

HERNAN IRIARTE

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📅 Date of Birth : 09/09/1994 (29 Years old)

🇨🇱 Nationality : Chilean

WORK EXPERIENCE

- 2022-Present **Postdoctoral Researcher**, The University of Texas at Austin 📍 USA
2021-2022 **Temporary Teaching and Research Assistant (ATER)**, Sorbonne Université 📍 France

EDUCATION

- 2022 **PhD in Mathematics**, École Polytechnique / Sorbonne Université. 📍 France
2018 **Master 2 in Mathematics**, Sorbonne Université. 📍 France
2017 **Master in Mathematics**, Instituto de Matemática Pura e Aplicada (IMPA). 📍 Brazil
2017 **Bachelor in Applied Mathematics, Specialization in Computer Science**, Universidade Federal de Rio de Janeiro. 📍 Brazil

EVENT MANAGEMENT

- > **2023** : Co-organizer of the Geometry Seminar. Department of Mathematics at the University of Texas at Austin. Austin, USA.
- > **2018-22** : Co-organizer of the REGA Seminar (Réseau des étudiants en Géométrie Algébrique). Institut Henri Poincaré, Paris, France

DIRECTED THESES AS AN ADVISOR

- > **2022** : **Jaime Ignacio Tobar**. Thesis for the degree of Mathematical Engineer, USACH. Highest honors.
Area : Applied mathematics and Microeconomics.
Title : Higher Rank Tropical Geometry For Analyzing Demand In Case Of Disturbances. (Original : Geometría Tropical de Rango Mayor Para Analizar la Demanda Ante Perturbaciones.)

CODING SKILLS

- > Python, C++, PyTorch, TensorFlow, Matlab, Sagemath, Polymake, \LaTeX , Jupyter notebooks, R, SQL, HTML, CSS, JavaScript, Typescript, Jekyll, Git.

PUBLICATIONS

- > **2023** : Higher Rank Polyhedral Geometry, Preprint
- > **2023** : Geometry of Higher Rank Valuations. joint with Omid Amini, submitted to Annales de l'institut Fourier
- > **2022** : Polyhedral, Tropical and Analytic Geometry of Higher Rank, PhD thesis

TALKS

- > **2024** : Joint Mathematics Meetings 2024
Weak continuity on the variation of Newton-Okounkov bodies.
- > **2023** : SIAM Texas-Louisiana. Lafayette, LA, United States.
Higher Rank Tropical Geometry in Microeconomics
- > **2023** : Conference : AGREGA 2. Universidad Santa Maria, Valparaiso, Chile.
Weierstrass cycles and their equidistribution
- > **2023** : Conference : Newton-Okounkov Bodies and Tropical Geometry. Goethe University Frankfurt, Alemania.
Geometry with higher rank valuations
- > **2023** : Seminar on Algebra and Combinatorics, Tulane University, New Orleans, USA.
Higher Rank Tropical Geometry
- > **2023** : Seminar on Nonlinear Algebra, Max Planck Institute, Leipzig, Alemania.
Higher rank tropical and polyhedral geometry
- > **2023** : Stanford Algebraic Geometry Seminar. Stanford University, Palo Alto, USA.
Weak variation of Newton-Okounkov bodies
- > **2023** : Algebra Seminar. University of California Los Angeles, Los Angeles, USA.
Geometry with higher rank valuations

- > **2022** :Conference : Non-Archimedean and Tropical Geometry. University of Regensburg, Regensburg, Alemania
Higher Rank Tropical Geometry
- > **2022** :Seminario de Geometría Algebraica. Universidad Catolica de Chile, Santiago, Chile
Geometría con valuaciones de rango superior
- > **2022** :Geometry Seminar, The University of Texas at Austin, Austin, USA.
Geometry with higher rank valuations
- > **2022** :Séminaire DGeCo. Sorbonné Université, Paris, France.
Higher rank polyhedral geometry
- > **2022** :Séminaire de géométrie, École Polytechnique, Palaiseau, France.
Higher rank polyhedral geometry and applications
- > **2021** :Réseau des Étudiants en Géométrie Algébrique. Institut Henri Poincaré, Paris, France
Geometry of Higher Rank Valuations
- > **2021** :Student Algebraic Geometry and Foliations Seminar. IMPA, Rio de Janeiro, Brasil.
Geometry of Higher Rank Valuations

ACADEMIC VISITS

- > **2023** : 5 month academic visit to the mathematics department of Stanford University for the Spring semester. Invited by Ravi Vakil. Palo Alto, California, USA.
- > **2021** : Academic visit during November to the mathematics department of the Technical University of Berlin. Invited by Michael Joswig. Berlin, Germany.

AWARDS AND SCHOLARSHIPS

- > **2022-24** : Postdoctoral Fellowship, National Science Foundation NSF, United States.
- > **2018-21** : PhD Scholarship, Fondation Sciences Mathématiques de Paris, France
- > **2017-18** : Master's Scholarship, Fondation Sciences Mathématiques de Paris, France
- > **2014-16** : Master's Scholarship, Commission Nationale de Recherche, CNPq, Brasil.
- > **2013** : Summer Program Scholarship, Instituto de Matemática Pura e Aplicada. IMPA.
- > **2012-13** : Andrónico Luksic Scholarship for Mathematical Talent, Andrónico Luksic Foundation.
- > **2012** : First Place and Gold Medal, National Mathematics Olympiad, Chilean Mathematical Society.
- > **2012** : Gold Medal, School Mathematics Championship CMAT.
- > **2012** : Top National Score in Mathematics, University Selection Test, DEMRE.

OUTREACH AND VOLUNTEERING

- > **Since 2017** : Coach of the Chilean Mathematics Team for International Olympiads, Chilean Mathematical Society.
- > **2021** : Talk "Théorie des graphes et coloration des cartes", Science Festival, École Polytechnique, Palaiseau, France.
- > **2019** : Talk "Cortando poliedros, el Tercer problema de Hilbert", Alicante del Sol School, Santiago, Chile.
- > **2017** : Talk "Clasificando teselaciones", Mathematics Week, Don Orione School, Quintero, Chile.

LANGUAGES

Spanish : Native

English : Fluent

Portuguese : Advanced

French : Advanced.