

Curriculum Vitae - CV

Daniel Bernal

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1 Personal Information

Name: Oscar Daniel Bernal Miranda

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Date and place of birth: Bogotá D.C., Colombia. July 02 of 1999.

2 Education

Starting and Ending Date	Length (in months)	Degree achieved	Institution and advisors	Work/Thesis title
2023 - 2027 (expected)	48	Ph.D. in Mathematics (expected)	IMECC - UNICAMP Advisor: Marcos Jardim ↗ Co-advisor: Cristian Martínez ↗	(to be determined)
2021 - 2022	24	M.Sc. in Mathematics	IMECC - UNICAMP Advisor: Marcos Jardim ↗ Co-advisor: Cristian Martínez ↗	Moduli Spaces of Neural Networks
2014 - 2019	72	Bachelor in Mathematics	Universidad Distrital Francisco José de Caldas Advisor: Carolina Mejía ↗ Co-advisor: Pedro Fernández ↗	On the number of exceptional pairs in quivers of type \mathbb{A}_n .

3 Positions and Awards

1. Exchange Student at University of Edinburgh under supervision of Dr. Antony Maciocia  during the period 01/10/2024 to 30/06/2026.
2. Programa de Estágio Docente (Academic tutor for the course Calculus I) during Semester 2025-I. Universidade Estadual de Campinas.
3. Exchange Student at University of Edinburgh under supervision of Dr. Antony Maciocia  during the period 01/08/2024 to 31/10/2024.
4. Programa de Estágio Docente (Academic tutor for the course Calculus I) during Semester 2024-I. Universidade Estadual de Campinas.
5. Programa de Estágio Docente (Academic tutor for the course Linear Algebra) during Semester 2023-II. Universidade Estadual de Campinas.
6. Academic Monitor during Semester 2018-I and 2019-I. Universidad Distrital Francisco José de Caldas. Dedication: 12 hours (weekly).
7. Honor Enrollment on Semester 2018-II.
8. High School Teacher on Instituto Campestre Senderos located in Soacha, Cundinamarca, Colombia during year 2020.
9. Meritorious Graduate Dissertation, awarded on May of 2020. Universidad Distrital Francisco José de Caldas, Bogotá D.C., Colombia.

4 Awarded Scholarships

Ongoing:

1. Ph.D. Scholarship, CAPES Agency. Validity: 01/03/2023 - 28/02/2027.
2. PDSE Sandwich Program, CAPES Agency. Validity: 01/10/2025 - 30/06/2026.

Past:

1. PRINT Program, CAPES Agency. Validity: 01/08/2024 to 31/10/2024.
2. M.Sc. Scholarship, CAPES Agency. Validity: 01/05/2021 to 28/02/2023.

5 Other relevant informations

5.1 Events

Talks (last five years)

- a. *Bridgeland wall-crossings for some moduli spaces of objects on $D^b(\mathbb{P}^3)$.* Vector bundles and their applications in Algebraic Geometry and related topics, Bandoleros 2024. Universidad del Rosario, Bogotá D.C, Colombia.

- b. *\mathcal{C} -instantons.* Algebraic Geometry Student Seminar, University of Edinburgh, October 2024.
- c. *Tilting bundles and a Baer-Bondal theorem.* DOGS Online Seminar. October 2024.
- d. *Bridgeland wallcrossings for some moduli spaces of objects on $D^b(\mathbb{P}^3)$.* Moduli spaces of sheaves and complexes of sheaves Online Seminar. 17 of september of 2024.
- e. *Double framed thin quiver representations and neural networks.* Algebraic Geometry arXiv Club. Universidade Estadual de Campinas (2022).
- f. *Complex Tori and Riemann Conditions.* Hodge Theory Seminar. Universidade Estadual de Campinas (2022).

Attended with poster

- a. *Bridgeland walls destabilizing one-dimensional sheaves on the projective space.* CIMPA School 2025: Bridgeland Stability and Applications. Universidade Federal de Santa Catarina from August 4 to August 15, 2025. Florianópolis, Brazil.

Attended (last five)

- a. LEGAL, Liberty in Algebraic Geometry. Universidade Federal do Rio de Janeiro. Teresópolis, Río de Janeiro, 2024.
- b. Fourth International Colloquium on Representation of Algebras and its Applications; Alexander Zavadskij, 2020. Online Colloquium ↗
- c. Third International Colloquium on Representation of Algebras and its Applications; Alexander Zavadskij. Medellín, Colômbia. June 27-29, 2018.
- d. Mathematics societies meeting from Colombia and Mexico. Universidad del Norte, Barranquilla, Colombia. May 30 to June 2 of 2018.
- e. CIMPA School 2018. Geometric and Homological Methods in the Representation Theory of Associative Algebras and Their Applications. Universidad de Antioquia, June 18-27, 2018, Medellín, Colombia.

5.2 Languages

Spanish: Native, English: Advanced (C1 on IELTS), Portuguese: Advanced