

Antoine Prouff

Born on January 20, 1998, in Lesquin (59), France.

CONTACT INFORMATION

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RESEARCH INTERESTS

- Microlocal and semiclassical analysis, quantum-classical correspondence principle, control of PDEs;
- Branched optimal transport.

APPOINTMENTS

Université Paris Cité, France,
Institut de Mathématiques de Jussieu - Paris Rive Gauche,
Maître de conférences, équipe Analyse fonctionnelle.

[Sep. 2026–present]

Purdue University, IN, USA,
Golomb Visiting Assistant Professor.
Mentor: Kiril Datchev.

[Aug. 2024–Aug. 2026]

EDUCATION

Institute of Mathematics of Orsay, Université Paris-Saclay, France.
PhD in Mathematics.

[2021–2024]

Advisor: [Matthieu Léautaud](#).

Title: *Quantum-classical correspondence principle and application
to the control of wave and Schrödinger equations in the Euclidean space.*

(Defense: June 11, 2024.)

École normale supérieure Paris-Saclay, department of Mathematics, France.
B.S. in Mathematics, June 2018; M.S. in Mathematics, June 2020.

[2017–2021]

Lycée Sainte-Geneviève, Versailles, France.

[2015–2017]

Classe préparatoire aux grandes écoles MPSI – MP*.

Lycée La Mennais, Ploërmel, France.

[2012–2015]

"Science Baccalaureate".

PUBLICATIONS

- [6] Kiril Datchev, Perry Kleinhenz, and Antoine Prouff. *Geometry of wave damping on the torus*. Preprint, [arXiv:2509.05239](#) [math.AP] (2025). Submitted.
- [5] Prouff, Antoine. "Smoothing effect and quantum-classical correspondence for the Schrödinger equation with confining potential". In: **ESAIM: ProcS** 79 (2025), pp. 83–95.
- [4] Antoine Prouff. *Egorov's theorem in the Weyl–Hörmander calculus*. Preprint, [arXiv:2412.04320](#) [math.AP] (2024). Submitted.
- [3] Antoine Prouff. "Uniform stability of the damped wave equation with a confining potential in the Euclidean space". In: **ESAIM, Control Optim. Calc. Var.** 31 (2025). Id/No 43, p. 29.
- [2] Antoine Prouff. "Observability of the Schrödinger equation with subquadratic confining potential in the Euclidean space". In: **Analysis & PDE** 18.5 (2025), pp. 1147–1229.

- [1] Maria Colombo, Antonio De Rosa, Andrea Marchese, Paul Pegon, and Antoine Prouff. “Stability of optimal traffic plans in the irrigation problem”. In: *Discrete and Continuous Dynamical Systems* 42.4 (2022), pp. 1647–1667.

RESEARCH TALKS

Mini-symposium "Length optimization" (Mathematics Days in Sofia 2026), Sofia, Bulgaria.	[Jul. 2026]
Oberseminar dynamical systems, Ruhr-Universität Bochum, Germany.	[Jun. 2026]
IMPRESS-U seminar (online).	[Apr. 2026]
AMS Sectional meeting - Special session on Microlocal Analysis and Mathematical Physics, Boston College, MA, USA.	[Mar. 2026]
Analysis seminar, Illinois State University, IL, USA.	[Mar. 2026]
Probability theory, Mathematical Physics and Analysis Seminar, Université d'Angers, France.	[Jan. 2026]
PDE - Mathematical Physics Seminar, Université de Bordeaux, France.	[Jan. 2026]
Analysis seminar, Université de Rennes, France.	[Jun. 2025]
Analysis seminar, Northwestern University, IL, USA.	[Jan. 2025]
Spectral and scattering theory seminar, Purdue University, IN, USA.	[Aug. 2024]
Young Researchers Symposium 2024 (ICMP 2024), Strasbourg, France.	[Jun. 2024]
Itinerant Quantum Math Meetings, Università degli Studi di Milano, Italy.	[Avr. 2024]
Analysis seminar (online), FernUniversität in Hagen, Germany.	[Oct. 2023]
Meeting of the ANR "Adyct", Université Côte d'Azur, Nice, France.	[Sep. 2023]
Congrès des Jeunes Chercheurs en Mathématiques Appliquées, CentraleSupélec, France.	[Sep. 2023]
Analysis seminar, Université de Nantes, France.	[Jun. 2023]
Analysis PhD students seminar, Orsay, France.	[Mar. 2023]
AGAPI Day VII, Universidad Politécnica de Madrid, Spain.	[Mar. 2022]

TEACHING

Université Paris Cité , France.	
• 2026-2027 1st semester:	
* "Logic and sequences" L1 Math-Economics (Instructor)	
* "Groups and actions" L3 Math for Teaching (TA)	
Purdue University , USA.	
• Spring 2026: "Linear algebra" MA265 (Instructor, 2 sections)	
• Fall 2025: "Ordinary differential equations" MA266 (Instructor, 2 sections)	
• Spring 2025: "Linear algebra" MA265 (Instructor, 2 sections)	
• Fall 2024: "Ordinary differential equations" MA266 (Instructor, 2 sections)	
Teaching assistant , "Semiclapp" summer school, Université Côte d'Azur, France WKB method and propagation of singularities	[May 2024]
Université Paris-Saclay , France.	
• 2023-2024 1st semester:	
* "Calculus +" L1 Biology-Geoscience (TA)	
* "Functions of several variables" L2 Chemistry (TA)	

	• 2022-2023 1st semester: * "Analysis for physicists" L2 Physics (TA) * "Functions of several variables" L2 Chemistry (TA) • 2021-2022 1st semester: * "Calculus +" L1 Biology-Geoscience (TA) * "Functions of several variables" L2 Chemistry (TA)	
MENTORING	Purdue University, USA, Mentored a Junior student for "Directed Reading Program".	[fall 2025]
AWARDS AND HONORS	PhD Award in science from the Chancellery of the Universities of Paris. [2025] Junior Scientific Visibility Program from FMJH [Mar. 2022] Travel grant for a 1-month research stay in Madrid. Erasmus+ program [2020-2021] Scholarship for a 1-year research stay in Madrid. ENS Paris-Saclay: Successful candidate (rank: 1st) at the third-year entrance exam. [2019] Master scholarship from the Jacques Hadamard Mathematical Foundation. [2018]	
RESEARCH VISITS	Research visit, Universidad Politécnica de Madrid, Spain. [Mar. 2022] Host: Fabricio Macià. Pre-doc research year, Universidad Politécnica de Madrid, Spain. [Oct. 2020–Jun. 2021] Supervisor: Fabricio Macià. Title: <i>Stabilisation of the wave equation and Observability of the Schrödinger equation in the Euclidean space.</i> Research internship, EPFL, Lausanne, Switzerland. [Apr.–Jul. 2019] Supervisors: Maria Colombo and Paul Pegon. Research internship, CMLA, ENS Paris-Saclay, France. [Jan.–Jun. 2018] Supervisors: Argyris Kalogeratos and Nicolas Vayatis.	
ACADEMIC SERVICE	Organization of the Mathematical Analysis PhD students' seminar of Orsay. [2021–2022] Grad student representative at the Hadamard Graduate School of Mathematics. [2021–2022]	
OTHER TEACHING EXPERIENCES	Volunteer, Villebon-Georges Charpak Institute, Orsay, France. [2017–2018] Helping two first-year students, two hours a week, with Mathematics and Physics. Volunteer, Maison de quartier Prés-au-Bois, Versailles, France. [2015–2016] Helping secondary school students to do their homeworks two hours a week.	
MISCELLANEOUS	Languages: French (native), English (fluent), Spanish (intermediate), Russian (elementary). Programming: Python, Matlab, Latex.	