

# Curriculum Vitæ - Gaétan LECLERC

December 2023

Born 27/11/1997 in Saint-Benoît-la-Forêt, France  
French Nationality

Currently a PhD Student since September 2021, in Paris, with Frederic NAUD.

Professionnal address:

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## Research interests

**Hyperbolic dynamical systems**, harmonic analysis, exponential mixing, thermodynamical formalism, additive combinatorics, sum-product phenomenon, Fourier dimension, fractals.

## Publications and preprints

- G. Leclerc. Julia Sets of Hyperbolic Rational Maps have Positive Fourier Dimension. *Commun. Math. Phys.* 397, 503–546 (2023). [doi:10.1007/s00220-022-04496-6](https://doi.org/10.1007/s00220-022-04496-6)
- G. Leclerc. On oscillatory integrals with Hölder phases. *Discrete and Continuous Dynamical Systems.* (2023) [doi:10.3934/dcds.2023103](https://doi.org/10.3934/dcds.2023103)
- G. Leclerc. Fourier decay of equilibrium states for bunched attractors (2023). [arXiv:2301.10623](https://arxiv.org/abs/2301.10623)
- G. Leclerc. Fourier decay of equilibrium states on hyperbolic surfaces (2023). [arXiv:2307.10755](https://arxiv.org/abs/2307.10755)
- Ongoing project: On the Fourier dimension of generic basic sets on surfaces.
- Ongoing project: A collaboration with I. Bailleul, N. V. Dang, J. Lin, and L. Ferdinand.

## Teaching (teaching assistant)

- Metric Differential Geometry of curves and Surfaces (L2, INSA Rennes 2020).
- Linear Algebra and Probability (LU1MA002, Sorbonne Université, 2022).
- Series and function series (LU2MA260, Sorbonne Université, 2022).
- Measure theory and probability (LU3MA263, Sorbonne Université, 2023).
- Complex analysis (LU3MA266, Sorbonne Université, 2023).

## Conferences and seminars

Conferences and workshop:

- Invited speaker. Roscoff, march 8 – march 12, 2022 , “Rigidity, Inverse Problems and hyperbolic dynamics”. Organizer: Colin Guillarmou.
- Invited speaker. Grenoble, 27-28 March 2023, “Meeting of the ANR ADYCT: Aléatoire, Dynamique et Spectre”. Organizers: Vincent Beffara, Frédéric Faure, Damien Gayet, Erwan Lanneau. [Website here.](#)
- Participant. Les Diablerets, May 28 – June 2, 2023. “Analytic techniques in Dynamics and Geometry” Organizers: Artur Avila, Mihajlo Cekic, Thibault Lefeuvre. [Website here.](#)

- Invited speaker (2 hours talk). IMJ-PRG, Paris. November 27, 2023. “Hyperbolic dynamics and semiclassical analysis”. Organizer: Thibault Lefeuvre. [Website here](#).

Given research talks (seminars):

- Seminar of ergodic theory, Rennes, 17 october 2022. Invited by Sebastien Gouezel.
- Seminar of analysis, Nantes, 23 january 2023. Invited by Joackim Bernier and Gabriel Rivière.
- Ergodic Theory and Dynamical Systems Seminar, Warwick, 20 June 2023. Invited by Julia Slipantschuk.
- MIT PDE/Analysis Seminar, Boston, 12 september 2023, invited by Semyon Dyatlov.
- Mathematical Physics seminar, Aalto University in Espoo, Finland, 03 October 2023, invited by Tuomas Sahlsten.

Given research talks (Misc):

- “ACG Day” at the IMJ-PRG, 16 June 2022.
- Doctoral seminar, Strasbourg, 13 january 2022.
- Dynamics and Group Geometry Early Researchers (DAGGER), Warwick, 19 June 2023. Invited by William O’Regan.

### **Education**

- 2021 - 2024: PhD with Frederic NAUD at IMJ-PRG (Paris, France)
- 2021: Master’s degree in pure Mathematics (Rennes, France). (Valedictorian)
- 2020: *Agrégation de Mathématiques*, [rank 3](#)
- 2018: Bachelor’s Degree in Physics
- 2017 - 2021: Maths studies in *Ecole Normale Supérieure de Rennes* (Rennes, France).
- 2014 - 2017: Classes préparatoires aux grandes écoles (Tours, France)

### **Organization or participation to mathematical events**

- 2017: Supervisor in the RJM (Rencontre des Jeunes Mathématiciennes) in Rennes, an event to promote women in maths. See [here](#) for more informations.
- 2017: Jury in the TFJM (Tournoi Français des Jeunes Mathématicien-nes). See [here](#).
- 2018: Supervisor and speaker in the RJM. Some memories [here](#).
- 2018: Jury in the TFJM.
- 2018: *Team manager* of the team “Ln et les garçons” (France 2) at [ITYM](#) (International Tournament of Young Mathematicians). [First prize](#) (second position).
- 2019: Jury in the TFJM.