

Shahriyar (Shah) Roshan Zamir

+1 706-201-0540 ◊ sroshanzamir2@huskers.unl.edu ◊ [Link to Personal Webpage](#)

EDUCATION AND EMPLOYMENT

Postdoctoral Fellow

Tulane University

August 2025 – present

Ph.D in Mathematics

University of Nebraska-Lincoln (UNL)

Advisor: [Dr. Alexandra Seceleanu](#)

August 2025

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, Accepted.
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.

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| 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 | September 2024 |
| Joint Colloquium: Mathematics Graduate Organization and Pi Mu Epsilon honors society | |
| 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 |

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| Joint Mathematics Meetings, Baltimore, Maryland | January 2019 |
| MAA North Central Section Meeting | October 2018 |

AWARDS AND HONORS

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| 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

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| 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

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| 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 |

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| 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

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| 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 URiCA, formerly KUMUNU jr, is a graduate student conference in Commutative Algebra. | Spring 2023/2024/2025 |
| Organizer: Nebraska Conference for Undergraduate Women in Mathematics | Fall 2021/2022 |
| Organizer: Commutative Algebra Regional Expository Seminar-CARES Site Coordinator at UNL – Triage Judge | Spring 2022-Fall 2023 Spring 2020/2021 |
| Mathematical Contest in Modeling (MCM)/The Interdisciplinary Contest in Modeling (ICM) | |
| Workshop Leader: Group Theory in Action College of St. Scholastica, Duluth, Minnesota Sonya Kovalevsky Day, aimed at encouraging female high school students to pursue Math. | November 2018 |

EDITORIAL/PUBLIC-FACING ACTIVITIES

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| Referee for Collectanea Mathematica/MAA's Mathematics Magazine | |
| Assistant Latex Editor – 10th edition of Contemporary Abstract Algebra I helped Dr. Joe Gallian implement changes in the 10-th edition of his book Contemporary Abstract Algebra, a classic in undergraduate abstract algebra. | Summer 2020 |
| Documentary “There Will Be An Answer” (producer/co-director) I produced and co-directed a documentary about the REU at the University of Minnesota-Duluth. Premiered at Joint Mathematics Meetings 2020, Denver. | January 2020 |

TEACHING EXPERIENCE

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| University of Nebraska Lincoln | September 2019 – Present |
| * Denotes courses taught as <i>instructor of record</i> with full course responsibilities. | |
| Qualifying Exam Workshop in Algebra* | January 2025 |
| Math Modeling* A math modeling class for future elementary school teachers. | Fall 2024 |
| Geometry Matters* A geometry class for future elementary school teachers. | Fall 2023 |
| Associate Convener-Calculus II Hold weekly meetings and observe and give teaching/classroom feedback to other GTAs. | Spring 2023 |
| 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

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| 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

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