

# Yann Chaubet

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## RESEARCH INTERESTS

Hyperbolic dynamics, microlocal analysis, spectral geometry, dynamical zeta functions, geometric topology.

## POSITIONS

- May 2026 : Visiting researcher, University of Melbourne.
- 2023– : Assistant Professor, Nantes Université.
- 2022–2023 : Herschel Smith Research Fellow, University of Cambridge (By-Fellow of Churchill College).

## EDUCATION

- 2019–2022 : PhD in Mathematics, Université Paris-Saclay. Advisor: Colin Guillarmou.
- 2014–2019 : École normale supérieure, Paris.

## PREPRINTS

- Geodesic Lévy flights on Zoll surfaces (with E. J. Godfried and L. Tzou), arXiv:2606.28744.
- Minimax spectral estimation of weighted Laplace operators (with V. Divol), arXiv:2511.22694.
- Nonlinear chaotic Vlasov equations (with D. Han-Kwan and G. Rivière), arXiv:2407.04426.

## PUBLICATIONS

- Dynamical zeta functions, book chapter in *Microlocal analysis in hyperbolic dynamics and geometry*, by Thibault Lefeuvre, published in *Cours spécialisés de la SMF*.
- Combinatorial zeta functions for triangles (with L. Bénard, N. V. Dang and T. Schick), to appear in *Journal of Topology*.
- Geodesic Lévy flights and expected stopping time for random searches (with Y. G. Bonthonneau, T. Lefeuvre and L. Tzou), *Probability Theory and Related Fields* 191 (2025), 235–285.
- Dynamical zeta functions for billiards (with V. Petkov), to appear in *Annales de l'Institut Fourier*.
- Resolvent of vector fields and Lefschetz numbers (with Y. G. Bonthonneau), *Pure and Applied Analysis* 6 (2024), 521–540.
- Dynamical torsion for contact Anosov flows (with N. V. Dang), *Analysis & PDE* 17 (2024), 2619–2681.
- Closed geodesics with prescribed intersection numbers, *Geometry & Topology* 28 (2024), 701–758.
- Closed billiard trajectories with prescribed bounces, *Annales Henri Poincaré* 24 (2022), 1051–1075.
- Poincaré series for surfaces with boundary, *Nonlinearity* 35 (2022).

## INVITED TALKS

### Mini-courses.

- October 2025, Journée Rennes–Nantes d'analyse, Rennes (2 lectures).
- December 2025, Conférence Géométrie et Dynamique, Aussois (3 lectures).

### International conferences.

- Three Days Workshop in Dynamics, Geometry and Analysis, Melbourne, 2026.
- Rigidity Phenomena in Dynamics and Spectral Theory, Zurich, 2024.
- Hyperbolic Dynamics and Semiclassical Analysis, Paris, 2023.
- Analytic Techniques in Dynamics and Geometry, Les Diablerets, 2023.
- Rencontre Aléatoire, Dynamique et Spectre, Grenoble, 2023.
- École de Printemps Géométrie et Dynamique, Lille, 2023.
- Paris–London Analysis Seminar, London, 2023.
- Geometrical Inverse Problems, Linz, 2022.
- Rigidity Problems in Geometry, Roscoff, 2022.
- Spectra and Dynamics on (Locally) Symmetric Spaces, Paderborn, 2022.

**Seminars.** University of Queensland (2026), Monash University (2026), Pisa (2025), Brest (2025), Tours (2024), Quimper (2024), Nantes (2024), Warwick (2024), Bristol (2023), London (2023), Cambridge (2023), Marseille (2022), IMJ-PRG (2022), Montpellier (2022), Bochum (2022), Pisa (2022), Bordeaux (2022), Orsay (2020–2021), Marseille (2020).

### AWARDS AND GRANTS

- 2025 – International Emerging Action (partnership with Melbourne University), 28 k€.
- 2025 – PEPS grant, 4.4 k€.
- 2023 – PULSAR grant, 10 k€.
- 2022 – Herschel Smith Research Fellowship.

### CONFERENCE ORGANIZATION

- 2026 – Workshop Analyse semiclassique le long de la Loire, Nantes.
- 2025 – Journées brestoises des jeunes chercheuses et chercheurs en analyse microlocale, Brest.
- 2025 – Three Days Workshop on Geometry, Analysis and Dynamics, Longeville-sur-Mer.
- 2024 – ANR Adyct Workshop, Nantes.
- 2024 – Workshop on Pseudo-Holomorphic Curves, Teyran.