Felipe Valdes Gonzalez

Education

Ph.D. in Mathematics *Wesleyan University, Middletown, CT*
Expected Completion: Fall 2025
Thesis: [Recoverability of Root Lattices]
Advisor: [Wai Kiu Chan]

Master of Science in Mathematics *Universidad de Talca, Talca, Chile*
Year of completion: 2018

Professional Experience

Instructor *Wesleyan University, Middletown, CT*
Spring 2022, Fall 2024
Courses taught:

- **Elementary Statistics (Spring 2022)**: Designed course structure, led lectures, and guided students through fundamental statistical methods and applications.
- **Elements of Calculus I (Fall 2024)**: Instructed students on the first half of a year long sequence on foundational calculus concepts including limits, derivatives, and exponential and logarithmic functions with real-world applications.

Teaching Assistant *Wesleyan University, Middletown, CT*
2019 – Present
Courses assisted:

- **Abstract Algebra: Groups, Rings, and Fields**
- **Linear Algebra**
- **Vectors and Matrices**
- **Elementary Statistics**
- **Math Workshop**

Instructor *Universidad de Talca, Talca, Chile*
2018
Courses taught:

- **Algebra I**, **Calculus I**, **Linear Algebra**, and **Introduction to Mathematics** on an engineering-focused campus. Emphasized problem-solving and practical applications.

Teaching Assistant *Universidad de Talca, Talca, Chile*
2016 – 2017
Courses assisted:

- **Intro to Math for Bio-engineering & Video Game Development** (taught twice)
- **Algebra & Calculus I for Forest Engineering**
- **Calculus I for Business & Economics**

- **Calculus I for Medical School**
- **Linear Algebra for Bio-engineering**
- **Geometry for Math Educators**

Graduate Teaching Assistant *Universidad de Talca, Talca, Chile*
2019
Worked under the supervision of Professor Ricardo Baeza. Assisted in teaching and grading for **Algebra I (First Trimester)**.

Research and Presentations

Talks at Graduate Student Seminar, Wesleyan University:

- **Coxeter Groups of Type** A_n
- **Diagrammatics for Khazdan-Lusztig R-polynomials**
- **Quadratic Forms: Lattices and Representations**
- **Diagrammatic Representations of Sublattices**

Talks at Graduate Student Seminar, Universidad de Talca:

- **Sublattices of Lattices of Type** D_n (in Spanish)
- **Minimal Criterion Sets on Representation of Binary Quadratic Forms** (in Spanish)

2024 LANGENHOP Lecture and SIU Conference:

- **Recoverability of the Lattice** A_n (20-minute talk)

Skills

Technical Skills:

- **Programming Languages**: LaTeX, Microsoft Excel
- **Mathematical Modeling**: Optimization, linear programming, algebraic structures

Soft Skills:

- Technical communication
- Problem-solving and critical thinking
- Collaborative teamwork

Additional Information

- Languages: Fluent in English and Spanish
- Volunteer Experience (if applicable): Teaching elementary mathematics for children at social risk