

## Education

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**University of Notre Dame**  
PhD in Mathematics

**Notre Dame, Indiana**  
**August 2015 - May 2020**

- Specialized in model theory. Studied model-theoretic Galois theory, differentially closed fields and the canonical base property.
- Thesis : "Internality in Families"
- Supervisor : Anand Pillay

**Université Pierre et Marie Curie**  
Agrégation de Mathématiques

**Paris, France**  
**September 2014 - June 2015**

- The most advanced french teaching diploma.
- Prepared many undergraduate lectures for my examination.

**Université Pierre et Marie Curie**  
Mathematics Undergraduate and Master's degree

**Paris, France**  
**September 2009 - June 2014**

## Employment

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**The Ohio State University**  
*Visiting Assistant Professor*

**Columbus, Ohio**  
**August 2023 - Present**

**The Fields Institute and The University of Waterloo**  
*Postdoctoral researcher*

**Toronto and Waterloo, Ontario**  
**August 2021 - August 2023**

- A joint postdoctoral contract funded by the Fields Institute and the University of Waterloo. The first year at the Fields Institute was part of the "Thematic Program on Trends in Pure and Applied Model Theory" and the "Thematic Program on Tame Geometry, Transseries and Applications to Analysis and Geometry".

**Université Claude Bernard Lyon 1**  
*GeoMod Postdoctoral researcher*

**Lyon, France**  
**September 2020 - August 2021**

- A collaborative research project between France and Germany, with many themes in both pure and applied model theory.

**University of Notre Dame**  
*Graduate Student*

**Notre Dame, Indiana**  
**August 2015 - May 2020**

## Publications and Prepublications

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- "Internality of autonomous algebraic differential equations", with Christine Eagles, arXiv:2409.01863
- "Splitting differential equations using Galois theory", with Christine Eagles, arXiv:2403.14900
- "Differential-algebraic permutation groups", with James Freitag and Rahim Moosa, arXiv:2307.11220
- "Enriching a predicate and tame expansions of the integers" with Gabriel Conant, Christian D'Elbée, Yatir Halevi and Silvain Rideau-Kikuchi, *Journal of Mathematical Logic*.
- "Relative Internality and Definable Fibrations", with Anand Pillay and Rémi Jaoui, *Advances in Mathematics*, Volume 415 (2023)
- "CM-trivial structures without the canonical base property", with Thomas Blossier, *Model Theory* Vol. 1 (2022), No. 1, 31–54.
- "Groupoids and Relative Internality", *Journal of Symbolic Logic*, 84 (2019), 987-1006

## Grants

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- AMS-Simons travel grant: \$2500 per year for two years to support research-related traveling.
- AIM-SQuaRES, February 2025: a fully funded week in California to collaborate with 4 other mathematicians. I was in charge of writing the project presentation.

## Mentorship

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### The Ohio State University

*Cycle program mentor*

Columbus, Ohio

September 2024 - May 2024

- An undergraduate research program for students from groups underrepresented in mathematics programs.
- Mentored one student.
- The theme of the project was to use methods coming from model theory to prove that solutions to classic systems of differential equations are not Liouvillian.

### Université Claude Bernard Lyon 1

*Undergraduate Thesis Supervisor*

Lyon, France

March 2021 - May 2021

- Supervised the writing of an undergraduate thesis. The theme was approximation of infinite structures by finite ones: ultraproducts, Fraïssé limits and zero-one laws.

## Teaching

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### The Ohio State University

*Lecturer*

Columbus, Ohio

August 2023 - present

- Fall 2024: two sections of Foundations of Higher Mathematics.
- Fall 2023, Spring 2024: Foundations of Higher Mathematics.

### University of Waterloo

*Lecturer*

Waterloo, Ontario

September 2022 - August 2023

- Winter 2023: Calculus 2 for Sciences.
- Fall 2022: Calculus 1 for Engineering.

### University of Notre Dame

*Lecturer*

Notre Dame, Indiana

- Fall 2019: Beginning Logic, a symbolic logic course for humanities students. Gave three lectures a week, wrote and graded exams.
- Spring 2019: Calculus 2. Gave three lectures a week.

### University of Notre Dame

*Teaching Assistant*

Notre Dame, Indiana

- Spring 2020: Calculus 2. Head TA. Tutorials and flipped classroom, both in person and online. Organized TA meetings and writing of tutorial exercises.
- Fall 2016, 2017, 2018: Calculus 3.

## Administration and Service

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### University of Waterloo, CEMC

*Grader for the Euclid Mathematics contest*

Waterloo, Ontario

April 2023

### University of Waterloo

*Organizer of the logic seminar*

Waterloo, Ontario

October 2022 - May 2023

### City of Toronto

*Community Stewardship Volunteer*

Toronto, Ontario

Summer 2022

- Removal of invasive plant species in a park.

### University of Notre Dame, Science Policy Initiative

*Judge in the Northern Indiana Science Fair*

Notre Dame, Indiana

February 2020

### University of Notre Dame, Graduate Career Center

*Graduate Assistant*

Notre Dame, Indiana

October 2019 - April 2020

- Collected and organized data on Notre Dame's graduate students career paths.

### Notre Dame Mathematics Graduates Students Association

*Treasurer*

Notre Dame, Indiana

August 2018 - May 2019

- Organized a weekly seminar for graduate students, allowing them to present their work in a laid back setting.

- Collected and analyzed data on home fires in Indiana. Used this to identify target areas for the Red Cross' recruitment efforts.
- Provided direct assistance to victims of domestic fires.

## **Presentations**

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Invited conference talks:

- May 2024: ASL Annual Meeting, Iowa State University.
- April 2024: AMS Spring Central Sectional Meeting, University of Wisconsin-Milwaukee.
- February 2023: Neostability Workshop, Banff International Research Station.
- July 2021: Workshop on Trends in Pure and Applied Model Theory, The Fields Institute.
- May 2019: Association for Symbolic Logic Annual North American Meeting, Model Theory Special Session. CUNY graduate center.
- October 2018: Neostability Theory Workshop. Casa Matemática Oaxaca.

Seminar talks:

- July 2023: Model theory seminar, University of Waterloo.
- November 2023: Logic seminar, University of Waterloo.
- November 2023: Unlikely intersection seminar, University of Illinois Chicago.
- September 2023: Kolchin Seminar in Differential Algebra, online.
- March 2023: Model theory seminar, University of Notre Dame.
- November 2022: Geometry and Model Theory Seminar, The Fields Institute.
- October 2021: Logic seminar, University of Illinois at Chicago.
- November 2019: Kolchin Seminar, CUNY Graduate Center.
- December 2017: Logic seminar, University of Waterloo.