

# Vincent Dumoncel

*PhD student in Mathematics*

\* 26 May 2001  
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## Interests

Geometric group theory, quasi-isometric rigidity, wreath products and variations, coarse and CAT(0) geometry, (quantitative) orbit and measure equivalences, probabilities on groups and on graphs.

## Education

- 2023 – **Ph.D. in Mathematics**, *IMJ-PRG, University of Paris*, Paris  
Present Under the guidance of Romain Tessera (CNRS, IMJ-PRG) and Anthony Genevois (CNRS, IMAG Montpellier). Research group: Operator algebras.
- 2021 – 2023 **M.Sc. in Mathematics**, *EPFL*, Lausanne  
*Geometric approaches to amenability and unitarisability*, Master thesis, under the supervision of Nicolas Monod. Final grade: 6/6.
- 2018 – 2021 **B.Sc. in Mathematics**, *University of Geneva*, Geneva
- 2015 – 2018 **French scientific baccalaureate**, *Saint-François High School*, Ville-la-Grand  
With mathematics as main subject

## Research

### In preparation

4. *On quantitative orbit equivalence for lamplighter-like groups*, joint with C. Correia
3. *Isoperimetric profiles of lamplighter-like groups*, joint with C. Correia

### Preprints

2. *Quasi-isometric rigidity for lamplighters with lamps of polynomial growth*, 21 pages, preprint arXiv:2502.01849. Submitted.
1. *On the quasi-isometric classification of permutational wreath products*, 52 pages, preprint arXiv:2409.20159. Submitted.

## Grants and awards

- Jan. 2024 Grant for participation in the *Thematic program in Randomness and Geometry*, Fields Institute, Toronto, Canada. CAD 1'400
- 2023-2026 PhD scholarship from the University of Paris.

## Talks

- May 2025 Geometries seminar, Institut Camille Jordan, Lyon, France.

- Apr. 2025 Geometry and Topology seminar, Bowling Green State University and University of Toledo, online.
- Mar. 2025 Darboux seminar, IMAG, Montpellier, France.
- Mar. 2025 Geometry and applications seminar, IRMA, Starsbourg, France.
- Feb. 2025 Working group on ergodic theory, IMJ-PRG, Paris, France.
- Jan. 2025 PhD seminar, LAREMA, Angers, France.
- Jul. 2024 Journées des doctorants de l'équipe AO, IMJ-PRG, Paris, France.

## Attended conferences

- June 2025 Summer school *Groupoids from a measurable, topological and geometric perspective*, IMJ-PRG, Paris, France.
- May 2025 Workshop *Random walks on groups, groups acting on fractals*, University of Montpellier, Montpellier, France.
- Apr. 2025 *Young Geometric Group Theory XIII*, University of Copenhagen, Copenhagen, Denmark.
- Mar. 2025 Workshop *Rigidity of isometric actions*, CIRM, Luminy, France.
- Dec. 2024 *Arbre de Noël du GDR Géométrie non commutative*, Université d'Orléans, Orléans, France.
- Nov. 2024 *Parole aux jeunes chercheurs du RT Tétraèdre de Platon*, ENS Ulm, Paris, France.
- July 2024 Workshop *Orbit equivalence*, Besse-en-Chandesse, France.
- Apr. 2024 *Young Geometric Group Theory XII*, University of Bristol, Bristol, United Kingdom.
- Feb. 2024 GAGTA 2024, CIRM, Luminy, France.
- Jan. 2024 *Thematic program in Randomness and Geometry*, Fields Institute, Toronto, Canada.
- Dec. 2023 *Colloquium Tits*, Collège de France, Paris, France.
- Nov. 2023 *Topics in geometric group theory*, University of Copenhagen, Copenhagen, Denmark.

## Teaching experiences

- 2023–2025 **Teaching assistant**, *University of Paris*, Paris  
 Leading exercises sessions, preparing and grading exams, holding questions sessions for the courses:
  - Mathematics 1 (Fall 2023, Fall 2024)
  - Interactions between maths and physics (Fall 2023, Fall 2024)
- 2023–2024 **Oral examiner**, *University of Paris*, Paris  
 Running oral examinations for first year math students in linear algebra and real analysis

2021–2023 **Teaching assistant**, *EPFL*, Lausanne

Running weekly exercise sessions, preparing and marking exercise sheets and examinations for the following courses:

- Advanced linear algebra I (Fall 2021, Fall 2022)
- Analysis I (Fall 2021, Fall 2022)
- Analysis II (Spring 2022)
- Algebra (Fall 2021)
- Probabilities and Statistics (Fall 2022)

2020–2021 **Research and teaching assistant**, *University of Geneva*, Geneva

Organising and leading weekly practical works in analysis, algebra and geometry for first year students

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## Organization

Jan. 2025– **Co-organizer of the working group "Geometric group theory and its coarse neighborhood"**, *IMJ-PRG*, Paris

Oct. 2023– **Co-organizer of the PhD students seminar**, *IMJ-PRG*, Paris

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## Languages

French    Fluent

English    Fluent

Spanish    Intermediate