

ARIANE CARRANCE

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EDUCATION AND EMPLOYMENT

- 2024-present Postdoctorate at the Faculty of Mathematics of Vienna, *Universität Wien*
With Nathanaël Berestycki, for the SFB project “Discrete random structures: enumeration and scaling limits”
- 2021-2024 [Hadamard lecturer](#) at CMAP, *École polytechnique*
With Igor Kortchemski
- 2019-2021 Postdoctorate at the Laboratoire de Mathématiques d’Orsay, *Université Paris-Saclay*
With Jean-François Le Gall and Nicolas Curien, within the ERC grant [GeoBrown](#)
- 2016-2019 PhD in mathematics at the Institut Camille Jordan, *Université Lyon 1*
Subject: “Random colored triangulations”, supervised by Grégory Miermont and Fabien Vignes-Tourneret.
Defended on 20th September 2019.
- 2012-2016 Student at the *École Normale Supérieure de Lyon*
- 2015-2016 Internship at the Institut Camille Jordan, *Université Lyon 1*
Subject: “Colored graphs and triangulations”, supervised by Fabien Vignes-Tourneret.
- 2014-2015 Second year of Master in Mathematics, *ENS Lyon, summa cum laude*
- Apr-Jul 2015 Internship at the Institut Camille Jordan, *Université Lyon 1*
Subject: “Coverings of colored graphs”, supervised by Fabien Vignes-Tourneret.
- 2013-2014 First year of Master in Physics, *ENS Lyon, summa cum laude*
- May-Jul 2014 Internship at TCM, Cavendish Laboratory, *Cambridge*
Subject: “Numerical simulations of pyrochlore spin ice”, supervised by Gunnar Möller.
- 2012-2014 Bachelor of Mathematics, *ENS Lyon, cum laude*
- 2012-2013 Bachelor of Physics, *ENS Lyon, summa cum laude*
- Jun-Jul 2013 Internship at the Laboratoire de Physique des Lasers, *Université Paris XIII*
Subject: “Optical traps for chromium condensates”, supervised by Étienne Maréchal.
- 2010-2012 First and second year of bachelor in Physics and Chemistry, *Lycée Henri IV, Paris*
“Classes Préparatoires aux Grandes Écoles”, cursus PC

PREPRINTS

- [The Ising model on cubic maps: arbitrary genus](#), avec Mireille Bousquet-Mélou et Baptiste Louf
- [Stable quadrangulations and stable spheres](#), with Eleanor Archer and Laurent Ménard
- [Some properties of stable snakes](#), with Eleanor Archer and Laurent Ménard
- [Random trees with local catastrophes: the Brownian case](#), with Jérôme Casse and Nicolas Curien

PUBLISHED ARTICLES

- [Enumeration of planar constellations with an alternating boundary](#), with Jérémie Bouttier
Electronic Journal of Combinatorics **28**(3), 21p (2021)
- [Convergence of Eulerian triangulations](#)

· Uniform random colored complexes

Random Structures & Algorithms 55 (3), pp 615-648 (2019)

TALKS

- March 2025 SPOC Seminar, *IMB*, Dijon
- February 2025 Conference *Enumerative combinatorics and effective aspects of differential equations*, CIRM
- January 2025 PIICQ Seminar (online)
- December 2024 Workshop *Stochastic Sauna*, Aalto University, Finland
- November 2024 (Not So) Informal Probability Seminar, Vienna
- September 2024 Kick-off of the project “Discrete random structures: enumeration and scaling limits”
Reichenau an der Rax, Austria
- August 2024 Bernoulli-IMS 11th World Congress in Probability and Statistics, Bochum, Germany
Organized Contributed Paper Session: Randomness on Trees and Random Trees
- July 2024 ANR Grant “3DMaps” Days, Paris
- June 2024 Workshop *Probabilistic Field Theories*, Aalto University, Finland
- March 2024 ALÉA Days, CIRM
- March 2024 Seminar of Mathematical Physics, *IMB*, Dijon
- October 2023 Seminar “Statistics, Probability, Algebra, Combinatorics and Ergodic Theory”, *IDP*, Tours
- September 2023 Seminar “Combinatorics and Interactions”, *LaBRI*, Bordeaux
- April 2023 Workshop *Non-commutative geometry meets Topological recursion*, ESI, Vienna
- January 2023 Thematic trimester *Quantum gravity, random geometry and holography*, IHP, Paris
- January 2023 Seminar of Probability and Statistics, *LAGA*, Villetaneuse
- September 2022 Otranto Workshop on Topological Recursion II, Italy
- June 2022 ANR Grant “3DMaps” Days, Paris
- April 2022 Seminar of Enumerative and Analytic Combinatorics, *IRIF*, Paris
- February 2022 Seminar of Probability and Statistics, *LAReMa*, Angers
- December 2021 Seminar of Enumerative and Analytic Combinatorics, *IRIF*, Paris
- November 2021 Probability Seminar, *IRMaR*, Rennes
- October 2021 Seminar of the CMAP, Palaiseau
- September 2021 Otranto Workshop on Topological Recursion, Italy
- July 2021 Kick-off of the ANR Grant “3DMaps”, Bordeaux
- February 2021 Journées Combinatoires de Bordeaux, *LaBRI*
- January 2021 Journées Cartes, CIRM
- December 2020 Modal’X Seminar, *Modal’X*, Nanterre
- November 2020 Probas du vendredi, *LPSM*, Paris
- November 2020 Combinatorics seminar, *LIX*, Palaiseau
- November 2020 Tensor Journal Club (online international seminar)
- March 2020 Mathematical physics seminar, *CPhT*, Palaiseau
- February 2020 Seminar of the Laboratoire de Physique de l’ENS Lyon
- November 2019 Journée Cartes, *LIX*, Palaiseau

April 2019	Seminar “Combinatorics and Interactions”, <i>LaBRI</i> , Bordeaux
February 2019	Women at the Intersection of Mathematics and High Energy Physics, Genève
February 2019	Probability and statistics seminar, <i>LMO</i> , Orsay
December 2018	ModTens Workshop, <i>LaBRI</i> , Bordeaux
November 2018	“Gaussbusters” seminar, <i>IRMaR</i> , Rennes
October 2017	Journée Cartes, <i>ENS Lyon</i>
September 2017	Mathematical physics seminar, <i>ICJ</i> , Lyon
October 2016	Lebesgue PhD Meeting , <i>Angers</i>
October 2016	Séminaire de la Détente Mathématique, <i>MMI</i> , Lyon

EVENT ORGANIZATION

2025-present	Combinatorial and Aleatory Knowledge Exchange Seminar , Vienna & Graz
2024-present	(Not So) Informal Probability Seminar , Vienna
2023-2024	Seed Seminar of Mathematics and Physics Regular events online and at <i>IHP</i> , Paris
June 2024	Special Day on Matrix models for quantum systems , <i>IHES</i> , Bures-sur-Yvette Special Day of the Seed seminar
2023-2024	Reading group “Discrete Random Objects: Limits and Estimates” , <i>CMAP</i>
November 2016	Young Researchers’ Day , <i>ICJ</i> , Lyon

RESEARCH-LEVEL TEACHING

March 2022	TA for the course “ <i>An invitation to analytic combinatorics in several variables</i> ” course by Steve Melczer, during the Journées ALÉA 2022
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ACADEMIC TEACHING

2022 - 2024	Probabiliy, 1st year of engineering cursus (L3), <i>École Polytechnique</i> 36hrs of exercise sessions /year
2022 - 2024	Discrete mathematics, 1st year of Bachelor, <i>École Polytechnique</i> 28hrs of exercise sessions (in English) /year
2018 & 2019	Maths II, 1st year of Bachelor in Maths (selective cursus), <i>Université Lyon 1</i> 36hrs (2018) and 4hrs (2019) of oral tutorials
2017 & 2018	Probability and statistics, 2nd year of Bachelor in Economics, <i>Université Lyon 1</i> 6hrs of computer sessions (language: R) /year
2017 & 2018	Statistics, 2nd year of Bachelor in Computer Science, <i>Université Lyon 1</i> 30hrs of exercise sessions and 8hrs of computer sessions (language: R) /year
2017	Maths II, 1st year of Bachelor in Computer Science, <i>Université Lyon 1</i> 64hrs of exercise sessions

SCIENTIFIC OUTREACH

2016-2019	Several one-day sessions with the organization “ MathaLyon ”, in schools around Lyon
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ACADEMIC RESPONSIBILITIES

2020-2021 Member of the equality committee of the Laboratoire de Mathématiques d'Orsay
2018-2019 Member of the council of the mathematics department of Université Lyon 1
2017-2019 Member of the library commission of Institut Camille Jordan

GRANTS AND FUNDING OBTAINED

2025-2029 Member of the ANR project [Louccoum](#)
Oct-Nov 2024 Research stay of 3 weeks funded by the Institut Henri Poincaré
Programme "Research in Paris", on the topic Exploring Universality of Random Planar Maps and Conformal Loop Ensembles
2023-2024 Funding for the [Seed Seminar of mathematics and physics](#)
Joint funding *FMJH, IHES & CMAP*
2021-2024 [Hadamard lecturer](#), *FMJH*
2016-2019 PhD grant "Contrat Doctoral Spécifique Normalien", *ENS Lyon*

LANGUAGE PROFICIENCY

French (native speaker), English (fluent), Russian (intermediate), Japanese (notions).

COMPUTING TOOLS

L^AT_EX, PGF/TikZ, HTML/CSS, PYTHON/SAGEMATH, C++, MAPLE, MATLAB, R