

Shahriyar (Shah) Roshan Zamir

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EDUCATION

Mathematics Doctoral Candidate University of Nebraska-Lincoln (UNL) Advisor: Dr. Alexandra Seceleanu	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. [On the Algebraic Properties of the Böröczky Configuration](#). (with Jake Kettinger)
preprint (2025), arXiv:2510.17029, submitted.
2. [Analytic Spread of Binomial Edge Ideals](#), preprint (2025), arXiv:2510.05915, submitted.
(with Fields Apprenticeship Group.)
3. [Interpolation in Weighted Projective Spaces](#), preprint (2024), arXiv:2406.08602, submitted.
4. [An Isomorphism Theorem for Arithmetic Complexes](#), to appear in Proc. Amer. Math. Soc.
(with L. Fiorindo, E. Reed, H. Yu).
5. [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. Seceleanu, S.X. Zhang).
6. [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.

AMS Spring Southeastern Sectional*,
Georgia Southern University, Savannah, GA

March 2026

Canadian Mathematical Society Winter Meeting-Toronto*	December 2025
National Congress of the Mexican Mathematical Society* Special Session on Commutative Algebra	October 2025
AMS Fall Central Sectional, Saint Louis University* special session on commutative algebra	October 2025
Georgia Algebraic Geometry Symposium – Mini Talk	March 2025
University of Georgia Athens – Algebra Seminar*	March 2025
Joint Mathematics Meetings – Seattle, Washington* AMS special session on applied and computational commutative algebra	January 2025
Stockholm University – Algebra and Geometry Seminar – online *	November 2024
Texas Tech University – Algebra and Number Theory Seminar – online *	October 2024
Colorado State University – Algebra, Geometry and Number Theory Seminar*	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’ Association 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 Presented by: Center For Educational Innovation – Nominated anonymously by students for “outstanding teaching and dedication to helping students learn.”	Spring 2019
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 Kraków, Poland.	May 2024
Recent Developments in Commutative Algebra, SLMath, Berkeley, CA	April 2024
Introductory Workshop in Commutative Algebra, SLMath, Berkeley, CA	January 2024
PRAGMATIC-Catania,Italy 3 weeks research intensive workshop aimed at graduate students and postdocs.	Summer 2023
MSRI Workshop – University of Notre Dame 2 week summer school in Commutative Algebra and Algebraic Geometry	Summer 2023

Pan-American School in Commutative Algebra, Guanajuato, Mexico.
2 week summer school in Commutative Algebra and Algebraic Geometry

Summer 2022

ORGANIZATIONAL ACTIVITY

Organizer: AMS Special Session, University of Kansas – Lawrence
Algebraic and Homological Perspectives with a view towards Geometry Spring 2025

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 Collectanea Mathematica/MAA's Mathematics Magazine

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

University of Nebraska Lincoln September 2019 – Present

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

Qualifying Exam Workshop in Algebra* January 2025

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

Hold weekly meetings and 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.

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 Joint Mathematics Meetings, San Diego, California	January 2018
Graduate Programs Committee - Elected Student Representative University of Minnesota-Duluth	August 2018 - May 2019
Graduate Student Representative-Mathematics and Statistics Department University of Minnesota-Duluth	August 2017 - May 2019
Invited Panelist – Sonya Kovalevsky Day	November 2017
President of Kappa Mu Epsilon National Mathematics Honors Society GA Zeta Chapter at Georgia Gwinnett College	June 2015 – May 2017
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