

Summer Haag

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Education

The University of Colorado Boulder , Boulder, CO	Expected: May 2028
<i>PhD., Mathematics</i>	GPA: 3.85/4.00
The University of Colorado Boulder , Boulder, CO	December 2024
<i>Master of Arts, Mathematics</i>	GPA: 3.85/4.00
The University of Georgia , Honors Program, Athens, GA	May 2022
<i>Bachelors of Science, Mathematics</i> , Franklin College of Arts & Sciences	GPA: 3.95/4.00

Work Experience

Teaching Assistant/Instructor , Boulder, CO	August 2022 - Current
<ul style="list-style-type: none">• Teaching Assistant: Led/leading three classes of 90 students in Calculus I/II, which includes project work, homework, and grading exams.• Instructor: Teaching a class of 30 students in Calculus II four times a week including grading exams.	
Graduate Research – CU Boulder Math , Boulder, CO	May 2023- June 2023
<ul style="list-style-type: none">• Disproved the Local-Global Conjecture for Apollonian circle packings with Dr. Katherine E. Stange and Dr. James Rickards. Article reference: https://annals.math.princeton.edu/2024/200-2/p06• Programmed in PARI/GP to automate comparison of curvatures on a massive scale.• Scripted in Python a heatmap generator to visualize 10,000 curvatures across packings.	
Undergraduate Research in Number Theory , Athens, GA	February 2020- May 2022
<ul style="list-style-type: none">• Conducted research in partitions, Group and Field Theory, and Galois Theory with Tyler Genao and Dr. Robert Schneider. Article reference: https://arxiv.org/abs/2112.03264	
Grayson Pediatrics , Grayson, GA	Seasonal August 2014- January 2021
<i>Front office/ Lab Tech</i>	
<ul style="list-style-type: none">• Entered vaccinations, scanned paperwork, checked out patients, urinary analysis and blood tests, and took patient's vitals.• Managed the Georgia Registry of Immunization Transactions and Services (GRITS) for the practice by updating patient's GRITS profiles to ensure patient's vaccines are up-to-date and accurate.	

Honors and Awards

Quanta Magazine- Research Feature

- Featured in an article in Quanta Magazine by Max G. Levy covering the Local-Global Conjecture for Apollonian circle packings. Article reference: <https://www.quantamagazine.org/two-students-unravel-a-widely-believed-math-conjecture-20230810/>

UGA Strahan Award- outstanding Junior award for excellence in mathematics

CURO Assistantship- received \$1,000 for research in Number Theory to present at the CURO Symposium.

The Hollingsworth Award- nominated for excellence in Math.

Campus and Community Involvement

Animal Shelter – Volunteer. Lead a team to groom 60 rabbits once a month.

Math Peer Mentorship Program - Helped guide first year math students navigate and select their class schedules. Mentored students for future class planning and career development.