

Sabrina Fowler

Mathematics PhD Candidate

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EDUCATION

PhD in Mathematics, *University of Nebraska–Lincoln* 2021 – present
Expected December 2026. Advised by Eloísa Grifo.

MS in Mathematics, *Missouri State University* 2021

BS in Applied Mathematics, *Missouri State University* 2019
Minor in Computer Science, with courses in Database Systems and Machine Learning.

RESEARCH INTERESTS

Commutative Algebra: neural ideals and their properties. Deep Learning: investigating neural ideals associated to various neural network architectures.

SEMINAR TALKS

A Characterization of Polarized Neural Ideals Feb 2026
University of Nebraska–Lincoln — Commutative Algebra Reading Seminar

Hipatia de Alejandría: matemática, filósofa, y mártir Oct 2025
University of Nebraska–Lincoln — Matemáticas Seminar

Persistent Stanley-Reisner Theory Oct 2025
University of Nebraska–Lincoln — Commutative Algebra Reading Seminar

Neural Ideals Apr 2025
University of Nebraska–Lincoln — Commutative Algebra Reading Seminar

La Paradoja de la Línea de Costa Feb 2025
University of Nebraska–Lincoln — Matemáticas Seminar

An Introduction to Gröbner Bases and Their Applications Nov 2024
University of Nebraska–Lincoln — Commutative Algebra Seminar (Oral Comprehensive Exam)

Gröbner Bases: Deleted Scenes and a Connection to Linear Algebra Nov 2024
University of Nebraska–Lincoln — Commutative Algebra Reading Seminar

Álgebra de Boole Oct 2024
University of Nebraska–Lincoln — Matemáticas Seminar

Applied Abstract Algebra: Not an Oxymoron May 2024
University of Nebraska–Lincoln — Commutative Algebra Reading Seminar

The Power of Symbolic Powers in Commutative Algebra Oct 2023
University of Nebraska–Lincoln — Commutative Algebra Reading Seminar

Using Finite Fields to Construct Error-Correcting Cyclic Codes Apr 2021
Missouri State University — Mathematics Department (Master's Degree Research Requirement)

CONFERENCES AND WORKSHOPS

Women in Commutative Algebra, *Fields Institute* Mar 2025

KUMUNU, *University of Missouri* Sep 2024

Recent Developments in Commutative Algebra, *SL Math (formerly MSRI)* Apr 2024

Introductory Workshop: Commutative Algebra, *SL Math (formerly MSRI)* Jan 2024

Gender Equity in the Mathematical Study (GEMS) of Commutative Algebra, *University of Minnesota* Nov 2023

Math 125: Celebrating 125 Years of Mathematics PhDs at UNL, *University of Nebraska–Lincoln* Apr 2023

Nebraska Conference for Undergraduate Women in Mathematics, *University of Nebraska–Lincoln* Jan 2019

POSITIONS HELD

Research Intern, *Georgia Tech Research Institute* 2024 – present

Graduate Teaching Assistant, *University of Nebraska–Lincoln* 2021 – present

RTG Graduate Trainee, *University of Nebraska–Lincoln* Spring 2025
Supported by the NSF Research Training Group grant for Commutative Algebra at Nebraska.

Graduate Research Assistant, *University of Nebraska–Lincoln* Summer 2023
Curriculum Development for College Trigonometry. Curriculum Development and Instructor for College of Engineering Summer Bridge Program, a program to help incoming first-year undergraduate Engineering majors succeed in their math courses.

Graduate Teaching Assistant, *Missouri State University* 2019 – 2021

TEACHING EXPERIENCE

Instructor of Record

Math 309: Introduction to Mathematical Proofs, *University of Nebraska–Lincoln*
Spring 2026

Math 203: Contemporary Math, *University of Nebraska–Lincoln*
Fall 2025

Math 102: College Trigonometry, *University of Nebraska–Lincoln*
Spring 2023, Fall 2023, Spring 2024

Math 101: College Algebra, *University of Nebraska–Lincoln*
Summer 2022, Fall 2022

Associate Convener

Math 102: College Trigonometry, *University of Nebraska–Lincoln*
Fall 2023 – Spring 2024

Responsible for coordinating all sections of College Trigonometry and supporting graduate student instructors.

Recitation/Lab Instructor

Math 314: Linear Algebra, *University of Nebraska–Lincoln*
Fall 2024

Math 106: Calculus I, *University of Nebraska–Lincoln*
Fall 2021, Spring 2022

MTH 101: Intermediate Algebra, *Missouri State University*
Fall 2019, Spring 2020, Fall 2020, Spring 2021

SERVICE AND OUTREACH

Graduate Student Mentor for AWM Student Chapter, *University of Nebraska–Lincoln* 2024 – present

Graduate Student Orientation Organizer, *University of Nebraska–Lincoln* 2024 – 2025
Coordinated two simultaneous week-long Orientation sessions for First-Year Math Grad Students and for First-Time Grad Student Instructors of Record.

Member of the NCUWM Organizing Committee 2023 – 2025
Nebraska Conference for Undergraduate Women in Mathematics is a conference for undergraduates that provides opportunities to present undergraduate research and connect with other young women mathematicians.

PROFESSIONAL DEVELOPMENT

Teaching and Learning Mathematics at the Post-Secondary Level Parts I and II, 2022 – 2023
University of Nebraska–Lincoln
A three-credit sequence of courses intended to train mathematics graduate teaching assistants how to be an effective teacher and classroom manager.

SKILLS

Programming	Python, C++, Perl, SQL
Tools	Git, HTML, \LaTeX
Mathematics	Macaulay2, Mathematica, MATLAB