Léo Jimenez
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Google Scholar

Education

University of Notre Dame — **Notre Dame, Indiana**
PhD in Mathematics — **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 — **Paris, France**
Agrégation de Mathématiques — **September 2014 - June 2015**

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

Université Pierre et Marie Curie — **Paris, France**
Mathematics Undergraduate and Master's degree — **September 2009 - June 2014**

Employment

The Ohio State University — **Columbus, Ohio**
Visiting Assistant Professor — **August 2023 - December 2026**

The Fields Institute and The University of Waterloo — **Toronto and Waterloo, Ontario**
Postdoctoral researcher — **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 — **Lyon, France**
GeoMod Postdoctoral researcher — **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 — **Notre Dame, Indiana**
Graduate Student — **August 2015 - May 2020**

Publications and Prepublications

Publications:

- "Algebraic independence of solutions to multiple Lotka-Volterra systems", with Yutong Duan and Christine Eagles, arXiv:2507.17090, accepted at the Journal of the London Mathematical Society.
- "Note on a differential algebra bound", Notre Dame Journal of Formal Logic, arXiv:2412.06034

- "Domination, fibrations and splitting", with Christine Eagles, Journal of Symbolic Logic, arXiv:2503.12274
- "Splitting differential equations using Galois theory", with Christine Eagles, Transactions of the American Mathematical Society, arXiv
- "Finite-dimensional differential-algebraic permutation groups", with James Freitag and Rahim Moosa, Journal of the Institute of Mathematics of Jussieu, arXiv
- "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, arXiv
- "Relative internality and definable fibrations", with Anand Pillay and Rémi Jaoui, Advances in Mathematics, arXiv
- "CM-trivial structures without the canonical base property", with Thomas Blossier, Model Theory, arXiv
- "Groupoids and Relative Internality", Journal of Symbolic Logic, arXiv

Prepublications:

- "Special classes of functions", with James Freitag and Joel Nagloo, arXiv:2604.26187, submitted.
- "Internality of autonomous algebraic differential equations", with Christine Eagles, arXiv:2409.01863, submitted.

Mentorship

The Ohio State University **Columbus, Ohio**
Cycle program mentor

- An undergraduate research program.
- 2026: guided reading of Marker's "Invitation to mathematical logic".
- 2024: guided project with the goal of using methods coming from model theory to prove that solutions to classic systems of differential equations are not Liouvillian.

Université Claude Bernard Lyon 1 **Lyon, France**
Undergraduate Thesis Supervisor **March 2021 - May 2021**

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

Teaching

The Ohio State University **Columbus, Ohio**
Lecturer **August 2023 - present**

- Spring 2026: Abstract Algebra II: classification of finitely generated abelian groups, groups actions, field theory, Galois theory.
- Fall 2025: Abstract Algebra I: groups and rings.
- Fall 2024: two sections of Foundations of Higher Mathematics.
- Fall 2023, Spring 2024: Foundations of Higher Mathematics: propositional logic, basic number theory, sets and functions.

University of Waterloo **Waterloo, Ontario**
Lecturer **September 2022 - August 2023**

- Winter 2023: Calculus 2 for Sciences.

- Fall 2022: Calculus 1 for Engineering.

University of Notre Dame **Notre Dame, Indiana**
Lecturer

- 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 **Notre Dame, Indiana**
Teaching Assistant

- 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

The Ohio State University **Columbus, Ohio**
Co-organizer of the logic seminar **August 2026 - Present**

University of Waterloo, CEMC **Waterloo, Ontario**
Grader for the Euclid Mathematics contest **April 2023**

University of Waterloo **Waterloo, Ontario**
Organizer of the logic seminar **October 2022 - May 2023**

City of Toronto **Toronto, Ontario**
Community Stewardship Volunteer **Summer 2022**

- Removal of invasive plant species in a park.

University of Notre Dame, Science Policy Initiative **Notre Dame, Indiana**
Judge in the Northern Indiana Science Fair **February 2020**

University of Notre Dame, Graduate Career Center **Notre Dame, Indiana**
Graduate Assistant **October 2019 - April 2020**

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

Notre Dame Mathematics Graduates Students Association **Notre Dame, Indiana**
Treasurer **August 2018 - May 2019**

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

American Red Cross **South Bend, Indiana**
Disaster Action Team, Financial and Statistical Information **August 2018 - July 2020**

- 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

Invited conference talks:

- May 2026: Differential Algebra and Related Topics, CNRS center La Vieille Perrotine, France.
- May 2026: BLAST 2026: Baylor University, Texas.
- February 2026: SEALS 2026, University of Florida.
- December 2025: Logic in Canada IV, CMS meeting, Toronto, Canada.

- June 2025: Workshop on Model Theory, Algebraic Dynamics, and Differential-Algebraic Geometry, the Fields Institute.
- May 2025: ASL Annual Meeting, New Mexico State University.
- February 2025: Galois Differential Theories and Transcendence Conference, CIRM.
- November 2024: Mid-Atlantic Mathematical Logic Seminar Fall Fest, Rutgers University.
- 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:

- January 2026: Dynamic systems seminar, Université Paul Sabatier, Toulouse, France.
- October 2025: Logic Seminar, University of Illinois at Urbana-Champaign.
- March 2025: Logic Seminar, Purdue University.
- November 2024: Logic seminar, University of Illinois Chicago.
- September 2024: Logic seminar, University of Southern Illinois, online.
- July 2024: 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.