

# Anakin Dey

## Curriculum Vitæ

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### Research Interests

Algebraic Combinatorics, Algebraic and Geometric Complexity Theory, Computational Algebra

### Education

*Fall 2024 — PhD Mathematics, The Ohio State University*

*Spring 2030* Advised by Dave Anderson and Zeyu Guo

*Fall 2020 — BSLAS Mathematics, University of Illinois Urbana-Champaign*

*Spring 2024* Minor in Computer Science  
Graduation with Highest Distinction

### Publications

2025 **Debordering Closure Results in Determinantal and Pfaffian Ideals**

Anakin Dey and Zeyu Guo  
Innovations in Theoretical Computer Science 2026, [LIPIcs](#)

2025 **Optimizing a Model-Agnostic Measure of Graph Counterdeceptiveness via Reattachment**

Anakin Dey, Sam Ruggerio, Manav Vora, and Melkior Ornik  
IEEE Cyber Awareness and Research Symposium 2025, [IEEE](#)

2024 **Classifying Primitive Solvable Permutation Groups of Rank 5 and 6**

Anakin Dey, Kolton O'Neal, Duc Van Khanh Tran, Camron Upshur, and Yong Yang  
Journal of Group Theory, [DeGruyter](#)

2022 **Post-Disaster Repair Crew Assignment Optimization Using Minimum Latency**

Anakin Dey and Melkior Ornik  
IEEE International Smart Cities Conference 2022, [IEEE](#)

### Talks

2026 **Debordering Closure Results in Determinantal and Pfaffian Ideals**  
Purdue Theory CS/Math Seminar

2026 **Debordering Closure Results in Determinantal and Pfaffian Ideals**  
Innovations in Theoretical Computer Science 2026

2025 **The Affine Symmetric Group**  
OSU Affine Grassmannian Seminar

2025 **What Is Algebraic Complexity Theory?**  
OSU What Is...? Seminar

2024 **Classifying Primitive Groups using Computer Algebra and Change Making**  
China-US Group Theory Summit 2024

- 2023 **Classifying Primitive Groups using Computer Algebra and Change Making**  
UIUC Department of Mathematics Undergraduate Friday Seminars
- 2023 **Classifying Primitive Solvable Permutation Groups of Rank 5 and 6**  
China Three Gorges University Algebra and Combinatorics Seminar
- 2022 **Post-Disaster Repair Crew Assignment Optimization Using Minimum Latency**  
IEEE International Smart Cities Conference 2022

## Research Experience

- Spring 2024* **Undergraduate Research Assistant**, [ICLUE](#)  
Under Prof. Alexander Yong, University of Illinois Urbana-Champaign
- Summer 2023* **Undergraduate Research Assistant**, [REU in Algebra, Combinatorics, and Statistics](#)  
Under Prof. Yong Yang, Texas State University
- Fall 2021 — Fall 2023* **Undergraduate Research Assistant**, [LEADCAT Lab](#)  
*Fall 2023* Under Prof. Melkior Ornik, University of Illinois Urbana-Champaign

## Student Organizations

- Spring 2025 — Current* **Vice President**, [OSU MGSA](#)  
Ohio State University Math Graduate Student Association
- Fall 2022 — Spring 2024* **Founder and President**, ACM [SIGma](#)  
Special Interest Group in Math and Algorithms
- Fall 2021 — Spring 2024* **Admin**, ACM [SIGPwny](#)  
Special Interest Group in Cybersecurity

## Teaching Experience

- Fall 2025 — Current* **Graduate Teaching Associate**, The Ohio State University
- Math 3345 — Foundations of Higher Mathematics  
(*Spring 2026*, Grader)
  - Math 1151 — Calculus I  
(*Fall 2025*, TA)
- Spring 2021 — Spring 2024* **Undergraduate Course Assistant**, University of Illinois Urbana-Champaign
- CS 225H — Honors Data Structures  
(*Spring 2024*)
  - CS 374 — Introduction to Algorithms and Models of Computation  
(*Spring 2022 — Fall 2022, Fall 2023*)
  - CS 173 — Discrete Structures  
(*Spring 2021 — Spring 2024*)
  - CS 475 — Models of Computation  
(*Spring 2023*)
  - CS 125 — Introduction to Computer Science  
(*Spring 2021*)

## Seminar Organization

- Spring 2025* **Commutative Algebra Reading Group**
- Spring 2025 — Current* **MGSA Seminar**

## **Fellowships and Awards**

*Fall 2024 — University Fellowship*

*Spring 2025 The Ohio State University Graduate School*

## **Posters**

**2026 Debordering Closure Results in Determinantal and Pfaffian Ideals**

OSU Computer Science and Engineering Poster Expo

**2023 Classifying Primitive Solvable Permutation Groups of Rank 5**

TXST REU Poster Session

## **Professional Experience**

*Summer 2022 Software Engineering Intern, CME Group*

*Summer 2021 Software Engineering Intern, SiteIQ*