

Curriculum Vitæ

Christophe GARBAN

ICJ, Université Lyon 1
43 bd du 11 novembre 1918
69622 Villeurbanne

Born on November
13th, 1982
French citizen
Pacsé, 3 children

E-mail : garban@math.univ-lyon1.fr

Web Page : math.univ-lyon1.fr/~garban

Academics

- 2014 -** — Professor, Université Lyon 1
- 2009 – 2014** — CNRS researcher at ENS Lyon.
Habilitation à Diriger des Recherches (HDR), defended in december 2013 at ENS Lyon.
- 2005 – 2009** — **PhD thesis** at Université Paris-Sud (Orsay) under the supervision of Wendelin Werner : *SLE Processes and sensitivity to perturbations of planar critical percolation*. Defended in December 2008.
- 2002 – 2006** — Ecole Normale Supérieure (Paris).

Research interests

Probability theory, SLE processes, conformal invariance, statistical mechanics, Fourier analysis of Boolean functions, critical and near-critical percolation, minimal spanning tree, random cluster model, coalescing flows, Liouville Quantum Gravity, Gaussian Multiplicative chaos, 3d turbulence, SPDEs, branching processes, Kosterlitz-Thouless transition, Abelian lattice gauge theory and a bit of amenability/RWs on groups.

Distinctions

- 2021 ERC Consolidator Grant.
- 2020 Junior Member of Institut Universitaire de France
- 2018 Prix Marc Yor
- 2016 Invited speaker (joint sectional talk with Gábor Pete) at the 7th European Congress of Mathematics, Berlin.
- 2015 ERC Starting Grant.
- 2014 Plenary speaker, 37th SPA (Conference Stochastic Processes and their Applications).
- Prix Peccot (Collège de France), 2013.
- Rollo-Davidson Prize (together with Gábor Pete), 2011.
- Prix Perrissin-Pirasset de la chancellerie de Paris, 2009.
- Ostrowski Fellowship 2008 (from Oded Schramm, recipient of the Ostrowski prize 2007).

Editorial work

- 2021–2023, editor in chief (with Alice Guionnet) of [Annals of probability](#)
- 2015–2021, associate editor, [Annals of probability](#)
- 2019 –, associate editor, [Probability and Mathematical Physics \(PMP\)](#)
- 2019–2021, associate editor, [Astérisque \(SMF\)](#)
- 2015–2021, associate editor, [Journal of the Institute of Mathematics of Jussieu \(JIMJ\)](#)

Research Articles

- [1] *The expected area of a filled planar Brownian loop is $\pi/5$* , with José Trujillo-Ferreras. **Communications in Mathematical Physics**, **264**, no. 3, 797–810, 2006.
- [2] *The Fourier Spectrum of Critical Percolation*, with Gábor Pete and Oded Schramm. **Acta Mathematica**, Vol **205**, Number 1, 19–104, 2010.
- [3] *Oded Schramm's contributions to Noise Sensitivity*. **Annals of probability**, **39**, 5, 1702–1767, 2011.
- [4] **Appendix** to the paper *On the scaling limits of planar percolation* by Oded Schramm and Stanislav Smirnov. **Ann. Probab.** **39**, no. 5, 1768–1814, 2011.
- [5] *Continuity of the SLE trace in simply connected domains*, with Steffen Rohde and Oded Schramm. **Israel Journal of Mathematics**, **187**, No 1, 23–36, 2012.
- [6] *Lectures on noise sensitivity and percolation*, with Jeffrey E. Steif. Probability and Statistical Physics in Two and more Dimensions. **Clay Mathematics Proceedings** **15**, 49–154, 2012.
- [7] *Exclusion Sensitivity of Boolean Functions*, with Erik Broman and Jeffrey Steif. **Probability Theory and Related Fields**, **155**, issue 3-4 , 621–663, 2013
- [8] *Pivotal, cluster and interface measures for critical planar percolation*, with Gábor Pete and Oded Schramm. **Journal of the American Mathematical Society**, **26**, no. 4, 939–1024, 2013.
- [9] *Quantum gravity and the KPZ formula*. Bourbaki seminar (après Duplantier-Sheffield), Vol. 2011/2012. Exp. No. 1052. 315–354. **Astérisque** No. **352**, 2013.
- [10] *The near-critical planar FK-Ising model*, with H. Duminil-Copin and G. Pete. **Communications in Mathematical Physics**, **326**, Issue 1, 1–35, 2014.
- [11] *The Ising magnetization exponent is $1/15$* , with F. Camia and C. M. Newman. **Probab. Theory and Related Fields**, **160**, Issue 1-2, 175–187, 2014.
- [12] *On the heat kernel and the Dirichlet form of Liouville Brownian Motion*, with Rémi Rhodes and Vincent Vargas. **Electron. J. Probab.**, Volume **19**, 1–25, 2014.
- [13] *Coalescing Brownian flows : a new approach*, with N. Berestycki and A. Sen. **Annals of Probability**, Volume **43**, Number 6, 3177–3215 (2015).
- [14] *Planar Ising magnetization field I. Uniqueness of the critical scaling limit*, with F. Camia and C. M. Newman. **Annals of Probability**, Vol **43**, No 2, 528–571, 2015.

- [15] *Planar Ising magnetization field II. Properties of the critical and near-critical scaling limits*, with F. Camia and C. M. Newman. arXiv :1307.3926.
Ann. Inst. Henri Poincaré (B), Volume **52**, Number 1, 146–161, 2016.
- [16] *Liouville Brownian motion*, with Rémi Rhodes and Vincent Vargas.
Annals of Probability, **44**, Number 4, 3076–3110, 2016.
- [17] *KPZ formula derived from Liouville heat kernel*, with Nathanael Berestycki, Rémi Rhodes and Vincent Vargas. **Journal. of London Math. Soc.**, **94** (1) : 186–208, 2016.
- [18] *A dissipative random velocity field for fully developed fluid turbulence*. with Rodrigo Pereira and Laurent Chevillard. **Journal of Fluid Mechanics**. **794** 369–408, 2016.
- [19] *The scaling limits of near-critical and dynamical percolation*, with Gábor Pete and Oded Schramm.
Journal of Eur. Math. Soc. Volume **20**, Issue 5, 1195–1268, 2018.
- [20] *The scaling limits of the Minimal Spanning Tree and Invasion Percolation in the plane*, with Gábor Pete and Oded Schramm.
Annals of probability. Volume **46**, Number 6, 3501–3557, 2018.
- [21] *Negative moments for Gaussian multiplicative chaos on fractal sets*, with Nina Holden, Avelio Sepúlveda and Xin Sun.
Electron. Commun. Probab. Volume 23, paper no. 100, 10 pp, 2018
- [22] *Exceptional times for percolation under exclusion dynamics*, with Hugo Vanneuille.
Annales scientifiques de l'École normale supérieure. Volume **52**, No 1, 1–57, 2019.
- [23] *On a skewed and multifractal uni-dimensional random field, as a probabilistic representation of Kolmogorov's views on turbulence*, with Laurent Chevillard, Rémi Rhodes and Vincent Vargas. **Ann. Henri Poincaré**, Volume **20**, Issue 11, pp 3693–3741, 2019.
- [24] *On the convergence of FK-Ising Percolation to SLE(16/3, 16/3 – 6)*, with Hao Wu.
Journal of Theoretical Probability. Volume 33, 828–865, 2020.
- [25] *Dynamical Liouville*.
Journal of Functional Analysis. Volume 278, no 6, pp. 108351–108402, 2020.
- [26] *Bargmann-Fock percolation is noise sensitive*, with Hugo Vanneuille.
Electr. Journal. Probab. Volume 25, paper no. 98, 20 pp, 2020.
- [27] *Inverted orbits of exclusion processes, diffuse-extensive-amenability and (non- ?)amenability of the interval exchanges*.
Groups, Geometry, and Dynamics. Volume 14, Issue 3, pp. 871–897, 2020.
- [28] *Liouville dynamical percolation*, with Nina Holden, Avelio Sepúlveda and Xin Sun.
Probability Theory and Related Fields. Volume 180, pp 621–678, 2021.
- [29] *Statistical reconstruction of the Gaussian free field and KT transition*, with Avelio Sepúlveda.
Journal of Eur. Math. Soc. (to appear) — arXiv :2002.12284. 48 pages.
- [30] *A new proof of Liggett's theorem for non-interacting Brownian motions*, with Xinxin Chen and Atul Shekhar.
Electron. Commun. Probab. Volume 26, 12pp, 2021.
- [31] *Continuous symmetry breaking along the Nishimori line* , with Thomas Spencer.
Journal of Mathematical Physics, Volume **63**, Number 9, pp 093302, 2022.
- [32] *The fixed points of Branching Brownian Motion*, with Xinxin Chen and Atul Shekhar.
Probability Theory and Related Fields. (to appear) – arXiv :2012.03917. 34 pages.
- [33] *Improved spin-wave estimate for Wilson loops in U(1) lattice gauge theory*, with Avelio Sepúlveda. **International Mathematics Research Notices**. (to appear) – arXiv :2107.04021. 36 pages.

- [34] *Long-range models in 1D revisited*, with Hugo Duminil-Copin and Vincent Tassion. arXiv :2011.04642. *Preprint*. 9 pages.
- [35] *Long-range order for critical Book-Ising and Book-percolation*, with Hugo Duminil-Copin and Vincent Tassion. arXiv :2011.04644. *Preprint*. 28 pages.
- [36] *Quantitative bounds on vortex fluctuations in 2d Coulomb gas and maximum of the integer-valued Gaussian free field*, with Avelio Sepúlveda. arXiv :2012.01400. *Preprint*. 46 pages.
- [37] *Percolation for 2D classical Heisenberg model and exit sets of vector valued GFF*, with Juhan Aru and Avelio Sepúlveda. arxiv :2212.06767. *Preprint*. 36 pages.
- [38] *Superconcentration for minimal surfaces in first passage percolation and disordered Ising ferromagnets*, with Barbara Dembin. arxiv :2301.11248. *Preprint*. 22 pages.
- [39] *Domain of attraction of the fixed points of Branching Brownian motion*, with Xinxin Chen and Atul Shekhar. arxiv :2301.13033. *Preprint*. 36 pages.

Book

[Noise sensitivity of Boolean functions and percolation](#), with Jeffrey E. Steif, *Cambridge University Press*. IMS Textbooks series, 2015.

Supervision of PhD students and postdocs

- **Juhan Aru**, PhD student, 2012–2015.
The geometry of the Gaussian free field combined with SLE processes and the KPZ relation, thesis defended on July 10, 2015.
Currently assistant professor at EPFL, Lausanne.
- **Hugo Vanneuville**, PhD student, 2015–2018.
Percolation dans le plan : dynamiques, pavages aléatoires et lignes nodales, thesis defended on November 28, 2018.
Currently CNRS researcher at Institut Fourier, Grenoble.
- **Alejandro Rivera**, PhD student co-supervised with **Damien Gayet (univ. Grenoble I.)**, 2015–2018.
Statistical Mechanics of Smooth Gaussian Fields, thesis defended on November 23, 2018.
Currently postdoc at EPFL, Lausanne.
- **Mickael Sousa**, PhD student, 2020–2023.
- **Avelio Sepúlveda**, postdoc ERC LiKo, 2017–2020.
Currently assistant professor at Universidad de Chile.
- **Atul Shekhar**, postdoc ERC LiKo, 2019–2021.
Currently Reader at the TIFR (Tata Institute of Fundamental Research), Bangalore.
- **Paul Dario**, postdoc ERC LiKo 2021–2022.
Currently CNRS researcher at Paris Est Créteil.

Invited lectures (research level courses and mini-courses)

- Cours doctoral, Spring semester, University of Geneva (Unige), 2023.
- Mini-course at the summer school *From Statistical Physics to Random Geometry*, SISSA Trieste, September 2022
- Mini-course on *random walks on groups*. **Journées Louis Antoine**, Rennes, February 2019
- Mini-course on *Euclidean constructive field theory*, **Geometry and scaling of random structures**, Cimpa School, Buenos Aires, July 2018.
- Mini-course on *conformal invariance*, ENS Paris, May 2015
- Mini-course, Workshop on Random Interacting Systems, University of Bath, June 2014
- Cours Peccot 2013, Collège de France.
- Foundational course “Noise sensitivity and percolation” with Jeffrey E. Steif, at the Clay Summer School in Buzios, Brazil, July 2010.
- Hypatie seminar with Federica Camia, Marseille, June 2009.
- Hypatie seminar with Jeffrey E. Steif, Marseille, June 2008.

Administrative duties

- Elected member at **CNU** (Conseil National des Universités), 2019–2022
- CNU/Hceres expert for the evaluation of the LAMPS maths and physics department (Perpignan), 2020.
- Elected member at Conseil de Laboratoire, ICJ, 2019–2021
- Member of Conseil scientifique, ICJ, 2019–2021
- Organizer of the **Colloquium** of the Institut Camille Jordan (ICJ), 2016–2022
- External referee for PhD fundings, DMA, ENS Paris. 2019.
- Comité des thèses de l'ICJ, 2016–2020.
- Coordinator of the starting ERC Grant "LiKo". 2016–2021.
- Coordinator of the ANR Grant "LIOUVILLE". 2015–2019.
- Member of the ANR grant MAC2 “Modèles aléatoires critiques bi-dimensionnels”. Coordinator : Vincent Beffara (UMPA, ENS Lyon). 2010–2014.
- Organization of the probability seminar, 2009 – 2014 (partly with C. Bernardin).
- Hiring committees : Dauphine McF 2012, Saint-Etienne McF 2012, Lyon 1 McF 2015, Lyon 1 Pr 2015, Toulouse 3 Pr 2016, Saint-Etienne Pr 2018, Sorbonne Université (Paris) McF 2021.
- Member of the scientific committee of the Laboratory of Excellence (Labex) MILYON. 2012–2014.
- Conseil de laboratoire, UMPA, 2009–2013.
- Organizer with O. Blondel, J. Bouttier, L. Chevillard, K. Gawedzki and G. Miermont of the conference **Universality in mathematical physics, random geometries, quantum field theory and hydrodynamics**, Lyon, September 26th-30th, 2022. <https://indico.in2p3.fr/event/27025/>.

- Organizer with R. Rhodes and V. Vargas of the conference **Probability and quantum field theory : discrete models, CFT, SLE and constructive aspects** (<http://www.i2m.univ-amu.fr/perso/remi.rhodes/Porquerolles/index3.html>), Porquerolles, June 10th - 21th, 2019.
- Organizer with A. Guionnet, G.Miermont, F. Toninelli and C. Sabot of a semester in probability **ProbabLYon** funded by the Labex Milyon, <http://math.univ-lyon1.fr/~garban/ProbabLYon/>. 2d semester 2017.
- Organizer with F. Toninelli and C. Sabot of the conference Statistical Mechanics, random planar geometry and interacting random walks, <http://math.univ-lyon1.fr/~garban/StatMech2017/>, June 2017
- Organizer with Christophe Sabot and Fabio Toninelli of the *Hypatie seminar* on “Continuity of the phase transition for Potts models $1 \leq l \leq 4$ ”. Lecturers : **Hugo Duminil-Copin** and **Vincent Tassion**. Université Lyon 1. 2015.
- Organizer with Christophe Sabot of the *Hypatie seminar* on “Regularity structures, models, and large deviations”. Lecturers : **Martin Hairer** and **Hendrik Weber**. Université Lyon 1. 2014.
- Organizer with Grégory Miermont of the *Hypatie seminar* on “dynamics of hard-spheres”. Lecturers : **Thierry Bodineau** and **Laure Saint-Raymond**. 2014.
- Organizer with Vincent Beffara of the mini-summer school **Statistical PhysIX in Lugdunum**, Lyon, June 24–28, 2013.
- **Referee for the PhD and HdR thesis** of Aurelia Deshayes (Institut Elie Cartan 2014), Henry Jackson (Cambridge 2016), Yichao Huang (ENS Paris, 2017), Aran Raoufi (IHES, 2017), Guillaume Remy (ENS Paris, 2018), Pál Galicza (Budapest, 2020), Nicolas Forien (ENS Paris, 2020), Joonas Oikarinen (Univ. Helsinki, 2021), Isao Sauzedde (Sorbonne Université, 2021), Dmitry Chelkak (HdR, ENS Paris, 2021), Matthis Lehmkuehler (ETH Zürich, 2022), Diederik Van Engelenburg (Univ Vienna, 2023).
- Jurys de thèse/HdR. Laurent Veysseire, July 2012. Vincent Tassion, June 2014, Xiaolin Zeng, November 2015, Henry Jackson, October 2016, Thomas Letendre, november 2016, Guillaume Aubrun (hdr), mars 2017, Olivier Marchal (hdr), october 2017, Yichao Huang, november 2017, Aran Raoufi, december 2017, Cong Bang Huynh, June 2019, Ariane Carrance, September 2019, Cyril Labbé (hdr), november 2019, Pál Galicza (Budapest, April 2020), Tunan Zhu (May 2020), Remy Poudevigne (July 2020), Nicolas Forien (Oct 2020), Isao Sauzedde (november 2021), Dmitry Chelkak (hdr, december 2021), Matthis Lehmkuehler (June 2022), Jeanne Boursier (December 2022).

Teaching

- 2019/2023** — Graduate course (agrégation), Univ Lyon 1 on *Differential calculus and ODEs*.
 — Préparation aux oraux (agrégation)
 — Graduate course at Univ Lyon1 & ENS Lyon on *Statistical mechanics*.
- 2018/2019** — Graduate course (agrégation), Univ Lyon 1 on *Differential calculus and ODEs*.
 — TDs at Univ Lyon 1 on *Markov chains and martingales*.
 — Graduate course at Univ. Lyon 1 on *Epidemiology*.
- 2016/2018** — Graduate course at Univ Lyon 1 on *Markov chains and martingales*.
 — Graduate course at Univ. Lyon 1 on *Epidemiology*.
- 2015/2016** — Graduate course at ENS Lyon on *Advanced probability theory*.
 — Graduate course at Univ. Lyon 1 & ENS Lyon on *Statistical mechanics*.

- Graduate course at Univ Lyon 1 on *Markov chains and martingales*.
- 2014/2015** — Graduate course at ENS Lyon on *Advanced probability theory*.
- Graduate course at Univ. Lyon 1 & ENS Lyon on *Statistical mechanics*.
- Graduate course at Univ Lyon 1 on *Markov chains and martingales*.
- 2013/2014** — Graduate course in ENS Lyon on *Advanced probability theory*.
- 2012/2013** — Graduate course in ENS Lyon on *stochastic calculus* (with C. Bernardin).
- Reading class seminar on *fractals* (together with V. Tassion).
- 2011/2012** — Graduate course in ENS Lyon on *Boolean functions and percolation*.
- 2009/2010** — Reading class seminar on *harmonic analysis and music* (together with E. Ghys).
- April 2008** — Teaching assistant at the summer school “Conformally Invariant Models”, IMPA, Brazil, course given by Wendelin Werner.
- July 2007** — Teaching assistant for the course *SLE Processes* given by Greg Lawler at the Park City - IAS summer school 2007.
- 2006/2008** — Teaching assistant for the first year course *Mathematics for Biology*, Université Paris-Sud.

Seminars - Talks

- 2022/2023** — Mini-course, summer school *From Statistical Physics to Random Geometry*, SISSA Trieste (September 2022)
- Probability Seminar, Vienna (November 2022)
- Colloquium, LMU Munich (December 2022)
- Conference *Coulomb gases and universality*, Paris (December 2022)
- Probability seminar, ETH Zürich (December 2022)
- Probability seminar, IAS Princeton (January 2023)
- Conference *Universality in Condensed Matter and Statistical Mechanics*, Roma (February 2023)
- Conference *High Dimensional Statistics and Random Matrices*, Porquerolles (June 2023)
- Conference *DIMERS Closing conference*, Paris (July 2023)
- 2021/2022** — **One World mathematical physics seminar** (IAMP), online seminar (October 2021)
- Berlin Probability Colloquium, Berlin (October 2021)
- Geneva mathematical physics seminar (November 2021)
- Joint Israel probability seminar (November 2021)
- Workshop *Frontiers of Statistical Mechanics and Theoretical Computer Science* (online) (December 2021)
- Workshop on Statistical Mechanics, Les Diablerets (February 2022)
- Oberwolfach Workshop, *Universality : Random Matrices, Random Geometry and SPDEs* (June 2022)
- **Probability and Mathematical Physics 2022**, satellite conference for ICM 2022, Helsinki (July 2022)

- Conference *Quantum Fields and Probability*, Mittag-Leffler, Stockholm (August 2022)
- Journées MAS, *Société de Mathématiques Appliquées et Industrielles*, plenary talk, Rouen (August 2022)
- 2020/2021** — [Percolation Today](#), online seminar, (November 2020)
- Stochastic analysis seminar, Imperial College (London), (December 2020)
- Séminaire de physique mathématique, Lyon (December 2020)
- Oberwolfach Workshop, *Spatial Networks and Percolation*, (January 2021)
- Probability and the City seminar, NYU and Columbia, NY (February 2021)
- CUNY probability seminar, NY (March 2021)
- Séminaire de probabilités, Marseille (March 2021)
- International Congress of Mathematical Physics (ICMP 2021), Thematic session *Probability and random structures*, Geneva (August 2021)
- 2019/2020** — GDR Turbulence, Lyon (10/2019)
- Probability seminar, Univ Toronto (12/2019)
- Probability seminar, ETH Zurich (12/2019)
- Séminaire de probabilités, Lyon (April 2020)
- Séminaire de Mathématiques Physique, Genève (April 2020)
- Horowitz seminar, Tel Aviv, (May 2020)
- [One World Probability Seminar](#). (June 2020)
- [Quantum Matter meets Maths](#), Lisbon (July 2020)
- Colloquium, Renyi institute, Budapest (04/2020) — *Delayed, Covid 19*
- Stochastic Partial Differential Equations and Applications - XI, Trento (05/2020) — *Delayed, Covid 19*
- Stochastic Analysis, Geometry of Random Processes, Oberwolfach (06/2020) — *Delayed, Covid 19*
- Analysis and Geometry of Random Spaces, South Korea (08/2020) — *Delayed, Covid 19*
- 2018/2019** — Oberwolfach workshop *Scaling Limits in Models of Statistical Mechanics* (09/2018)
- Séminaire de probabilités de P6/P7 Paris (11/2018)
- Scaling limits & SPDEs : recent developments and future directions. Newton Institute, Cambridge (12/2018)
- Mini-course, [Journées Louis Antoine \(Rennes\)](#) (with Hugo Duminil-Copin). Rennes (01/2019)
- Workshop on Statistical Mechanics, Les diablerets, Suisse (02/2019)
- *Séminaire de théorie des groupes*, DMA (ENS). Paris (02/2019)
- Marc Kac seminar, Utrecht (04/2019)
- Rencontres EDP/Probas, IHP Paris (04/2019)
- 2017/2018** — Séminaire de probabilités, Toulouse (December 2017)
- “Séminaire d’Orléans”, Orléans (February 2018)
- Séminaire de probabilités, Grenoble (March 2018)
- Séminaire de géométrie, EPFL Lausanne (May 2018)
- Congrès SMF Lille 2018, exposé session "probabilités et combinatoire" (June 2018)
- Course given at the ICM Rio Satellite workshop [Geometry and scaling of random structures](#), Buenos Aires (July 2018)

- 2016/2017** — "Quantum integrable systems, conformal field theories and stochastic processes", Cargese, Corse. (Sep 2016)
- Heat Kernels, Stochastic Processes and Functional Inequalities, Oberwolfach workshop, (November 2016)
- Probability seminar, Helsinki. (Feb 2017)
- "SLE, GFF and LQG in NYC". Columbia university, NY, (March 2017)
- Stochastic Analysis : Geometry of Random Processes, Oberwolfach workshop, (June 2017)
- Journées de probabilités, Aussois, (June 2017)
- 2015/2016** — Random processes and random media : A conference on the occasion of Alain-Sol Sznitman's 60th birthday, (January 2016)
- Inhomogeneous Random Systems annual conference, IHP, Paris. (January 2016)
- Workshop "Planar statistical physics", Diablerets, (February 2016)
- Section main speaker, Stochastic days 2016, Bochum, Germany, (Mars 2016)
- Probability seminar, Nice. (March 2016)
- Colloquium, Institut Elie Cartan, Nancy. (May 2016)
- "Rencontres de mécanique statistique", Créteil. (June 2016)
- Invited speaker (joint sectional talk with Gábor Pete)
7th European Congress of Mathematics, Berlin. (July 2016)
- 2014/2015** — **Charles River lectures on probability**, Harvard university, (October 2014)
- Probability seminar, Université d'Orsay, (November 2014)
- Probability seminar, ETH Zurich, (December 2014)
- Probability seminar, Bonn University, (December 2014)
- Colloquium, section de mathématiques, université de Genève, (December 2014)
- Mini-course, ENS Paris, (April 2015).
- Geometry of Random Walks and SLE : A Birthday Conference for Greg Lawler, (June 2015)
- 2013/2014** — Colloquium of the Physics department, ENS Lyon, (October 2013)
- Probability seminar, Lille, (November 2013)
- Probability seminar, University of Warwick, UK (January 2014)
- Colloquium of the Institut Fourier, Grenoble (January 2014)
- Probability seminar, Nancy (February 2014)
- Probability seminar, Nanterre, (February 2014)
- Simons Symposium on Discrete Analysis : Beyond the Boolean Cube, Puerto Rico (February 2014)
- Probability seminar, NYU, New York (April 2014)
- Probability seminar, MIT Boston (April 2014)
- Mini-course, Workshop on Random Interacting Systems, University of Bath, June 2014
- Plenary speaker, 37th SPA (Conference Stochastic Processes and their Applications), July 2014
- 2012/2013** — International Summer School of Mathematics for Young Students, Lyon (August 2012)

- Rencontres Analyse/Probabilités, Lyon (September 2013)
- Probability seminar, Dauphine, (October 2012)
- Probability seminar, Toulouse, (November 2012)
- “Soirées mathématiques de Lyon”. General audience talk on “Random walks, from the Avagadro Number to Google”. (December 2012).
- Mini-course, journées BOOLE, Marseille, (January 2013)
- Probability seminar, Oxford, (January 2013)
- Conference “Two-Dimensional statistical mechanics”, Les Diablerets, (February 2013)
- Cours Peccot, March and April 2013
- Probability seminar, Grenoble (May 2013)
- Probability seminar, Paris 6 (May 2013)
- 2011/2012** — Probability Seminar, Université de Genève (September 2011)
- Séminaire d’Analyse Fonctionnelle de Paris 6, (Novembre 2011)
- Séminaire de probabilités, Université de Strasbourg (Novembre 2011)
- Colloque en l’honneur de David Aldous (Doctor Honoris Causa), Marseille, (December 2011)
- PASI conference “Topics in percolative and disordered systems”, Santiago and Buenos Aeres (January 2012)
- MSRI workshop “Percolation and Interacting Systems”, Berkeley (February 2012)
- **Bourbaki seminar**, IHP Paris (March 2012)
- Colloquium Paris 5, Descartes (April 2012)
- Probability Seminar, Statistical Laboratory, University of Cambridge (May 2012)
- Invited session “Critical 2-D Systems and SLE”, 8th World Congress in Probability and Statistics, Istanbul, July 2012
- 2010/2011** — Short lecture, Ceremade, Dauphine (October 2010)
- Probability Seminar, Statistical Laboratory, University of Cambridge (October 2010)
- Workshop “Informal week on Influences, sharp thresholds and k-wise independance”, IHP Paris (March 2011)
- Conference “Discrete Harmonic Analysis”, Newton Institute, Cambridge (April 2011)
- Oberwolfach workshop “Stochastic Analysis” (June 2011)
- Conference “the 4th La pietra week on probability”, Firenze (June 2011)
- 2009/2010** — Oded Schramm Memorial conference, Microsoft Research, Redmond (September 2009)
- Probability seminar, Section mathématiques, Geneva (September 2009)
- Probability seminar, Institut Fourier, Grenoble (November 2009)
- Short lecture, Midrasha Mathematicae : The Mathematics of Oded Schramm, Jerusalem (December 2009)
- Foundational course on noise sensitivity, given with Jeffrey Steif at the Clay summer school in Buzios (July 2010).
- 2008/2009** — Statistical Mechanics Workshop, *Institut Henri Poincaré* (December 2008)
- Séminaire Analyse-Probabilités, Ceremade Dauphine (December 2008)

- Mittag-Leffler weekly seminar (February 2009)
- Statistics Seminar, Chalmers Gothenburg (March 2009)
- Probability Seminar, Laboratoire Dieudonné, Université de Nice Sophia-Antipolis (March 2009)
- Probability Seminar, Université de Provence (March 2009)
- Probability Seminar, Institut de Mathématiques de Toulouse (April 2009)
- Harmonic analysis Seminar, Orsay (May 2009)
- Colloquium “Analysis and Probability in Nice” (June 2009)
- Hypathie Seminar (with Federico Camia), CMI Marseille (June 2009)
- 2007/2008** — Probability Seminar, Weizmann Institute (November 2007)
- Probability Seminar, IMPA Rio de Janeiro (April 2008)
- Stochastic Analysis Workshop, Oberwolfach (June 2008)
- Hypathie Seminar (with Jeff Steif), CMI Marseille (June 2008)
- 2006/2007** — Journées de Probabilités, CIRM (September 2006)
- Probability Seminar, Institut Fourier Grenoble (November 2006)
- IAS/Park City Summer School (July 2007)
- 2005/2006** — Journées "SLE, percolation", MAPMO Orléans (October 2005)
- Probability Seminar, Orsay (November 2005).
- 2004/2005** — Seminar on Stochastic Processes, Cornell University (March 2005)
- Summer School in Probability, PIMS Vancouver (June 2005)