

Education

- 2022 - **Doctor of Philosophy**, *Clemson University, School of Mathematics and Statistical Sciences*
Current
Funded by HHMI: Gilliam Fellowship Program #GT16840
Area of Study: Stochastic Processes
Anticipated Graduation Date: May 2027
Advisor: Dr. Keisha Cook
- 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

Research Experience

- 2022 - **The Institute for Computational and Experimental Research in Mathematics, Providence, RI - Data Science and Social Justice: Networks, Policy, and Education**
2023
 - 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**
2017
 - 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

- 2024 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
- 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

- 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 Poster 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)**
Current - *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
- 2022
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**
2024

- 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,**
2023 **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 - **UNC-G Chapter of AWM, President**
2022
- 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