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 (Spring 2025)
- **University of New Mexico (UNM)** — B.S. in Mathematics, Minor in Philosophy, *Summa cum laude* (Spring 2023)

Research Interests

My research interests have an operator theoretic and complex analytic bent with recent attention to hyperbolic analytic and algebraic curves and the theory of cofinite algebras of Riemann surfaces.

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.
2. Submitted: *Properties of Pair Operations Inspired by Order* (with Sarah Poiani and Janet Vassilev).

Presentations & Seminar Talks

- WUSTL Analysis Seminar – *Hyperbolic Analytic and Algebraic Curves*, September 2025.
- WUSTL Szegő 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.

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).

Teaching Experience

- Solution Writer — Math 312: Differential Equations and Dynamical Systems (Spring 2025).
- DRP Instructor — Real Analysis (Stein & Shakarchi Ch. 1–2; Bartle Ch. 1–6), Summer 2022.
- DRP Instructor — Naïve Lie Theory (Stillwell, full book), Spring 2022.
- High School DRP Instructor — Group Theory (Spring 2022, original notes).
- 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 — (Summer 2021).

Awards

- UNM Distinguished Undergraduate Mathematics Student (Spring 2023).

Languages

English, Spanish.