

# JULIANN GERACI

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## EDUCATION

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<b>Doctor of Philosophy</b> , Mathematics <i>University of Nebraska-Lincoln, Lincoln, NE</i>	Expected May 2026
<b>Master of Science</b> , Mathematics <i>University of Nebraska-Lincoln, Lincoln, NE</i>	December 2021
<b>Bachelor of Arts</b> , Mathematics <i>State Univeresity of New York at Oswego, Oswego, NY</i>	May 2020

## POSITIONS HELD

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<b>Graduate Teaching Assistant</b> <i>Mathematics Department, University of Nebraska- Lincoln</i>	August 2020 -
<b>Graduate Research Assistant</b> <i>Center for Science, Mathematics and Computer Education, University of Nebraska- Lincoln</i> Worked on the AIR@NE project, an NSF-funded grant that examines the adaptation and implementation of a validated K-8 Computer Science curriculum in diverse school districts.	June 2021 - August 2021, June 2023-August 2023
<b>NSF Graduate Student Mentor</b> <i>The Polymath Jr Program, City University of New York</i>	June 2023 - August 2023
<b>NSF Research Assistant</b> <i>REU, East Tennessee State University, Johnson City, TN</i>	June 2019- August 2019

## PUBLICATIONS

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1. A. Cantwell, J. Geraci, A. Godbole, and C. Padilla “Graphical Universal Cycles of Combinatorial Objects,” *Advances in Applied Mathematics*, Volume 127, June 2021, 102166

## TALKS AND PRESENTATIONS

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8. **Monomial Resolutions**(50 min) April 26, 2023  
*University of Nebraska-Lincoln, Commutative Algebra Reading Seminar*
7. **Introduction to Neural Codes, Rings, and Ideals**(25 min.) March 14, 2023  
*Dordt College, Great Plains Alliance Series*
6. **Neural Rings and Ideals** (50 min.) December 5, 2022  
*Online, Commutative Algebra Regional Expository Seminar*
5. **Neural Rings and Ideals** (50 min.) November 30, 2022  
*University of Nebraska-Lincoln, Commutative Algebra Reading Seminar*
4. **A Path to Resolutions** (20 min.) August 31, 2022  
*University of Nebraska-Lincoln, Commutative Algebra Reading Seminar*

3. **Gröbner Bases II** (50 min.) March 9, 2022  
*University of Nebraska-Lincoln, Commutative Algebra Reading Seminar*
2. **Gröbner Bases I** (50 min.) March 2, 2022  
*University of Nebraska-Lincoln, Commutative Algebra Reading Seminar*
1. **Construction of Free Resolutions Through Simplicial Complexes** (50 min.) October 6, 2021  
*University of Nebraska-Lincoln, Commutative Algebra Reading Seminar*

## CONFERENCES/WORKSHOPS ATTENDED

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- **Advanced Studies Institute in Mathematics of Data Science & Machine Learning**  
*Urgench State University (Uzbekistan)* January 2024
- Neural Coding and Combinatorics  
*ICERM* October 2023
- KUMUNU  
*University of Missouri* September 2023
- Macaulay2 Workshop and Mini School  
*University of Minnesota* June 2023
- SLMath/CMND Summer School  
*University of Notre Dame* May 2023
- URiCA  
*University of Nebraska-Lincoln* May 2023
- Math 125  
*University of Nebraska-Lincoln* April 2023
- KUMUNU  
*University of Nebraska-Lincoln* October 2022
- BRIDGES (Building Relationships for an Inclusive and Diverse Group of Emerging Students)  
*University of Utah* June 2022
- CA+  
*Iowa State University* May 2022

## TEACHING EXPERIENCE

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### Associate Convener

- Math 100A: *Intermediate Algebra* Fall 2022, Spring 2023

### Instructor of Record

- Math 300: *Mathematics Matters* Spring 2024
- Math 100A: *Intermediate Algebra* Fall 2021, Spring 2022, Fall 2022, Spring 2023

### Recitation Instructor

- Math 106: *Calculus I Recitation* Fall 2020, Spring 2021 (2 sections),  
Summer 2021 (1 section), Fall 2023 (3 sections)

### Teaching Assistant

- Math 812T: *Geometry for Geometry Teachers* Summer 2022

## Curriculum Development

- Math 101C: *College Algebra* Summer 2022

## Tutoring

- UNL Math Resource Center Fall 2020-  
Drop-in tutoring center for students in general mathematics courses. Tutored two hours per week, one semester per year.

## Grading Assignments

- Math 415/815: *Theory of Linear Transformations* Spring 2023

## AWARDS

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**Don Miller Outstanding Teaching by a Graduate Student** 2022

*University of Nebraska - Lincoln*

The Mathematics Department places a very high value on quality teaching, and since 1991 has honored outstanding teaching by a graduate teaching assistant with a cash award.

## PROFESSIONAL DEVELOPMENT

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**Commutative Algebra Market Preparation workshop** August 2023

*University of Nebraska-Lincoln*

**Graduate Student Orientation Leader** 2022-2023

*University of Nebraska-Lincoln*

**Teaching and Learning Mathematics at the Post-Secondary Level I and II** 2021-2022

*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.

## SERVICE

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**UNL Math Circle** 2023-

*University of Nebraska - Lincoln*

The UNL Math Circle is an outreach event that brings university mathematicians and mathematical scientists together with high school students. While the presenters will explain new ideas, the meetings will be centered on activities rather than lectures. The focus is on mathematical topics outside of the typical high school curriculum.

**Great Plains Alliance** 2022-

*University of Nebraska - Lincoln*

The Great Plains Alliance allows UNL graduate students to give talks to undergraduates interested in math at local universities and colleges. The speaker and supporting graduate student hold a Q&A after the talk about graduate school..

**Commutative Algebra Reading Seminar Co-Organizer** 2022-2023

*University of Nebraska - Lincoln*

Along with one other graduate student, organized and conducted this weekly seminar of presentations by grad students, for grad students in various topics in commutative algebra.

**Graduate Student Seminar Co-Organizer** 2021-2022

*University of Nebraska - Lincoln*

Along with one other graduate student, organized and conducted this weekly seminar of presentations by grad students, for grad students.

**NCUWM Volunteer**

2020 -

*University of Nebraska - Lincoln*

The Nebraska Conference for Undergraduate Women in Mathematics is an event dedicated to promoting women's research in math by giving them the opportunity to network and present at a conference.

**UNL Math Day Volunteer**

2020 -

*University of Nebraska - Lincoln*

This is an annual event hosted by the UNL mathematics department for roughly 1500 high school math students from across the state of Nebraska.

**COMPUTER SKILLS**

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*Languages:* Java, HTML/CSS, JavaScript, Python, C++

*Software:* Git/GitHub, L<sup>A</sup>T<sub>E</sub>X, Mathematica, Macaulay2, Microsoft Office, Google Workspace