ACADEMIC CV

Adrián Vidal Delgado

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adrian279vd.github.io

Google Scholar / ORCID

PhD Candidate in Mathematics

Institute of Mathematics · Universidad de Talca, Chile

RESEARCH AREAS

Orthogonal polynomials

Symmetric functions

Integrable systems

Stochastic processes

EDUCATION

PhD in Mathematics
Universidad de Talca, 2024–present
Candidate since March 2026. Expected completion: March 2028. Advisor: Jan Felipe van Diejen.

M.Sc. in Mathematics
Universidad de Talca, 2022–2024
Advisor: Jan Felipe van Diejen.

B.Sc. in Mathematics
Universidad de La Habana, 2016–2020
Advisor: Gemayquzel Bouza Allende.

PUBLICATIONS

Approximation of Askey–Wilson roots
J. F. van Diejen, A. Soledispa Tibán, **A. Vidal**
Constructive Approximation (2026). DOI

The Spectrum of the Finite Open XX Quantum Spin Chain with Transverse Magnetic Boundary Fields via Orthogonal Polynomials
J. F. van Diejen, A. Soledispa Tibán, **A. Vidal**
Annales Henri Poincaré **27**(4) (2026), 1451–1495. DOI

SELECTED TALKS

AUGUST 2026 · COSTA RICA
Hall–Littlewood Polynomials and Interacting Random Walks on Partitions
CIMPA School on Combinatorial Structures in Geometry, Graphs, and Symmetry, Universidad de Costa Rica.

JUNE 2026 · SPAIN
Biased random walks on partitions and hyperoctahedral Hall–Littlewood polynomials
OPSF-S11 Summer School, Universidad de Alcalá.

APRIL 2026 · CHILE
Aproximación de las raíces de los polinomios de Askey–Wilson mediante una iteración de punto fijo
XXXVIII Jornada de Matemática de la Zona Sur, Universidad del Bío-Bío, Concepción.

OCTOBER 2025 · ONLINE
Análisis espectral de una clase de cadenas de espín cuántico XX
ICMAM Central America and the Caribbean 2025 (16 October).

APRIL 2025 · CHILE
La función de onda para n-magnones en la cadena de spin XX no homogénea
XXXVII Jornada de Matemática de la Zona Sur, Universidad Católica del Maule, Talca (23 April).

TEACHING

Lecturer
Universidad de Talca, 2025
Mathematics for Engineering in Nutrition and Dietetics.

Teaching Assistant
Universidad de Talca, 2022–2024
Probability and Statistics, Calculus, Linear Algebra, Ordinary Differential Equations.

Teaching Assistant
CUJAE, 2020–2022
Discrete Mathematics.

Teaching Assistant
Universidad de La Habana, 2018–2020
Calculus.

SCHOOLS

CIMPA School · Costa Rica
2026
Combinatorial Structures in Geometry, Graphs, and Symmetry.

OPSF-S11 · Spain
2026
Summer School on Orthogonal Polynomials and Special Functions.

FUNDING & ACADEMIC SERVICE

- **ANID National Doctoral Scholarship**
  Chile, 2026–2028.
- **FONDECYT Regular Project 1250427**
  Thesis student, 2025.
- **Universidad de Talca PhD scholarship**
  2024–2025.
- **FONDECYT Regular Project 1210015**
  Thesis student, 2023.
- **Academic service**
  Organizing Committee, *Summer School for Undergraduates in Mathematics* (2026), Universidad de Talca.

COMPUTATIONAL WORK

- **HHL Lab · work in progress**
  A small experimental tool I have been building to try tableau rules, adjust weights, and compare Hall–Littlewood polynomial examples.