

Shahriyar (Shah) Roshan Zamir

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EDUCATION

Mathematics Doctoral Candidate University of Nebraska-Lincoln (UNL)	August 2021 – present
M.A. Pure Mathematics University of Nebraska-Lincoln	May 2021
M.S. Applied and Computational Mathematics Graduate Minor in Liberal Studies University of Minnesota-Duluth (UMD)	August 2017 – May 2019
B.S. Pure Mathematics Georgia Gwinnett College, GA, USA Graduation Honor: Cum Laude	August 2014 – May 2017

RESEARCH

Interests: Commutative Algebra and Algebraic Geometry.

Publications:

1. *Interpolation in Weighted Projective Spaces*, preprint (2024), arXiv:2406.08602, submitted.
2. *An Isomorphism Theorem for Arithmetic Complexes*, to appear in Proc. Amer. Math. Soc. (with L. Fiorindo, E. Reed, H. Yu).
3. *Axial Constants and Sectional Regularity of Homogeneous Ideals*, Proc. Amer. Math. Soc. 151 (2023), (with M. DeBellevue, A. Lebovitz, Y. Li, M. Lotfi, S. Mohite, X. Pan, M.S. Pathak, A. Secoleanu, S.X. Zhang).
4. *Subgroups of Groups of Units Modulo n* , Mathematics Magazine, 95 (2022), no. 4, 376–388 (with J. Gallian).

Master's Thesis: *Subgroups of Groups of Units Modulo n*

RESEARCH PRESENTATIONS

* Denotes Invited Talk.

Joint Mathematics Meetings – Seattle, Washington*	January 2025
-AMS Special Session on Applied and Computational Commutative Algebra	
Algebra and Number Theory Seminar – Texas Tech University – online *	October 2024
Algebra, Geometry and Number Theory Seminar – Colorado State University *	October 2024
KUMUNU 2024 – University of Missouri*	September 2024

AMS Sectional, University of Texas at San Antonio* -Special Session on Homological Commutative Algebra	September 2024
Syracuse University* -Algebra Seminar -Joint Colloquium: Mathematics Graduate Organization and Pi Mu Epsilon honors society	September 2024
9th Annual Graduate Student Conference in Algebra, Geometry, and Topology	May 2024
AMS Sectional, San Francisco State University* -Special Session on Recent Developments in Commutative Algebra	May 2024
Commutative Algebra Graduate Student Seminar – Syracuse University – online*	April 2024
Comm. Alg. Student Seminar, Simons-Laufer Research Institute (formerly MSRI)	March 2024
Canadian Mathematical Society Winter Meeting – Montreal*	December 2023
Poster: “ <i>Interpolation in the Weighted Projective Space</i> ” MSRI summer school in Commutative Algebra, BrianFest, KUMUNU, Western Algebraic Geometry Symposium (WAGS)	May – November 2023
Commutative Algebra Student Seminar – UNL	October 2022
Commutative Algebra Regional Expository Seminar – online	April 2022
Commutative Algebra Seminar – UNL	March 2022
Commutative Algebra Regional Expository Seminar – online	November 2021
Commutative Algebra Student Seminar – UNL	October/November 2021
GRAD Talk Series – University of Minnesota-Duluth	April 2019
Joint Mathematics Meetings, Baltimore, Maryland	January 2019
MAA North Central Section Meeting	October 2018

AWARDS AND HONORS

American Mathematical Society – Graduate Student Travel Award	May 2024
Emeritus Faculty Fellowships – Bill Leavitt Award – UNL	Fall 2023
Ben Carse Nolting Award – UNL “For efforts to create a department culture and climate that actively advances diversity, equity and inclusion in tangible and sustainable ways.”	Fall 2021
Parents’ Recognition Award – UNL	Fall 2019
Outstanding Graduate Teaching Assistant Award – UMD	Spring 2019
Graduate Student Service Award – UMD “For numerous contributions to UMD math department’s graduate community and representing math grad students at departmental meetings.”	Spring 2019
Bulldog Award – UMD For serving in co-curricular activities “where their exemplary service and leadership qualities has positively affected the University community.”	Spring 2019

Recipient of Certificate: Thank a Teacher Project – UMD Spring 2019
Presented by: Center For Educational Innovation – Nominated anonymously by students for
“outstanding teaching and dedication to helping students learn.”
UMD Mathematics and Statistics Department Summer Research Fellowship Summer 2018
Georgia Gwinnett College : President’s List/Dean’s Honors List Spring 2015, 2016/Fall 2014, 2016

MENTORING

[Directed Reading Program Mentor – UNL](#) Fall 2024/Spring 2020
[PolyMath Jr. REU Graduate Student Mentor](#) Summer 2021
Mentor to a first year mathematics graduate student at UNL 2021-2022, 2023-2024

ADDITIONAL PROFESSIONAL TRAINING

[Apprenticeship Program in Commutative Algebra, Fields Institute, Toronto](#) January 2025
[Preparatory School: Lefschetz Properties in Algebra, Geometry, Topology and Combinatorics](#) May 2024
Kraków, Poland.
Recent Developments in Commutative Algebra, SLMath, Berkeley, CA April 2024
Introductory Workshop in Commutative Algebra, SLMath, Berkeley, CA January 2024
[PRAGMATIC-Catania,Italy](#) Summer 2023
3 weeks research intensive workshop aimed at graduate students and postdocs.
MSRI Workshop – University of Notre Dame Summer 2023
2 week summer school in Commutative Algebra and Algebraic Geometry
[Pan-American School in Commutative Algebra, Guanajuato, Mexico.](#) Summer 2022
2 week summer school in Commutative Algebra and Algebraic Geometry

ORGANIZATIONAL ACTIVITY

Organizer: [AMS Special Session, University of Kansas – Lawrence](#) Spring 2025
[Algebraic and Homological Perspectives with a view towards Geometry](#)
Organizer: [Upcoming Researchers in Commutative Algebra](#) Spring 2023/2024/2025
URiCA, formerly KUMUNU jr, is a graduate student conference in Commutative Algebra.
Organizer: [Nebraska Conference for Undergraduate Women in Mathematics](#) Fall 2021/2022
Organizer: [Commutative Algebra Regional Expository Seminar-CARES](#) Spring 2022-Fall 2023
Site Coordinator at UNL – Triage Judge Spring 2020/2021
[Mathematical Contest in Modeling \(MCM\)/The Interdisciplinary Contest in Modeling \(ICM\)](#)
Workshop Leader: [Group Theory in Action](#) November 2018
College of St. Scholastica, Duluth, Minnesota
Sonya Kovalevsky Day, aimed at encouraging female high school students to pursue Math.

EDITORIAL/PUBLIC-FACING ACTIVITIES

Referee for MAA's Mathematics Magazine/Collectanea Mathematica

Assistant Latex Editor – 10th edition of Contemporary Abstract Algebra Summer 2020

I helped Dr. Joe Gallian implement changes in the 10-th edition of his book Contemporary Abstract Algebra, a classic in undergraduate abstract algebra.

Documentary “*There Will Be An Answer*” (producer/co-director) January 2020

I produced and co-directed a documentary about the REU at the University of Minnesota-Duluth.

Premiered at Joint Mathematics Meetings 2020, Denver.

TEACHING EXPERIENCE

* Denotes courses taught as *instructor of record* with full course responsibilities.

Graduate Teaching Assistant - University of Nebraska Lincoln September 2019 – Present

Math Modeling* Fall 2024

A math modeling class for future elementary school teachers.

Geometry Matters* Fall 2023

A geometry class for future elementary school teachers.

Associate Convener-Calculus II Spring 2023

Associate Convener duties: hold weekly meetings for all other GTAs, observe and give teaching/classroom feedback to other GTAs.

Differential Equations Recitation Fall 2022

Associate Convener-College Algebra* Fall 2021-Spring 2022

Associate Convener duties: writing the syllabus, parts of the course policy, quizzes/exams/rubrics for all 11 sections/400 students enrolled in the course.

Observing and providing constructive pedagogical feedback to instructors.

College Algebra* (*Thompson Scholars*) Spring 2021

A section dedicated to Thompson's Scholars (minority/first generation students).

College Algebra* Fall 2020

Calculus III Recitation Spring 2020

Calculus I Recitation Fall 2019

Upward Bound Program Teaching Experiences (UB) Program*

ACT Prep Boot Camp UWS December 2020 – March 2021

An online course focused on ACT Mathematics/Science prep through active learning.

University of Wisconsin-Superior (UWS) June – July 2020/2019

Taught a variety of topics through active learning including: ACT prep, introductory combinatorics, Algebra II, logic, pre-calculus and probability.

College of St. Scholastica June 2020/2019

Class time ran for three hours, topics similar to UWS.

Graduate Teaching Assistant - University of Minnesota Duluth August 2017 – May 2019

- Calculus I Recitation Spring 2019
- Calculus II Recitation Fall 2018
- Math 103 - Pre-Algebra* Spring 2018
- Graduate TA-Discrete Math Spring 2018
Helped students, 30 total, with proof writing in an active learning format.
- Securian Math Lab Spring 2018
- Calculus I Recitation Fall 2017

Other Teaching

- Full time Mathematics Tutor - Gwinnett Technical College January 2016 – July 2017

SERVICE

- “*An Introduction to Commutative Algebra and Algebraic Geometry*” October 2024
Undergraduate Math Club – Georgia Gwinnett College – online
- Treasurer, American Mathematical Society Student Chapter at UNL Fall 2022-Spring 2023
- Presentation: “REUs, What, Why and How” December 2022
Undergraduate Math Club – UNL
- Presentation: “*Subgroups of Groups of Units Modulo n* ” November 2020
Undergraduate Math Club – UNL
- Triage Judge-MCM/ICM Spring 2018/2019/2022
- Volunteer Judge for Undergraduate Poster Session January 2018
Joint Mathematics Meetings, San Diego, California
- Graduate Programs Committee - Elected Student Representative August 2018 - May 2019
University of Minnesota-Duluth
- Graduate Student Representative-Mathematics and Statistics Department August 2017 - May 2019
University of Minnesota-Duluth
- Invited Panelist – Sonya Kovalevsky Day November 2017
- President of Kappa Mu Epsilon National Mathematics Honors Society June 2015 – May 2017
GA Zeta Chapter at Georgia Gwinnett College
- Vice President – Georgia Gwinnett College Math Club August 2015 - May 2017

PROFESSIONAL MEMBERSHIP

- American Mathematical Society, Mathematical Association of America August 2019-present
- Kappa Mu Epsilon – National Mathematics Honors August 2017-present