

Matias C.Y. Relyea

CONTACT INFORMATION	<p><i>E-mail:</i> hyanlong@unc.edu <i>Website:</i> quadcryo.github.io/quadcryo/</p>
EDUCATION	<p>University of North Carolina at Chapel Hill, Chapel Hill, North Carolina B.S. Mathematics; Minor in violin performance (expected graduation, May 2029). <i>Relevant Coursework:</i> Topology (Duke University), Algebraic Geometry, Algebraic Structures, Advanced Calculus, Linear Algebra.</p> <p>North Carolina School of Science and Mathematics (NCSSM), Durham, North Carolina High School Diploma, August 2023—May 2025.</p>
PUBLICATIONS	[1] Matias C.Y. Relyea. The Quadratic and Cubic Characters of 2. <i>Mathematics Magazine</i> . Published online January 2026. [arXiv: 2410.21646] [DOI: 10.1080/0025570X.2025.2574223].
PREPRINTS	[2] Matias C.Y. Relyea. On Finite Fields and Higher Reciprocity (2024). [arXiv: 2407.03559].
PRESENTATIONS	[3] “On Finite Fields and Higher Reciprocity” (poster). NCSSM Research Symposium Spring 2024.
OTHER WRITING	[4] Peyton Jackson, Tatiana Medved, and Matias C.Y. Relyea. “Can You Even?” An Exploration of Polyominoes. Accepted for publication in <i>NCSSM Broad Street Scientific</i> (forthcoming 2026). PDF: quadcryo.github.io/quadcryo/assets/pdf/jackson_medved_relyea_polyominoes.pdf . [5] Matias C.Y. Relyea. Proofs and Applications of Quadratic Reciprocity. Summer 2022, <i>Euler Circle</i> . PDF: simonrs.com/eulercircle/irpw2022/matias-quadrec-paper.pdf .
RESEARCH EXPERIENCE	<p>University of North Carolina at Chapel Hill, Chapel Hill, North Carolina UNC Accelerated Research Program, Fall 2025— Directed Reading Program on Category Theory, Fall 2025</p> <ul style="list-style-type: none">Completed DRP on Tom Leinster’s <i>Basic Category Theory</i> under UNC graduate student. <p>North Carolina School of Science and Mathematics, Durham, North Carolina. Independent study on number theory and algebraic number theory, producing one arXiv preprint and one peer-reviewed publication. August 2023—May 2025. Mentored by Dr. Tamar Avineri. Euler Circle, Mountain View, California Attended Summer 2022 Independent Research and Paper Writing course. Independently produced 44-page expository paper on quadratic reciprocity. Mentored by Dr. Simon Rubinstein-Salzedo.</p>
TEACHING AND SERVICE	<p>Mathematics Institute of the Triangle, Chapel Hill, North Carolina Mathematics Tutor and Teaching Assistant, Fall 2025—</p> <ul style="list-style-type: none">Provided one-on-one tutoring to students located in the Chapel Hill area. Assisted with grading and led short problem-solving workshops. <p>University of North Carolina at Chapel Hill, Chapel Hill, North Carolina Undergraduate Learning Assistant</p> <ul style="list-style-type: none">MATH 381 (Discrete Mathematics), Fall 2025. <p>Chapel Hill Math Circle, Chapel Hill, North Carolina Program Volunteer, Fall 2025—</p> <ul style="list-style-type: none">Collaborated with UNC graduate students to assist and lead teaching for various levels of mathematics circle coursework.
TECHNOLOGICAL SKILLS	Proficient in \LaTeX , familiar with Python.