

# Sabrina Fowler

Mathematics PhD Candidate

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## EDUCATION

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<b>PhD in Mathematics</b> , <i>University of Nebraska–Lincoln</i>	2021 – present
Expected December 2026. Advised by Eloísa Grifo.	
<b>MS in Mathematics</b> , <i>Missouri State University</i>	2021
<b>BS in Applied Mathematics</b> , <i>Missouri State University</i>	2019
Minor in Computer Science, with courses in Database Systems and Machine Learning.	

## RESEARCH INTERESTS

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

## SEMINAR TALKS

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<i>A Characterization of Polarized Neural Ideals</i>	Feb 2026
University of Nebraska–Lincoln — Commutative Algebra Reading Seminar	
<i>Hipatia de Alejandría: matemática, filosofa, y mártir</i>	Oct 2025
University of Nebraska–Lincoln — Matemáticas Seminar	
<i>Persistent Stanley-Reisner Theory</i>	Oct 2025
University of Nebraska–Lincoln — Commutative Algebra Reading Seminar	
<i>Neural Ideals</i>	Apr 2025
University of Nebraska–Lincoln — Commutative Algebra Reading Seminar	
<i>La Paradoja de la Línea de Costa</i>	Feb 2025
University of Nebraska–Lincoln — Matemáticas Seminar	
<i>An Introduction to Gröbner Bases and Their Applications</i>	Nov 2024
University of Nebraska–Lincoln — Commutative Algebra Seminar (Oral Comprehensive Exam)	
<i>Gröbner Bases: Deleted Scenes and a Connection to Linear Algebra</i>	Nov 2024
University of Nebraska–Lincoln — Commutative Algebra Reading Seminar	
<i>Álgebra de Boole</i>	Oct 2024
University of Nebraska–Lincoln — Matemáticas Seminar	
<i>Applied Abstract Algebra: Not an Oxymoron</i>	May 2024
University of Nebraska–Lincoln — Commutative Algebra Reading Seminar	
<i>The Power of Symbolic Powers in Commutative Algebra</i>	Oct 2023
University of Nebraska–Lincoln — Commutative Algebra Reading Seminar	

## CONFERENCES AND WORKSHOPS

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<b>Women in Commutative Algebra</b> , <i>Fields Institute</i>	Mar 2025
<b>KUMUNU</b> , <i>University of Missouri</i>	Sep 2024
<b>Recent Developments in Commutative Algebra</b> , <i>SL Math (formerly MSRI)</i>	Apr 2024
<b>Introductory Workshop: Commutative Algebra</b> , <i>SL Math (formerly MSRI)</i>	Jan 2024
<b>Gender Equity in the Mathematical Study (GEMS) of Commutative Algebra</b> , <i>University of Minnesota</i>	Nov 2023
<b>Math 125: Celebrating 125 Years of Mathematics PhDs at UNL</b> , <i>University of Nebraska–Lincoln</i>	Apr 2023
<b>Nebraska Conference for Undergraduate Women in Mathematics</b> , <i>University of Nebraska–Lincoln</i>	Jan 2019

## POSITIONS HELD

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<b>Research Intern</b> , <i>Georgia Tech Research Institute</i>	2024 – present
<b>Graduate Teaching Assistant</b> , <i>University of Nebraska–Lincoln</i>	2021 – present
<b>RTG Graduate Trainee</b> , <i>University of Nebraska–Lincoln</i>	Spring 2025
Supported by the NSF Research Training Group grant for Commutative Algebra at Nebraska.	
<b>Graduate Research Assistant</b> , <i>University of Nebraska–Lincoln</i>	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.	
<b>Graduate Teaching Assistant</b> , <i>Missouri State University</i>	2019 – 2021

## TEACHING EXPERIENCE

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### 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

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**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

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**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

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Programming Python, C++, Perl, SQL

Tools Git, HTML, L<sup>A</sup>T<sub>E</sub>X

Mathematics Macaulay2, Mathematica, MATLAB