

Laura Monk

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Research experience

- 2021 – 22 **Postdoctoral guest at the Max Planck Institute for Mathematics**
mentored by Ursula Hamenstädt, *Bonn (Germany)*.
- 2018 – 21 **PhD** under the supervision of Nalini Anantharaman, *Institut de Recherche
Mathématique Avancée, Strasbourg (France)*.

Education

- 2018 – 21 **PhD in Mathematics** under the supervision of Nalini Anantharaman,
Université de Strasbourg (France).
The spectrum of random hyperbolic surfaces of high genus
- 2014 – 18 **École Normale Supérieure** in Mathematics with minor in Physics, *Paris*.
- 2017 – 18 **Master's degree in Mathematics** (with honours), *Paris-Sud University*.
- 2017 **Agrégation of Mathematics** (7th place).
Secondary-school and University Teaching degree
- 2014 – 15 **Bachelor's degrees** in Mathematics and in Physics (with honours), *Paris-Sud University*.
- 2012 – 14 **Preparatory class** in Mathematics and Physics, *Lycée Privé Sainte
Geneviève, Versailles (France)*.

Publications and preprints

- 2020 Anantharaman N., Monk L., *A high-genus asymptotic expansion of Weil-Petersson volume polynomials*, submitted.
- 2020 Monk L., Thomas J., *The tangle-free hypothesis on random hyperbolic surfaces*, submitted.
- 2020 Monk L., *Benjamini-Schramm convergence and spectrum of random hyperbolic surfaces of high genus*, Analysis & PDE (In Press).
- 2017 Fouvry J.B., Pichon C., Chavanis P., Monk L., *Resonant thickening of self-gravitating discs: imposed or self-induced orbital diffusion in the tightly wound limit*, Monthly Notices of the Royal Astronomical Society.

Awards and grants

- 2021 Post-doctoral funding at the Max Planck Institute for Mathematics, *Bonn (Germany)*.
- 2019 Best Poster in Mathematics price from the Doctoral School, *École Doctorale MSII, Strasbourg (France)*.
- 2018 – 21 PhD grant from the ENS Ulm.
- 2014 – 18 Full scholarship at the ENS Ulm.

Conferences and seminars

- 12/20 Oberseminar Differentialgeometrie, *Max Planck Institute for Mathematics, Bonn (Germany)*.
- 12/20 Young researchers conference “Jeunes géomètres dynamiques”, *GdR Platon, Institut de recherche mathématique de Rennes (France)*.
- 11/20 Probability seminar, *Université Paris-Saclay (France)*.
- 11/20 Dynamical systems seminar, *Bremen-Oldenburg (Germany)*.
- 11/20 Geometry seminar, *University of Leeds (UK)*.
- 10/20 Online seminar “Billiards and Surfaces à la Teichmüller and Riemann”.
- 06/20 Analysis informal seminar, *Cardiff University (UK)*.
- 05/20 Geometrical Analysis seminar, *organised by Frédéric Naud*.
- 11/19 8th Strasbourg / Zurich Meeting: Frontiers in Analysis and Probability, *University of Zurich (Switzerland)*.
- 05/19 Seminar “Théorie spectrale et Géométrie”, *Institut Fourier, Grenoble (France)*.
- 05/19 Workshop STROM : Spectral Theory and pRObability in Mathematical physics, *IRMA, Strasbourg (France)*.
- 04/19 Workshop Dynamics of geodesic flows and applications to PDEs, *ANR ISDEEC, École Polytechnique, Palaiseau (France)*.
- 04/19 Poster session at the SMF research school “Du quantique au classique”, *CIRM, Marseille (France)*.
- 19 Reading seminar on Weil-Petersson volumes and Mirzakhani’s recursion formula, with Federica Fanoni and Yohann Bouilly (organization + two talks), *IRMA, Strasbourg (France)*.
- 10/18 Analysis seminar, *IRMA, Strasbourg (France)*.

Teaching

- 2020 – 21 **Lecturer**, *University of Strasbourg (France)*, analysis - 2nd year.
- 2018 – 21 **Teaching assistant**, *University of Strasbourg (France)*.
- analysis - 2nd year in computer science
 - differential equations - 3rd year
 - written, oral exams, individual tutoring for the preparation of the agrégation
 - oral exams in analysis - 1st and 2nd year
 - mathematical circle (math club for high-school students)
- 2017 – 18 **Tutoring class**.
- 1st year of economic, social and legal sciences, CPES, Paris.
- 2014 – 18 **Oral examiner in preparatory schools**, *MPSI, MP*, HK B/L*.
Sainte-Geneviève (Versailles), Fénelon Sainte-Marie and Henri IV (Paris).

Other activities

- 2018 and 19 **Organization of the RJM**, *University of Strasbourg*.
Three-day meeting for high school girls to conduct mathematical group activities,
meet female researchers and engineers and speak about gender issues.
- 2017 **Jury for the TFJM²**.
Conference-like mathematical competition for high-school students.
- 2017 **Outreach talk** for undergraduates, *Lycée Privé Sainte-Geneviève*.
- 2015 **Arts Students' Union**, *École Normale Supérieure*.

Skills

- Languages French (mother tongue), English (fluent), Spanish (basic).
- Programming C, Caml, L^AT_EX, Maple, Mathematica, Python.