Nicolás Berkopec

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Education

- Washington University in St. Louis — Ph.D. in Mathematics (Fall 2023 – Present)
- Washington University in St. Louis — M.A. in Mathematics (Expected Spring 2025)
- University of New Mexico — B.S. in Mathematics, Minor in Philosophy (Spring 2023)

Research Interests

- Complex Analysis, Algebraic Geometry, Number Theory, and Differential Equations.

Publications

- 1. *The Density of Elliptic Dedekind Sums* (with J. Branch, R. Heikkinen, C. Nunn, and T.A. Wong), Acta Arith. 205 (2022), no. 1, 33–40. [journal | arXiv]
- Submitted: *Properties of Pair Operations Inspired by Order* (with Sarah Poini and Janet Vassilev).

Presentations & Seminar Talks

- WUSTL Analysis Seminar – *Hyperbolic Analytic and Algebraic Curves*, September 2025.
- WUSTL Szegö Seminar – *Dirichlet's Theorem: A Gem from Number Theory*, April 2024.
- UNM Algebra-Geometry Seminar – *p-Derivations, Jet Operators, Ring Schemes*, May 2022.
- Young Mathematicians Conference – *Elliptic Dedekind Sums*, August 2021.
- UNM Algebra-Geometry Seminar – *Elliptic Dedekind Sums*, August 2021.
- MAA MathFest – *Elliptic Dedekind Sums*, August 2021.
- SUMMR Conference – *Elliptic Dedekind Sums*, July 2021.

Teaching Experience

- Solution Writer — Math 312: Differential Equations and Dynamical Systems (Spring 2025).
- DRP* Instructor — Real Analysis (Stein & Shakarchi, Chapters 1–2; Bartle, Chapters 1–6, Summer 2022).
- DRP Instructor — Naïve Lie Theory (Stillwell, full book, Spring 2022).
- High School DRP Instructor — Group Theory (Spring 2022, using original notes).

*Directed Reading Programs (DRP)

• DRP Instructor — Elementary Mathematics (Fall 2021).

• Tutor — Linear Algebra, Calculus I–III, and High School Algebra (Fall 2018–Fall 2020).

Grading Experience

• Grader — Math 5121: Graduate Complex Analysis I; Math 5331: Graduate Algebra I (Fall 2025).

• Grader — Math 5021: Graduate Complex Analysis I; Math 415: PDEs (Fall 2024).

• Grader — Math 313: Complex Analysis (Spring 2023).

• Grader — Math 322: Abstract Algebra (Fall 2020).

Internships

• University of Michigan–Dearborn REU, Paid Research Internship (Summer 2021).

Service

• Initiated expansion of the Directed Reading Program (DRP) for high-school students in New Mexico (Spring 2022).

• Undergraduate representative and co-founder of the UNM Math DRP (Fall 2021).

Awards

• UNM Distinguished Undergraduate Mathematics Student (Spring 2023).

Languages

• English, Spanish.

*Directed Reading Programs (DRP)