



Gonzalo Jiménez

Ph.D. in mathematics

► Chilean

Skills

TeX / TikZ 12+ yrs.

**Python / Sage
Matlab** 4+ yrs.

**HTML / CSS
JavaScript** 2+ yrs.

Spanish Native

English C1

French B1

Portuguese B1

Contact

📍 Valdivia
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🏠 <https://gingfreecss17.github.io/>

Biography

Mathematician, with research-oriented training in pure mathematics and the use of programming to analyze, understand phenomena and solve problems. My research primarily focuses on Algebra and Combinatorics, with particular interest in Soergel Bimodules, Diagrammatic Calculus, and Categorification. Additionally, I have a strong interest in developing algorithms, graphical representation, and the analysis of discrete structures.

Working experience

Member of Creative Committee for the PAES

2023/2024

DEMRE
Universidad de Chile

Design, construction, and review of multiple-choice items for assessment tools for university selection in the field of mathematics.

Tutor in the Integration to University Mathematics Program

Fall/2018

Department of Mathematics
Universidad Católica

Supporting first and second year students in Calculus and Linear Algebra.

Tutor at Mathematics Helping Room

Fall/2017

Department of Mathematics
Universidad Católica

Providing assistance in resolving mathematical queries for students across all disciplines.

Assistant of the Mathematical Reasoning course

Fall/2015

Department of Mathematics
Universidad Católica

Calculus and ODE coursework tailored for students in Medicine.

Assistant of the Quantitative Reasoning course

Fall/2015

Department of Mathematics
Universidad Católica

Logic, Probability and Statistics coursework tailored for students in Pedagogy.

Tutor at Mathematics Helping Room

Fall/2015

Department of Mathematics
Universidad Católica

Providing assistance in resolving mathematical queries for students across all disciplines.

Assistant of the Ordinary Differential Equations course

Fall/2015

Department of Mathematics
Universidad Católica

ODE coursework tailored for students in Engineering, Physics, and Astronomy.

Education

2023

Doctorado en Matemática (Ph.D.)

Universidad de Chile

Algebra - Combinatorics

Ph.D. thesis: "Counterexamples to the Forking Path Conjecture".

2015

Mestrado em Matemática (M.Sc.)

IMPA

Algebra - Combinatorics

Master thesis: "Tiles, Conway's tiling groups and some related problems".

2012

Licenciatura en Matemática (B.Sc.)

Universidad de Chile

Number Theory - Algebra

Investigation Unit: "Lattices and their behavior under completions".

Other Interests

- ▶ Cycling
- ▶ Running
- ▶ Swimming

Assistant of the Ordinary Differential Equations course

Department of Mathematics
Universidad de Chile

Spring/2012

Calculus and ODE coursework tailored for students in Biology, Chemistry and Engineering.

Assistant of the Linear Algebra course

Department of Mathematics
Universidad de Chile

Fall/2011

Linear Algebra course for Mathematics and Physics students

Member of Academic Committee

Scholar Championship of Mathematics (CMAT)
Universidad de Santiago

2008 - 2015

Creating, solving, evaluating, and proposing problems for the math olympiad. Grading student exams. Instructor for extracurricular workshops for outstanding students.

Scholarships/Awards

- Beca Conicyt de Doctorado Nacional *Chile, 2017*
- Bourse d'études Fondation Sciences Mathématiques de Paris *France, 2015*
- Bolsa de estudos CNPq *Brazil, 2013*
- Best undergraduate student in the generation *Chile, 2012*
- Beca Universidad de Chile *Chile, 2007*
- Maximum score in the national university entrance exam (PSU) *Chile, 2007*

Publications

- G. Jiménez. On the Forking Path Conjecture. *Journal of Algebra*, 2024, <https://doi.org/10.1016/j.jalgebra.2024.07.048>.

Additional studies

- Data Science Bootcamp - Fall 2024
Talento Digital - Sence
- English as a Medium of Instruction - Spring 2022
Postgraduate Department - Universidad de Chile
- Introduction to University Teaching - Spring 2021
Postgraduate Department - Universidad de Chile
- Data structures with Python - Fall 2020
Coursera - Universidad Austral
- Introduction to Programming with Python - Fall 2020
Coursera - Universidad Austral