

Sayantani Bhattacharya

Office: Department of Mathematics and Statistics, Auburn University, AL, 36849

Email: szb0261@auburn.edu **Phone:** +1 334-559-8987

Website: <https://sayantani-bhattacharya-math.github.io/>

Education

Auburn University, Alabama, USA

Aug 2023 – Present

PhD in Mathematics (CGPA: 3.62)

Tezpur University, Assam, India

2018 – 2020

Master's in Mathematics

Chennai Mathematical Institute, Chennai, India

2015 – 2018

Bachelor's in Mathematics and Computer Science (Dual Degree)

Research Interests

Graph Theory, Combinatorics, and Commutative Algebra.

Research Experience

Master's Project: An Introduction to Manifolds

Supervisor: Dr. Deepjyoti Goswami, Tezpur University (Jan–Apr 2020)

Books Covered: Introduction to Manifolds (Loring W. Tu), Introduction to Smooth Manifolds (J. M. Lee)

Teaching Experience

Graduate Teaching Assistant, Auburn University, AL

Merit Recitation Program (Calculus I): GRA/GTA.

Summer/Fall 2025

MATH 1610, 1617 (Calculus I): Grader.

Summer 2025

MATH 1610.R15, 1610.R16 (Calculus I) : Recitation Leader.

Spring 2025

MATH 1000.005, 1000.006 (College Algebra) : Instructor of Record.

Fall 2024

MATH 1000/1120/30/50 & 2650 : GTA (Tutoring Center).

Summer 2024

MATH 1610, 1617 (Calculus I): Grader.

Spring 2024

MATH 2650 (Linear Differential Equations): Grader.

Fall 2023

Fellowships & Awards

- Awarded \$1000 towards Professional Development for the completion of the Auburn University Summer STEM Institute (AUSSI 2025) Training Program.
- Awarded \$4500 for a Graduate Research Assistantship position in the "Merit Recitation Program" at Auburn University (Summer 2025). (Project: NSF grant #2315747 awarded to Dr. Lanius (PI), Dr. Abebe (co-PI) and Dr. Kuechle (co-PI).) Also awarded a Certificate of Completion for the 2025 Active Learning Teaching Professional Development Program in Spring 2025.

- Graduate Teaching Assistantship and Fellowship, Auburn University (2023–Present)
- Council of Scientific and Industrial Research (CSIR India) National Eligibility Test (NET) with Junior Research Fellowship (JRF) Awardee (Nov 2019)
- INSPIRE Scholarship for Higher Education (SHE) Fellowship, Govt. of India (2015–2018)
- Institutional Fellowship at Chennai Mathematical Institute for Undergraduates (2015-2018)

Technical Skills

Programming: Python, C, SageMath, LaTeX, MATLAB, PSPP

Service & Outreach

- Event Judge, Alabama State Science Olympiad, Auburn University (Mar 29th, 2025)
- Mentor, First Year Experience (FYE) Mentorship Program, Graduate Student Council, Auburn University (Feb 2025 - Present)
 - *Awarded the Outstanding First Year Experience (FYE) Mentor Award 2025 by the Auburn University Graduate School.*
- Volunteer, Mathematical Puzzle Programs (MaPP), Department of Math-Stat, Auburn University (Feb 15th, 2025)
- Treasurer, Association for Women in Mathematics (AWM), Auburn University (May 2024 - Present)
- President, College of Science & Mathematics International Students Association (CISA), Auburn University (Nov 2023 – Aug 2024)

Conferences & Workshops

- **Topological Methods in Combinatorics Workshop**, Iowa State University, May 2025
- **Commutative Algebra in The South (CATS)**, Georgia State University, Apr 2025
- **AMS Spring Southeastern Sectional Meeting**, Clemson University, Mar 2025
- **Atlanta Lecture Series (ALS 29) in Combinatorics and Graph Theory**, Georgia State University, Nov 2024
- **33rd Cumberland Conference**, Mississippi State University, May 2024
- **Shanks Workshop on Combinatorics and Graph Theory**, Vanderbilt University, Apr 2024
- **Yellowhammer Network of Women in Mathematical Sciences**, University of Alabama, Feb 2024
- **Advanced Instructional School on Advanced Linear Algebra (AIS-ALA 2022)**, ATM Schools, National Center for Mathematics, Mumbai, India, May, 2022

Professional Memberships

Member, American Mathematical Society (AMS)

Member, Association for Women in Mathematics (AWM)