

Loren Coquille

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Personal informations

Born on April 25, 1985.

Married, one child (Cyril, born in 2018).

Nationalities : swiss and french.

Formation

- 09/2015– **Maître de conférences (Assistant Professor)**, *Institut Fourier*, Université Grenoble-Alpes, France.
- 2013–2015 **Hausdorff Postdoc**, *University of Bonn*, Germany.
Advisor : Prof. Anton Bovier
- 2009–2013 **PhD in Mathematics**, *University of Geneva*, Switzerland.
Advisor : Prof. Yvan Velenik,
Title of the thesis: “Flowers, Forests and Fields in Physics”,
<http://archive-ouverte.unige.ch/unige:29204>
- 2008–2009 **MSc in Theoretical Physics**, *University of Geneva*, Switzerland.
Advisor : Prof. Yvan Velenik
- 2007–2008 **BSc in Mathematics**, *University of Geneva*, Switzerland.
- 2004–2007 **BSc in Physics**, *University of Geneva*, Switzerland.

Research articles

Publications

- [1] Loren Coquille and Yvan Velenik. A finite-volume version of Aizenman–Higuchi theorem for the $2d$ Ising model. *Probab. Theory Relat. Fields*, 153(1-2):25–44, 2012.
- [2] Loren Coquille and Piotr Miłoś. A note on the discrete Gaussian free field with disordered pinning on \mathbb{Z}^d , $d \geq 2$. *Stoch. Process. Appl.*, 123(9):3542–3559, 2013.
- [3] Loren Coquille and Piotr Miłoś. A second note on the discrete Gaussian Free Field with disordered pinning on \mathbb{Z}^d , $d \geq 2$. *ArXiv:1303.6770*, mar 2013.
- [4] Loren Coquille, Hugo Duminil-Copin, Dmitry Ioffe, and Yvan Velenik. On the Gibbs states of the noncritical Potts model on \mathbb{Z}^2 . *Probab. Theory Relat. Fields*, 158(1-2):477–512, 2014.
- [5] Loren Coquille. Examples of DLR states which are not weak limits of finite volume Gibbs measures with deterministic boundary conditions. *J. Stat. Phys.*, 159(4):958–971, 2015.
- [6] Martina Baar, Loren Coquille, Hannah Mayer, Michael Hölzel, Meri Rogava, Thomas Tüting, and Anton Bovier. A stochastic model for immunotherapy of cancer. *Sci. Rep.*, 6(1):24169, jul 2016.
- [7] Loren Coquille and Piotr Miłoś. Note on Bolthausen-Deuschel-Zeitouni’s paper on the absence of a wetting transition for a pinned harmonic crystal in dimensions three and larger. *ArXiv:1703.01479*, mar 2017.

- [8] Anton Bovier, Loren Coquille, and Rebecca Neukirch. The recovery of a recessive allele in a Mendelian diploid model. *J. Math. Biol.*, 77(4):971–1033, 2018.
- [9] Anton Bovier, Loren Coquille, and Charline Smadi. Crossing a fitness valley as a metastable transition in a stochastic population model. *ArXiv:1801.06473*, jan 2018.
- [10] Loren Coquille, Aernout C. D. van Enter, Arnaud Le Ny, and Wioletta M. Ruszel. Absence of Dobrushin states for $2d$ long-range Ising models. *J. Stat. Phys.*, 172(5):1210–1222, 2018.
- [11] Modibo Diabate, Loren Coquille, and Adeline Samson. Parameter estimation and treatment optimization in a stochastic model for immunotherapy of cancer. *ArXiv:1806.01915*, jun 2018.

Long duration research stays

- Jan.-March 2015 **Isaac Newton Institute for Mathematical Sciences**, *Participation to the semester programm “Random Geometry”*, Cambridge, United Kingdom.
- March-July 2012 **Technion Institute of Technology**, *Collaboration with Dmitry Ioffe and Nicholas Crawford*, Haifa, Israel.
- May 2010 **Technion Institute of Technology**, *Collaboration with Dmitry Ioffe and Nicholas Crawford*, Haifa, Israel.

Teaching experience

Year	Place	Topic	Level*	Role**	Volume
2017-2019	Grenoble	Systèmes dynamiques pour la biologie	L1	C+Ex	112h
2016-2019	Grenoble	Prépa Agreg Modélisation	M2	C+Ex	136h
2016-2017	Grenoble	Mécanique statistique	M2	C	24h
2015-2018	Grenoble	Introduction aux probabilités	L2	C+Ex	216h
2015-2017	Grenoble	Processus stochastiques	M1	Ex	78h
2013-2014	Bonn	Gibbs measures and phase transitions	M1-M2	C	28h
2012-2013	CIRM	Introduction to Statistical Mechanics	PhD	Ex	5h30
	Geneva	Lattice models and phase transitions	M1	Ex	28 h
2011-2012	Geneva	Seminar on Markov chains and fields	L3-M1		56 h
2010-2011	Geneva	Selected Topics of Probability B	M1	Ex	14 h
		Measure theory	L3-M1	Ex	14 h
		Probability and Statistics	L2	Ex	28 h
2009-2010	Geneva	Selected Topics of Probability A	M1	Ex	14 h
		Probability and Statistics	L2	Ex	56 h
2006-2007	Geneva	Analysis 1 and Algebra 1	L1	Ex	112 h
2004-2008	Geneva	Astronomy course	College	C	~150 h

*L1-L2-L3 : License 1st-2nd-3rd year, M1-M2 : Master 1st-2nd year, PhD : doctoral course.

**C : course, Ex : exercise sessions.

Talks for (upcoming) conferences

- June 2019 **Journées de Probabilités 2019.**
Invited speaker, Dourdan, France
- August 2018 **Advances in Statistical Mechanics, Conference in honor of Anton Bovier's 60th birthday.**
Invited speaker, CIRM, Marseille, France
- June 2017 **Workshop "Spectral Geometry, Graphs, Semiclassical Analysis and Dynamics in Peyresq".**
Invited speaker, Peyresq, France
- October 2016 **Workshop "Young Women in Probability".**
Invited speaker, HCM Bonn, Germany
- July 2015 **Mini-workshop "Women in Probability".**
Invited speaker, TU Munich, Germany
- June 2015 **Journée Nancéienne de Probabilités Discrètes.**
Invited speaker, IECL, Nancy, France
- June 2015 **Probability and Biological Evolution.**
Invited speaker, CIRM, Marseille, France
- Sept. 2014 **Opening workshop of the Leverhulme International Network Grant "Laplacians, Random Walks, Bose Gas, Quantum Spin Systems".**
Contributed talk, University of Bristol, United Kingdom
- July 2014 **37th Conference on Stochastic Processes and Their Applications.**
Contributed talk, University of Buenos Aires, Argentina
- July 2014 **Critical random two-dimensional models.**
Invited speaker, UPMC, Paris, France
- June 2014 **Mini-workshop "Genealogies of population models with competition".**
Invited speaker, University of Duisburg-Essen, Essen, Germany
- June 2014 **Mark Kac Seminar.**
Invited speaker, University of Utrecht, The Netherlands
- June 2013 **Branching, diffusions and Gaussian free fields.**
Invited speaker, Aix-Marseille University, Marseille, France
- May 2012 **The 2012 Meeting of the Israeli Mathematical Union.**
Invited speaker, Bar-Ilan University, Ramat Gan, Israel
- Feb. 2012 **Young European Probabilists conference IX.**
Invited speaker, Eurandom, Eindhoven, The Netherlands

Talks for (upcoming) seminars

- Dec. 2018 **Séminaire de Séminaire de Physique Mathématique/Physique Statistique du LPTHE, Jussieu, Paris, France.**
- Fev. 2018 **Séminaire de probabilités, Leiden, Pays-Bas.**
- Jan. 2018 **Séminaire d'analyse et probabilités, Université Paris-Dauphine, France.**
- Nov. 2017 **Séminaire de probabilités, Rennes, France.**

- Oct. 2017 **Séminaire de probabilités**, TU Eindhoven, Pays-Bas.
- Sept. 2017 **Groupe de Recherche MaMoVi**, Université Lyon 1, France.
- Juin 2017 **Rencontre de l'ANR PPPP**, Grenoble, France.
- Mai 2017 **Groupe de Travail probabilités**, Université Paris Est Créteil, France.
- Dec. 2016 **Séminaire de probabilités**, Strasbourg, France.
- Nov. 2016 **Séminaire de probabilités**, Paris VII, France.
- Nov. 2016 **Séminaire de probabilités**, Toulouse, France.
- June 2016 **Séminaire Polaris**, Grenoble, France.
- April 2016 **Rencontre de la chaire Modélisation Mathématique et Biodiversité au Muséum d'Histoire naturelle**, Paris, France.
- March 2016 **Easter retreat of Bovier's group**, Cadenabbia, Italy.
- March 2016 **Séminaire de probabilités**, Tours, France.
- Feb. 2016 **Groupe de Travail Maths-Cancer**, Marseille, France.
- Nov. 2015 **Journée EDP Rhône-Alpes-Auvergne**, Clermont-Ferrand, France.
- Sept. 2015 **Journée du Laboratoire de Mathématiques**, Grenoble, France.
- Sept. 2015 **Séminaire commun LJK/IF**, *Université Joseph Fourier*, Grenoble, France.
- April 2015 **Séminaire Probabilités et Statistique**, *I2M*, Marseille, France.
- March 2015 **Cambridge Probability Seminar**, *Statslab*, Cambridge, United-Kingdom.
- Febr. 2014 **Analysis and Probability Seminar**, *Max Planck Institute*, Leipzig, Germany.
- January 2014 **Wahrscheinlichkeitsseminar**, *Universität Duisburg-Essen*, Essen, Germany.
- October 2013 **Oberseminar Stochastik**, *HCM*, Bonn, Germany.
- October 2013 **Séminaire généraliste de probabilités**, *IECL*, Nancy, France.
- January 2013 **UBC Probability seminar**, *UBC*, Vancouver, Canada.
- October 2012 **Journée de Probabilités Lyon-Genève**, *ICJ*, Lyon 1, France.
- Sept. 2012 **Séminaire informel de Probabilités**, *ÉNS-Ulm*, Paris, France.
- June 2012 **Horowitz Seminar**, *Tel-Aviv University*, Tel-Aviv, Israel.
- April 2012 **Groupe de travail Modélisation**, *LPMA*, Paris 7, France.
- October 2011 **Probability seminar**, *ÉPFL*, Lausanne, Switzerland.
- Sept. 2011 **8th Swiss Graduate Colloquium**, *Université de Bâle*, Switzerland.
- Febr. 2011 **Séminaire de Physique Mathématique**, Université de Genève, Switzerland.
- July 2010 **Séminaire de Probabilités**, *LATP*, Marseille, France.
- May 2010 **Seminar in Probability and Stochastic Processes**, *Technion*, Haifa, Israel.

Grants

- 2018 **Research grant PEPS Young Scientist of the CNRS for the project "Ising"**, *March 2018–December 2018*, 3000€, Université Grenoble-Alpes, France.
- 2016 **Research grant of the LabEx Persyval for the exploratory project "Cancer and population dynamics"**, *March 2016–September 2017*, 8000€, Université Grenoble-Alpes, France.
- 2015 **"Advanced postdoc.Mobility" grant of the Swiss National Foundation**, *September 2015–August 2017*, pursued at Université Grenoble-Alpes, France.
- 2015 **Oberwolfach Leibniz Graduate Students Grant**, *Travel grant of 200 € to attend the Oberwolfach conference on "Scaling Limits in Models of Statistical Mechanics"*, August 31 – September 4, 2015, Oberwolfach Germany.
- 2014 **SPA/Elsevier Travel Award**, *Travel grant of 500 € to attend the 37th conference on "Stochastic Processes and Their Applications"*, July 28 – August 1, 2014, Buenos Aires, Argentina.
- 2013 **Postdoctoral position at Hausdorff Center für Mathematik**, *September 2013–August 2015*, University of Bonn, Germany.
- 2005 **Advancement of Women**, *Grant of 1800 CHF for a study at the Swiss National Centre of Competence in Research Materials with Novel Electronic Properties*, August 2 – September 7, 2005, Geneva, Switzerland.

Supervision of students

PhD thesis at Université Grenoble-Alpes

- 2016 **Modibo Diabate**, co-supervision with Adeline Leclercq-Samson (LJK, Grenoble).

M2 thesis at Université Grenoble-Alpes

- 2017 **Guillaume Bideau**, *Dynamique stochastique des populations et modélisation de la croissance tumorale*.
- 2016 **Modibo Diabate**, *Parameter estimation in a stochastic model for immunotherapy of cancer*, co-supervision with Adeline Leclercq-Samson (LJK, Grenoble).

M1 thesis (Travaux d'Etude et de Recherche) at Université Grenoble-Alpes

- 2017 **Lea Guériteau**, *Loi du demi-cercle de Wigner*.
- 2017 **Magalie Stoupy**, *Loi du demi-cercle de Wigner*.
- 2016 **Sarah Bensalem**, *Unicité de l'amas infini en percolation*.
- 2016 **Kevin Friedrich**, *Loi du demi-cercle de Wigner*.

Bachelor thesis at University of Bonn

- 2014 **Boris Prochnau**, *Simulation einer stochastischen Populationsdynamik*, co-supervision with Anton Bovier and Martina Baar.
- 2014 **Marcel Wildpassinger**, *Dynamik und Implementation stochastischer Populationsmodelle*, co-supervision with Anton Bovier and Martina Baar.

Organization of conferences / seminars

- September 2017 **Colloque Francophone International sur l'Enseignement de la Statistique 2017**, *co-organizer*, Grenoble, France, <http://cfies2017.sfds.asso.fr/index.html>.
- June 2017 **Journées de probabilités 2017**, *co-organizer*, Centre Paul Langevin, Aussois, France, Budget: 40k€, 70 participants, <https://jp2017.sciencesconf.org/>.
- Spring 2015 **Oberseminar Stochastics**, *co-organizer with Martin Huesmann*, University of Bonn, Germany, <http://wt.iam.uni-bonn.de/events/>.
- 26-28 May 2014 **Young Women in Probability**, *co-organizer with Janna Lierl*, University of Bonn, Germany, Budget: 18k€, 50 participants, 28 talks, <http://www.iam.uni-bonn.de/ywip2014/>.

Member of hiring committees

- 2017 **Université Grenoble-Alpes**, *Assistant Professor position*, Probability.
- 2016 **Université Paris-Est Créteil**, *Assistant Professor position*, Probability or Statistics.

Refereeing

I have been referee for the following journals:

Stochastic Processes and their Applications, 1 review.

Electronic Journal of Probability, 1 review.

Journal of Applied Probability / Advances in Applied Probability, 1 review.

Journal of Mathematical Biology, 1 review.

Administratives tasks

- 2013-2014 **Repartition of the assistants teaching tasks**, *creation of a PHP program to make the repartition almost automatic, and creation of an online-platform for the list of assistants to be used by the secretaries of the maths department*, University of Geneva.

Popularization

- 2019 **"MATH.en.JEANS 2019"**, Member of the organization team for the congress in Grenoble, <https://www.mathenjeans.fr/>.
- Since 2009 **"Images des Mathématiques"**, Proof-reader for the popularization website of the french CNRS, <http://images.math.cnrs.fr/>.
- 2013 **"Le monde est mathématique"**, Proof-reader for the collection of books edited by the french journal *Le Monde* in 2013, <http://www.lemondeestmathematique.fr/>.
- 2012-2013 **Member of the popularization team**, mathematics department, University of Geneva, Switzerland.
- 2012 **Museum of History of Sciences of Geneva**, Member of the scientific committee, and redactor of texts for the exhibition "Les jeux sont faits - hasard et probabilités" (1/2/2012 – 7/4/2013), http://www.ville-ge.ch/mhs/expo_2012_jeux.php.

Other publications

Popularization

- [V1] L. COQUILLE, *Mesures photométriques d'étoiles variables diverses*, Orion (ISSN 0030-557X), 63 (2005).
- [V2] —, *L'expérience d'Eddington, récit et impact*, Orion (ISSN 0030-557X), 64 (2006), pp. 18–21.
- [V3] L. COQUILLE, *Un modèle probabiliste pour l'immunothérapie du cancer*, Tangente, HS58 (2016), pp. 36–37.

Amateur astronomy

- [A1] J.-G. BOSCH, C. DEMAUTIS, L. BERNASCONI, L. COQUILLE, N. WAELCHLI, D. DELUZ, C. RINNER, D. MATTER, V. COTREZ, AND B. BEHREND, *Four new pulsating variables*, IAU Inform. Bull. Var. Stars, Reports on new discoveries, 5500 (2004).
- [A2] C. RINNER, L. BERNASCONI, C. DEMAUTIS, N. WAELCHLI, L. COQUILLE, D. MATTER, V. COTREZ, AND B. BEHREND, *Eleven new eclipsing variables*, IAU Inform. Bull. Var. Stars, Reports on new discoveries, 5500 (2004).