

# Ricardo Canesin

PhD Student

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## Education

- 2023–Present **Pursuing a PhD in Mathematics**, *Université Paris Cité (UPC)*, Paris, France.  
Supervisor: Bernhard Keller.
- 2022–2023 **Master's degree in Mathematics (M2 de Mathématiques Fondamentales)**, *UPC*, Paris, France.  
Master's thesis: "On the bounded derived category of a Dynkin quiver".  
Supervisor: Baptiste Rognerud.
- 2018–2021 **Bachelor's degree in Mathematics**, *University of São Paulo (USP)*, São Paulo, Brazil.  
Bachelor's thesis: "Modular representations of finite groups".  
Supervisors: Lucia Satie Ikemoto Murakami and Vitor de Oliveira Ferreira.

## Scholarships received

- 2022–2023 **PGSM Master Scholarship**, *Fondation Sciences Mathématiques de Paris (FSMP)*, France.
- 2018–2021 **PICME Scholarship**, *Brazilian National Council for Scientific and Technological Development (CNPq)*, Brazil.

## Preprints

- 05/2025 **A categorification of combinatorial Auslander–Reiten quivers**, *arxiv:2505.06147*.
- In preparation **Categories of split filtrations and graded quiver varieties**.

## Talks and conferences

### Invited talks

- 06/2025 **A categorification of combinatorial Auslander–Reiten quivers**, *Demi-journée de l'équipe Groupes, Représentations et Géométrie*, UPC, France.
- 07/2024 **Categorifying twisted Auslander–Reiten quivers**, *Workshop on higher homological algebra and related topics*, Nanjing University, China.

### Contributed talks

- 08/2025 **A categorification of combinatorial Auslander–Reiten quivers**, *The Legacy of Peter Gabriel*, Bielefeld University, Germany.
- 08/2024 **Categorifying twisted Auslander–Reiten quivers**, *International Conference on Representations of Algebras (ICRA 21)*, Shanghai Jiao Tong University, China.

### Posters

- 11/2025 **A categorification of combinatorial Auslander–Reiten quivers**, *New perspectives in quantum representation theory*, ICMS, Edinburgh, United Kingdom.
- 09/2025 **A categorification of combinatorial Auslander–Reiten quivers**, *Advances in Representation Theory of Algebras (ARTA X)*, University of Cologne, Germany.

05/2025 **Combinatorial Auslander–Reiten quivers and their frieze patterns**, *Frieze patterns in algebra, combinatorics and geometry*, Centre International de Rencontres Mathématiques (CIRM), France.

#### Conference organization

05/2024 **CHARMS Summer School: Categorical and geometric methods in the representation theory of algebras**, Université de Versailles Saint-Quentin-en-Yvelines, France.  
Member of the organizing committee.

#### Conferences and workshops attended

06/2025 **Nordfjordeid Summer School 2025: Cluster Geometry**, Sophus Lie Conference Center, Nordfjordeid, Norway.

03/2025 **Algebra Days in Caen 2025: Categorification and quantisation in cluster theory and beyond**, Université de Caen-Normandie, Caen, France.

08/2024 **Masterclass on Derived Category Methods in Ring Theory**, Aarhus University, Denmark.

07-08/2024 **Workshop at ICRA 21**, Shanghai Jiao Tong University, China.

05/2024 **Catégories amassées et symétrie miroir (Rencontre ANR Charms)**, IRMA, Université de Strasbourg, France.

04/2024 **Workshop: Hochschild (Co)Homology and Applications**, Oberwolfach Research Institute for Mathematics (MFO), Germany.

11–12/2023 **Current trends in representation theory, cluster algebras and geometry**, Centre International de Rencontres Mathématiques (CIRM), Marseille, France.

## Awards

2023 “Best student” award (Class of 2021), Institute of Mathematics and Statistics of USP.

2022 Silver medal in the Brazilian Mathematical Olympiad (OBM), Brazilian Mathematical Society (SBM) and Institute for Pure and Applied Mathematics (IMPA).

2021 Gold medal in the International Mathematical Competition for University Students (IMC), University College London (UCL).

2020 Gold medal in the “Competencia Iberoamericana Interuniversitaria de Matematicas” (CIIM), Universidad Antonio Nariño (UAN, Colombia).

## Teaching assistantships

2025 **Interactions Mathematics-Physics (L1 Physique)**, UPC, Paris, France.

2024 **Calculus and Linear Algebra (L2 Informatique)**, UPC, Paris, France.

Professor: David Hernandez.

2024 **Calculus (L1 MIASHS)**, UPC, Paris, France.

Professor: Yves Capdeboscq.

## Languages

Portuguese **Mother tongue**

English **Advanced**

French **Advanced**