à l'Histoire*, ENS Paris-Saclay (inv. comm.)
Feb.	2016	*International Conference on Operations Research*, La Habana, Cuba (invited comm.)
June	2015	*Stat. Mech., Integrability & Combinatorics*, G. Galilei Institute, Florence, Italy
July	2014	30th *Colloquium on Group-Theoretical Methods*, Ghent, Belgium (communication)
June	2014	*Adv. in Non-Equilibrium Processes*, G. Galilei Institute, Florence, Italy
May	2014	Colloquium *Creativity and Learning*, HEP Lausanne, Switzerland (communication)
Oct.	2013	9th UNESCO *COPROMAPH School*, Cotonou, Benin (invited lecturer + 2 comm.)
Sept.	2013	*European Conference on Complex Systems*, Barcelona, Spain (communication)
Sept.	2012	FRIAS Workshop on *Non-equilibrium Processes & F.-T. Theorems*, Italy (participant)
May	2011	Les Houches Session on *Vicious Walkers and Random Matrices*, France (participant)
March	2010	*Conf. of the German Physical Society*, Regensburg, Germany (communication)
Feb.	2009	*Tata Institute of Fundamental Research*, Bombay/Mumbai, India (invited researcher)

Organizing:

10/2017: co-organizer, panel discussion *Can one do History with Mathematics?*
National Open Science Festival *Les Rendez-vous de l'Histoire*, Blois, France

2017-2018: *Faces of Paris* - main organizer of this workshop on the modeling of socio-spatial dynamics in the Parisian metropolitan area (selected as Atelier Campus Condorcet, Europe's largest campus for Humanities and Social Sciences)

04/2017: organizer, workshop **Topics in Random Geometry** (sponsored by CNRS – GdR GeoSto)

since 2011: ***Interactions*** *– From Mathematical Sciences to Human and Social Sciences*
main organizer of this biennial, international and interdisciplinary workshop (sponsored by University Paris-1, Campus Condorcet, Paris Institute for Complex Systems, EHESS). Next ed. Oct 2017

since 2013: main organizer, **weekly research seminar *Statistics, Analysis, Multidisciplinary Modeling*** at Univ. Paris-1; initiator and director of a partnership with the research seminar ***Complex Systems in Social Sciences*** at EHESS.

since 2014: member of the **Faculty Board**, coordinator of a list of candidates at the **University Senate**

Referee for international peer-reviewed journals: PloS One, Europhysics Letters – EPL, Stochastic Processes & Applications, Bulletin of the London Mathematical Society, JSTAT …

Selected scientific publications (in international peer-reviewed journals):

15 – J. Randon-Furling, M. Olteanu, A. Lucquiaud: *From urban segregation to spatial structure detection*, submitted (2018)

14 – M. Olteanu, J. Randon-Furling: *Analyzing spatial dissimilarities via effective-time series*, Proceedings of IEEE Conference ITISE (2017)

13 – M. Cottrell, A. Hazan, M. Olteanu, J. Randon-Furling: *Multidimensional urban segregation: an exploratory case study*, Proceedings of IEEE Workshop WSOM+ (2017)

12 - A. Nucit, J. Randon-Furling: *A network model for the propagation of Hepatitis C with HIV co-infection*, **J. Stat. Mech.** 053205 (2017)

11 - J. Randon-Furling, F. Wespi: *Facets on the convex hull of* d*-dimensional Brownian and Lévy motion*, **Physical Review E** 95, 032129. (2017).

10 – E. Ben-Naim, P.L. Krapivsky, J. Randon-Furling: *Maxima of two random walks: universal statistics of lead changes*, **J. Phys. A: Math. & Theor.** 49, 205003 (2016).

9 - J. Randon-Furling: *From Markovian to non-Markovian persistence exponents*, **Europhysics Letters (EPL)** 109 40015 (2015). "**Editor's choice**"

8 - J. Randon-Furling: *Universality and time-scale invariance for the shape of planar Lévy processes*, **Physical Review E** 89, 052112. (2014).

7 - A. Hazan, J. Randon-Furling: *A Schelling model with switching agents: decreasing segregation via random allocation and social mobility,* **European Physical Journal B** 86, 421. (2013)

6 - J. Randon-Furling: *Convex hull of n planar Brownian paths: an exact formula for the average number of edges*, **J. Phys. A: Math. & Theor**. 46, 015004. (2012). "**Highlight of 2013**"

5 - S.N. Majumdar, A. Comtet, J. Randon-Furling: *Random convex hulls and extreme-value statistics*, **J. Stat. Phys.** 138 (6) 955. (2010)

4 - J. Randon-Furling, S.N. Majumdar, A. Comtet: *Convex hull of planar Brownian motion: exact results and an application to ecology*, **Physical Review Letters** 103, 140602. (2009)

3 - G. Schehr, S.N. Majumdar, A. Comtet, J. Randon-Furling: *Exact distribution of the maximal height of* p *vicious walkers*, **Physical Review Letters** 101, 150601. (2008)

2 - S.N. Majumdar, J. Randon-Furling, M.J. Kearney, M. Yor: *On the time to reach maximum for a variety of constrained Brownian motions*, **J. Phys. A: Math. & Theor.** 41, 365005. (2008)

1 - J. Randon-Furling, S.N. Majumdar: *Distribution of the time at which the deviation of a Brownian motion is maximum before its first-passage time*, **J. Stat. Mech.** P10008. (2007)

Science publishing

Selected translations (English to French):

- *Mets-toi ça dans la tête : Les stratégies d'apprentissage à la lumière des sciences cognitives*
  Peter C. Brown, Henry L. Roediger, Mark A. McDaniel, Genève : Ed. M.Haller, 2016
  [*Make It Stick: the science of successful learning*, **Harvard University Press**]
- *La société des inconnus : histoire naturelle de la collectivité humaine*
  Paul Seabright, Genève : Ed. M. Haller, 2011
  [*The Company of Strangers: a natural history of economic life*, **Princeton University Press**]
- *Penser le risque : apprendre à vivre dans l'incertitude*
  Gerd Gigerenzer, Genève : Ed. M. Haller, 2010
  [*Calculated Risks: how to know when numbers deceive you*, **Simon & Schuster**]
- *Petit cours de sciences ... pour ceux qui n'y comprennent rien*
  Natalie Angier, Paris : Dunod, 2008
  [*The Canon: the beautiful basics of science*, **Faber & Faber**]
- *Et Dieu créa les nombres : les plus grands textes de mathématiques réunis et commentés par* ***Stephen Hawking***, Paris : Dunod, 2006