

Louis Chataignier

Curriculum Vitae

Date of birth	Dec 14, 1996
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Academic Background

2026– **Postdoctoral researcher** at *Hua Loo-Keng Center for Mathematical Sciences, Academy of Mathematics and Systems Science* (CN). Supervisor: Zhan Shi.

2023–2026 **PhD student** at *Institut de Mathématiques de Toulouse*. Supervisors: Pascal Maillard and Michel Pain. Thesis title: *On particle trajectories and genealogy in branching Brownian motion and branching random walk*. NNT: 2026UTLSS044.

2022–2023 **Master in Advanced Mathematics** at *Université Lyon 1 – ENS de Lyon*, specializing in Probability and Statistics.

M2 thesis: *Additive martingales of the branching Brownian motion*. Supervisors: Pascal Maillard and Michel Pain. `arXiv:2407.20227`.

2022 ***Agrégation* of Mathematics**, option Probability and Statistics. Admitted 24th in the national ranking.

2021–2022 **Master in General Mathematics** at *Université Lyon 1*.

M2 thesis: *Ordinary differential equations: examples of resolution and study of solutions in dimension* 1 *and* 2. Supervisor: Élise Fouassier.

2017–2018 **M1 in General Mathematics** at *Université Lyon 1*.

M1 thesis: *Formal study of the solvability of systems of partial differential equations*. Supervisor: Philippe Malbos.

2014–2017 **Bachelor's degree in General Mathematics** at *Université Lyon 1*.

2014 **Scientific *Baccalauréat*** at *Lycée du Forez*, Feurs.

Publications and preprints

2026 *Almost sure path localisation for the derivative martingale of branching Brownian motion*, with Julien Berestycki and Gabriel Flath. *Preprint* (`arXiv:2608.06263`).

Upper moderate deviation probabilities for the maximum of a branching random walk, with Lianghui Luo. *Preprint* (`arXiv:2601.08766`).

Asymptotics of the overlap distribution of branching Brownian motion at high temperature, Ann. Henri Lebesgue, 9, 371–421, with Michel Pain.

2025 *Upper moderate deviation probabilities for the maximum of branching Brownian motion*, Electron. Commun. Probab., 30, 1–14.

Conferences and Seminars

Nov 2026 Workshop on **Branching processes and related topics** at *Tianyuan Mathematics Research Center* (CN): attendance and presentation of a 50-minute talk.

Jun 2026 Summer school **Particle systems and PDEs** at *Institut de Mathématiques de Toulouse*: attendance.

May 2026 Conference **Discrete random structures II** at Będlewo (PL): attendance and presentation of a 20-minute talk.

May 6, 2026 **PhD seminar** at *Institut Élie Cartan de Lorraine*, Nancy: presentation of a 1-hour talk (invited).

Apr 2026 Annual conference of the **GDR Branchement** at Avignon: attendance.

Dec 9, 2025 **Probability seminar** at *Beijing Institue of Technology* (CN): online presentation of a 1-hour talk (invited).

Nov 25, 2025 **Probability seminar** at *Johannes Gutenberg-Universität Mainz* (DE): presentation of a 1-hour talk (invited).

Nov 20, 2025 **Franco-German doctoral college** on machine learning and probability at *Institut Agro Montpellier*: attendance and presentation of a 20-minute talk.

Sep–Oct 2025 Colloquium **Jeunes probabilistes et statisticiens** at *CAES du CNRS*, Saint-Pierre-d'Oléron: attendance and presentation of a 25-minute talk.

Apr 2025 Conference **Branching and persistence** at *Université d'Angers*: attendance and presentation of a 20-minute talk.

Mar 2025 Workshop **Random discrete structures** at *Department of Earth Sciences of Oxford* (UK): attendance.

Jan 2025 Annual conference of the **GDR Branchement** at Orsay: attendance.

Jan 16, 2025 **Probability PhD students' day** at *Institut de Mathématiques de Toulouse*: attendance and presentation of a 20-minute talk.

Sep 2024 Conference **Non-local branching processes** at *Centre International de Rencontres Mathématiques*, Marseille: attendance and presentation of a 10-minute talk.

Jul 2024 Probability summer school of **Saint-Flour** at *Ancien grand séminaire de Saint-Flour*: attendance and presentation of a 40-minute talk.

Feb 2024 Spring school **Multiplicative chaos and cascades** at *Technical University of Darmstadt* (DE): attendance and presentation of a 10-minute talk.

Jan 24, 2024 **Probability PhD students' day** at *Institut de Mathématiques de Toulouse*: attendance and presentation of a 15-minute talk.

Dec 21, 2023 **Christmas student seminar** at *Institut de Mathématiques de Toulouse*: attendance and presentation of a 15-minute talk.

Nov 2023 1st conference of the **GDR Branchement** at *Institut de Mathématiques de Toulouse*: attendance.

Science Communication

Jun 2024 **Classroom intervention to introduce probability theory** at *Collège Jacques Mauré*, Castelginest.

Apr 2022 **Management of the MathαLyon exhibition** at *Collège Marcel Pagnol*, Pierre-Bénite, with Régis Goiffon and Denis Serre.

Teaching

2025–2026 At *Université de Toulouse*:
- Measure theory, L3, TD (56h).

2024–2025 At *Université de Toulouse*:
- Introduction to probability theory, L2, TD/TP (38h).
- Measure theory, L3, TD (28h).

2023–2024 At *Université de Toulouse*:
- Introduction to probability theory, L2, TD/TP (46h).
- Introduction to statistics, L2, lecture/TD (18h).

2022–2023 Weekly oral exams in preparatory classes at *Lycée du Parc*, Lyon.

2020–2021 Tutoring at *GoStudent*, Lyon.

Organizing Responsibilities

2024–2026 **Representative of PhD students and postdocs** on the laboratory council at *Institut de Mathématiques de Toulouse*.

Spring 2025 **Organizer of a reading group** for the probability team of *Institut de Mathématiques de Toulouse*, jointly with Jan-Luka Fatras.

Autumn 2024 **Organizer of a reading group** for PhD students and postdocs in probability theory at *Institut de Mathématiques de Toulouse*.

Skills

Languages French (native), English (C2).

Programming LaTeX, Python, Git.

Driving French driver's license.