

## Education

- 2022 - **Doctor of Philosophy**, *Clemson University, School of Mathematics and Statistical Sciences*  
Funded by HHMI: Gilliam Fellowship Program #GT16840  
Funded by Clemson's Call Me Doctor Assistantship  
Southern Regional Education Board Doctoral Fellow  
Previously funded by LSAMP's Clemson University Bridge to Doctorate Fellowship  
Area of Study: Applied Statistics, Data Science, and Quantitative Justice  
Anticipated Graduation Date: May 2027
- 2022 **Master of Arts**, *The University of North Carolina - Greensboro*  
Mathematics
- 2020 **Bachelor of Arts**, *The University of North Carolina - Greensboro*  
Mathematics
- 2019 **Master of Science**, *North Carolina Agricultural and Technical State University*  
Clinical Mental Health Counseling: Marriage and Family Therapy  
Certificate
- 2017 **Bachelor of Science**, *North Carolina State University*  
Biological Sciences: Human Biology

## External Research Experience

- 2025 **American Institute of Mathematics, Pasadena, CA - MetaMath: Modeling the Mathematical Sciences Community Using Mathematics, Statistics, and Data Science**
- o Catalyzed research collaborations aimed at using data to answer questions about the sciences community. Explored techniques from mathematics, statistics, and data science to gain insight into the systems and structure of the mathematical sciences community
- 2022 - **The Institute for Computational and Experimental Research in Mathematics, Providence, RI - Data Science and Social Justice: Networks, Policy, and Education**

- o Worked with data scientists, mathematicians, engineers, and local community partners developing new computational methods for quantitative social justice research
- 2014 - **National Institutes of Health, North Carolina State University, Raleigh, NC** - *Initiative for Maximizing Student Diversity*
  - o Conducted research on heart rate and lifespan trends
  - o Developed a Diversity Report Card for institutions of higher learning
  - o Presented at local and national symposiums such as the NC State Annual Undergraduate Research Symposium, MAPRS, and ABRCMS
- 2016 **Johns Hopkins University: Diversity Summer Internship Program**
  - o Conducted research that analyzed the health disparities of African American men
- 2011 **NC ProjectSEED, North Carolina State University, Raleigh, NC**
  - o Explored the enhancement of medical practices by studying nanobiosensor properties

## Publications

- o Christina Hoffman, **Jakini Kauba**, Julie Reidy, and Thomas Weighill. "Proportionality in multi-winner RCV elections: A simulation study with ballot truncation" (2024).
- o **Jakini Kauba** and Thomas Weighill. "Topological analysis of U.S. city demographics" (2024).
- o Buckmire, R., Eaton, C. D., Hibdon Jr., J. E., **Kauba, J. A.**, Lewis, D., Ortega, O., Pabón, J.L., Roca, R. & Vindas-Meléndez, A.R. (2025). Quantifying and Documenting Gender-Based Inequalities in the Mathematical Sciences in the United States. In *Advances in Data Science: Women in Data Science and Mathematics (WiSDM) 2023* (pp. 335 - 352). Cham: Springer Nature Switzerland.

## Invited Talks

- 2025 **AWM Research Symposium**, A Stochastic Approach to Modeling Drug Delivery Using Spatial Poisson Process
- 2024 **The University of Melbourne**, A Stochastic Approach to Modeling Drug Delivery Using Spatial Poisson Process

- 2023      **MAA MathFest, A Topological Analysis of U.S. City Demographics**
- 2022      **International Conference on Advances in Interdisciplinary Statistics and Combinatorics, An Analysis of Demographic Trends Using Topological Data Analysis**

## Conference Presentations

- 2026      **Janelia Research Campus February Meeting (2026)**
  - o iPoster Presenter: *A Comprehensive Overview of the Effects of Anxiety, Depression, Insomnia, and Trauma on Cognitive Functioning*
- 2025      **UNCG Regional Mathematics and Statistics Conference (RMSC)**
  - o Graduate Student Presentation: *A Comprehensive Overview of the Effects of Anxiety, Depression, Insomnia, and Trauma on Cognitive Functioning*
- 2025      **HHMI Gilliam Annual Meeting (2025)**
  - o iPoster Presenter: *A Comprehensive Overview of the Effects of Anxiety, Depression, Insomnia, and Trauma on Cognitive Functioning*
- 2025      **Southeast Center for Mathematics and Biology (SCMB) Final Annual Symposium**
  - o Poster Presenter: *A Stochastic Approach to Modeling Drug Delivery Using Spatial Poisson Process*
- 2025      **Math For All Conference**
  - o Graduate Student Presentation: *A Stochastic Approach to Modeling Drug Delivery Using Spatial Poisson Process*
- 2024      **Clemson's Fourth Annual Women's Roundtable**
  - o Panelist: *Building a supportive community through empowering discussions and the representation of dynamic women leaders in STEM*
- 2024      **HHMI Gilliam Annual Meeting (2024)**
  - o iPoster Presenter: *The Quantification of Endosomal Escape Using Spatial Poisson Processes*
- 2024      **Men of Color Summit**
  - o Moderator/Presenter: *High School Roundtable Discussion - Charting the Course*
- 2024      **Math For All Conference**
  - o Graduate Student Presentation: *Quantifying Hierarchy and Documenting Inequity in PhD-Granting Mathematical Sciences Departments in the United States*

- 2023      **Carolina Math Seminar**
  - o Graduate Student Presentation: *A Topological Analysis of U.S. City Demographics*
  - o Graduate Student Recruitment Presentation: *Why Grad School?*
- 2023      **NAM MATHFest**
  - o Graduate Student Oral Presentation: *A Topological Analysis of U.S. City Demographics*
  - o Graduate Student Speaker (Lightening Talk): *Building Your Village*
- 2023      **Joint Math Meeting**
  - o Moderator/Panelist: Community Discussion on Quantitative Justice
    - Intersections of Mathematics, Data Science, and Social Justice
  - o Panelist: Re-envisioning Justice in Mathematics Research
- 2022      **NAM MATHFest**
  - o Panelist: Graduate School Panel (Students only)

## Academic Service

### Professional Memberships

- 2023 -      **Mathematical Association of America (MAA)**  
Current
- 2022 -      **National Association of Mathematicians (NAM)**  
2023      - *Graduate Student Representative*
- 2020 -      **American Mathematical Society (AMS)**  
Current
- 2019 -      **Association for Women in Mathematics (AWM)**  
Current

### Teaching Experience

- 2021 -      **JAK of All Trades Tutoring, Founder**  
Current      o Offer tutoring services in mathematics, chemistry, biology, and writing
  - o Develop tailored lesson plans and provide recorded lectures
  - o Create homework, quizzes, and other exams to ensure an understanding of material

2020 - **Graduate Teaching Assistant, University of North Carolina at Greensboro, Department of Mathematics and Statistics, Greensboro, NC**

- o Tutored undergraduate students taking various math courses and provided guest lectures
- o Assisted professors by grading homework assignments and quizzes

## Student Leadership

2025 Organized, moderated, and participated in the Graduate Student Panel at NAM's Undergraduate MATHFest

2024 Quantitative Biology Summer School

- o Presented on drug delivery and the challenges of drug implementation

2020 - **Graduate Student Recruiter**

- Current
- o Serve on panels and give various informative talks educating and inspiring undergraduate students to pursue graduate education in mathematics
  - o Help create and organize extended recruitment events for underrepresented students interested in STEM graduate degrees (Stem ALL-IN and Men of Color)
  - o Serve as a moderator for panelists in government, industry, and academic professions by fostering more discussion questions for undergraduate students curious about the impact of obtaining a graduate degree
  - o Further normalize diversity in mathematics by providing research presentations in quantitative justice
  - o Review resumes, personal statements, and cover letters for undergraduate students seeking support for graduate school applications

2023 - **National Association of Mathematicians: Services and Special Projects Committee**

- o Offer insight from the graduate student perspective in an effort to further enhance graduate student involvement and retention within NAM

2023 **Enhancing Diversity in Graduate Education (EDGE), Brown University, Providence, RI**

- o Presented a Chalk Board Talk: *Optimal Separating Hyperplanes*
- o Developed skills in various mathematical topics
- o Further enhanced research presentation skills in addition to building a network of women mathematicians

2022 - **Black Graduate Student Association, Clemson University, Clemson, SC, Public Relations Chair**

- o Organized events catered to elevating the graduate student experience
- o Networked with faculty and staff members to arrange for guest speakers to encourage graduate students during their studies

- 2021 -  
2022      **UNC-G Chapter of AWM, *President***
- o Organized and hosted events catered to women in mathematics
  - o Established an inclusive space for all who support women mathematicians
  - o Fundraised and further enhanced a collaborative community for all women mathematicians
  - o Scheduled meetings and semester retreats to maintain structure for all executive board members
- 2021      **Graduate Student Research Mentor (*UNCG Statistics REU*)**
- o Served as a mentor to undergraduate students conducting statistics research
  - o Assisted undergraduate students in their development of mathematical writing skills
  - o Fostered the understanding of mathematical proofs as it related to coding methods in R Studio