

# Sayantani Bhattacharya

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## Education

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**Auburn University, Alabama, USA**

*Aug 2023 – Present*

PhD in Mathematics (CGPA: 3.56)

**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

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Graph Theory, Combinatorics, and Commutative Algebra.

## Research Experience

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**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

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**Graduate Teaching Assistant, Auburn University, AL**

*MATH 2650 (Linear Differential Equations): Grader.*

Fall 2023

*MATH 1610, 1617 (Calculus I): Grader.*

Spring 2024

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

Summer 2024

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

Fall 2024

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

Spring 2025

*(TBD) Merit Recitation Program : GRA/GTA.*

Summer/Fall 2025

## Fellowships & Awards

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- Awarded \$4500 for a Graduate Research Assistantship position in the "Merit Recitation Program", Auburn University (Summer 2025).  
(Project: NSF grant #2315747 awarded to Dr. Lanius (PI), Dr. Abebe (co-PI) and Dr. Kuechle (co-PI).)
- 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)

## Conferences & Workshops

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- **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

## Technical Skills

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

**Tools:** PSPPP

## Service & Outreach

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

## Professional Memberships

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**Member, American Mathematical Society (AMS)**

**Member, Association for Women in Mathematics (AWM)**