Camille Labourie

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Employments

2023– **Postdoctoral researcher**, *University Paris-Saclay*
With Blanche Buet.

2022–2023 **Postdoctoral researcher**, *University of Erlangen-Nuremberg*
With Manuel Friedrich.

2020–2022 **Postdoctoral researcher**, *University of Cyprus*
With Emmanouil Milakis.

2019–2020 **ATER (temporary assistant, research and teaching)**, *University Paris-Saclay*

2016–2020 **PhD in Fundamental Mathematics**, *University Paris-Saclay*
Under the supervision of Guy David. «Limits of quasiminimal sets and existence of minimal sets under topological constraints». Defense on January 6, 2020. The manuscript referees were Thierry de Pauw and Guido de Philippis.

Education and qualifications

2015–2016 **Master in Fundamental Mathematics**, *University of Rennes*
Option Analysis. With highest honors.

2014–2015 **External Agrégation of Mathematics**, *University of Rennes*
Option Scientific computation.

2012–2016 **Élève normalien**, *École Normale Supérieure de Rennes*

Teaching and scientific mediation

Teaching

2019–2020 **ATER**, *University Paris-Saclay*, 150h
Tutorial classes aimed at first year students in Maths-Physics-Computer science (Calculus), first year students in Physics-Chemistry (Calculus) and second year students in Math-Physics (Analysis/Algebra).

2016–2019 **Doctoral teacher**, *IUT de Cachan*, 3 × 54h
Practical works with Scilab aimed at first year students to teach the basics of programming and numerical analysis. Mathematics classes for first year students.

Scientific mediation

2019–2020 Research advisor for math club "Maths en Jeans" (preparation of problems), Lycée Blaise Pascal of Orsay.

11 December 2019 Seminar «Explain me... Plateau problems» aimed at students, Orsay.

11 October 2019 Workshop "Maps and snowflakes" and workshop SURFER for the Festival of Science (organized by Mélanie Guenais and Samuel Lelièvre), Orsay.

22–26 May 2019 Stand IMAGINARY at the Culture & Mathematical Games Fair (organized by Rémi Coulon and Samuel Lelièvre), Paris.

27–28 April 2019 Jury TFJM, Paris.

24–25 May 2018 Stand IMAGINARY at the Culture & Mathematical Games Fair (organized by Rémi Coulon and Samuel Lelièvre), Paris.

16 October 2016 Workshop SURFER for the Festival of Science (organized by Samuel Lelièvre), Orsay.

Research works

[9] Avec M. Friedrich et K. Stinson, Strong existence for free discontinuity problems in linear elasticity. *Preprint (2024).*

[8] Avec A. Lemenant, Uniform concentration property for Griffith almost-minimizers. *Preprint (2023).*

[7] Avec M. Friedrich et K. Stinson, On regularity for Griffith almost-minimizers in the plane. *Preprint (2023).*

[6] Avec A. Lemenant. Epsilon-regularity for Griffith almost-minimizers in any dimension under a separating condition. *Arch. Ration. Mech. Anal (2023).*

[5] With A. Lemenant. Regularity improvement for the minimizers of the two-dimensional Griffith energy. *Rendiconti Lincei Matematica e Applicazioni (2023).*

[4] With E. Milakis. The calibration method for the thermal insulation functional. *ESAIM: Control, Optimisation and Calculus of Variations (2022).*

[3] With E. Milakis. Higher integrability of the gradient for the thermal insulation problem. *Interfaces and Free Boundaries (2022).*

[2] Solutions of the (free boundary) Reifenberg Plateau Problem. *Advances in Calculus of Variations (2020).*

[1] Weak Limits of Quasiminimizing Sequences. *The Journal of Geometric Analysis (2021).*

Talks, conferences and research visits

Talks

5 March 2024 Workshop Calculus of Variations and Free Boundary Problems VII, Pise.

1 March 2024 Seminar at SAMM (Panthéon-Sorbonne), Paris.

20 February 2024 Seminar of EDP at IRMAR, Rennes.

5 February 2024 Seminar of Analysis at IMT, Toulouse.

19 December 2023 Seminar of EDP at IECL, Nancy.

17 October 2023 Seminar of Harmonic Analysis at LMO, Orsay.

28 June 2023	Conference Geometrical trends in Applied Analysis, Mulhouse.
16 June 2023	Workshop Young mathematicians in Geometry and Analysis 2, Freiburg.
10 March 2023	Seminar AG Analysis-Probability at the Max Planck Institute, Leipzig.
2 March 2023	Seminar of PDE at LJK, Grenoble.
14 December 2022	Conference Rencontre GDR CalVa, Nancy.
14 July 2022	Seminar at the University of Erlangen-Nuremberg, Erlangen.
22 June 2022	Conference 44th Summer Symposium in Real Analysis, Paris.
24 February 2022	Seminar of Algebra, Topology and Geometry at LJAD, Nice.
1 February 2022	Seminar of Analysis at the LMBP, Clermont-Ferrand.
6 January 2022	Seminar of Analysis at the LPP, Lille.
8 December 2021	Poster session at the conference Rencontre en Calcul des Variations, Nancy.
6 December 2021	Seminar at the working group GT CalVa, Paris.
10 November 2021	Seminar of Analysis at the University of Crete, Heraklion.
24 June 2021	Conference SMAI 2021, La Grande-Motte.
30 March 2021	Seminar at IECL, Nancy (visio).
25 November 2020	Seminar at the University of Cyprus, Nicosia.
19 February 2020	Sage Days 107 at LMO, "Modeling minimal surfaces with Surface Evolver", Orsay.
7 October 2019	Conference GDR AFHP Days, Grenoble.
30 September 2019	Seminar of Harmonic Analysis at LMO,Orsay.
3 June 2019	Seminar of young researchers in Analysis at IRMAR, Rennes.
31 May 2018	Seminar of PhD students in Harmonic Analysis and PDEs at LMO, Orsay.
6 April 2018	Seminar of PhD students at LMO, Orsay.
22 January 2018	Seminar of youg researchers in Analysis at IRMAR, Rennes.

Conferences

5 March 2024	Workshop Calculus of Variations and Free Boundary Problems VII, Pise.
10–14 July 2023	Variational and PDE Methods in Nonlinear Science, Cetraro.
28–30 June 2023	Geometric trends in Applied Analysis, Mulhouse.
19–21 June 2023	Calculus of Variations and Applications, Paris.
15–16 June 2023	Young Mathematicians in Geometry and Analysis 2, Freiburg.
13–14 December 2022	Rencontre GDR CalVa, Nancy.
20–24 June 2022	44th Summer Symposium in Real Analysis, Orsay and Paris.
13–17 June 2022	Shape Optimization, related topics and applications, Roscoff.
8–10 December 2021	Rencontre en Calcul des Variations, Nancy.
21–25 June 2021	SMAI 2021, La Grande-Motte.
7–8 October 2019	GDR AFHP Days, Grenoble.
2–6 September 2019	Geometric Measure Theory and Applications, Cetraro.
18–22 February 2019	Calcul des Variations et Probabilités, Toulouse.

1–21 July 2018	PCMI Graduate Summer School in Harmonic Analysis, Park City.
11–15 June 2018	Geometric Measure Theory, Verona.
2–6 October 2017	Harmonic Analysis and Geometric Measure Theory, Marseille (CIRM).
26–30 June 2017	New Trends on Analysis and Geometry in Metric Spaces, Levico Terme.
27 June–1 July 2016	Calculus of Variations, Optimal Transportation and GMT, Lyon.

Research visits

19–21 January 2022	University of Lorraine, Nancy, with Antoine Lemenant.
1–12 November 2021	University of Crete, Heraklion, with Ioannis Athanasopoulos.

Internships

29 January–2 February 2018	**Study Weeks Maths–Industry (SEME Hauts de France)**, *Lille* «Behaviour law of an immerged piston», under the supervision of Juliette Venel and Olivier Goubet. I presented this experience at the "Forum Emploi Maths 2019" Fair.
January–June 2016	**Master 2 internship**, *University Paris-Sud* «Geometric Measure Theory and Plateau problem», under the supervision of Guy David
May–June 2014	**Master 1 internship**, *University of Warwick (United Kingdom)* «Variational problems around Abrikosov networks», under the supervision of Florian Theil
May–June 2013	**Bachelor's degree internship**, *University of Lille* «Holomorphic functions of several variables», under the supervision of Léa Blanc-Centi

Other projects

- `https://github.com/camillelab/evolver`
  A set of scripts to install and use Surface Evolver, a software written by Ken Brakke for the modelling of minimal surfaces.
- `https://github.com/camillelab/min_free_discontinuity`
  A Julia implementation of the Bischof–Chambolle–Cremers–Pock–Strekalovskiy algorithm for minimizing free-discontinuity functionals.