

Noah Walker

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[Website](#) | [GitHub](#)

Education

University of Nebraska-Lincoln August 2024 – present
Ph.D. Mathematics
Advisor: Alexandra Seceleanu

University of Nebraska-Lincoln August 2024 – May 2026
M.S. Mathematics

Cedarville University May 2024
B.S. Mathematics, B.S. Computer Science

Publications

Walker, N. (*Submitted*) On general principal symmetric ideals. [arXiv:2505.21802](https://arxiv.org/abs/2505.21802)

Dannetun, E., Fang, B., Formenti, R., Gao, B. Y., Geraci, J., Kogel, R., Li, Y., Mandal, S., Rupasinghe, V., Seceleanu, A., Van Khanh Tran, D., & Walker, N. (2024). Products and powers of principal symmetric ideals. *Journal of Algebra and its Applications*, <https://doi.org/10.1142/S0219498825503207>

Walker, N. (2024). Relation between the almost truth of the principle of charity and uniform continuity for monoidal T-norm based logics. *Journal of Multi-Valued Logic and Soft Computing*, 42(5-6), 425-438.

Talks and Presentations

UNL Seminar Talks

RTG Seminar on Koszul Algebras March 2026
G-quadratic and LG-quadratic Algebras

Graduate Student Seminar March 2026
How to Solve All Your Problems Quickly

Discrete Seminar January 2026
An Introduction to Kostka Numbers

Graduate Student Seminar September 2025
Winning Ways for Your Mathematical Plays

Commutative Algebra Reading Seminar
General Principal Symmetric Ideals March 2025

Graduate Student Seminar
All the Numbers: The Surreal Numbers February 2025

Graduate Student Seminar
Are You Tall? An Introduction to the Sorites Paradox and Fuzzy Logic December 2024

Commutative Algebra Reading Seminar
Products and Powers of Principal Symmetric Ideals November 2024

Groups, Semigroups, and Topology Seminar
Turing Machines and Incomputability September 2024

Outside Talks

Nebraska Wesleyan University Math, Data Analytics, and Computer Science Club
Winning Ways for Your Mathematical Plays April 2026

AMS Spring Central Sectional Meeting at University of Kansas
General Principal Symmetric Ideals March 2025

Benedictine College Math and CS Colloquium Series
Are You Tall? An Introduction to the Sorites Paradox and Fuzzy Logic March 2025

Pi Mu Epsilon Conference at Miami University
Impartial Games: The Sprague-Grundy Theorem September 2023

Choose Ohio First Scholar Showcase at the Ohio Statehouse
Fuzzy Logic: The Mathematics of Vagueness April 2023

Classes Taught

Instructor of Record

Trigonometry Fall 2025, Spring 2026

Recitations

Linear Algebra Spring 2025

Calculus II Fall 2024

Academic Experience

Graduate Level Courses

Commutative Algebra I, II; Algebraic Geometry; Homological Algebra; F-singularities;
Mathematical Analysis I, II; Topology I, II; Discrete Math I,II; Reading Course in Local
Cohomology

Advanced Undergraduate Courses and Undergraduate Research

Independent Study in Error-Correcting Codes
Independent Study in Theoretical Computer Science
Capstone Experience in Combinatorial Game Theory
Polymath Jr. 2023 Research Program

Course Development

Linear Algebra WeBWork problems
Data Science camp for high school students

Directed Reading Program

Mentored two undergraduates, Eric Woods and Riley Brown, on Combinatorial Game Theory

Work Experience

University of Nebraska-Lincoln
Graduate Teaching Assistant

August 2024 – present

Cedarville University Mathematics
Grader for Calculus I, II and Differential Equations

August 2022 – April 2024

Honors and Awards

University of Nebraska-Lincoln
Outstanding First Year Student

Cedarville University
Dean's Honors List (All Semesters)
Cedarville University Honors Program
President's Society Fellows Scholarship
Heyd Math/Science Scholarship

Computer Skills

Proficient in Latex and Lean
Worked with Macaulay2, a commutative algebra system

Experienced with Python, Java, C++, Javascript, C#
Familiar with several other programming languages