

# 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

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## 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 — **Undergraduate Research Assistant, [LEADCAT Lab](#)**

Fall 2023 Under Prof. Melkior Ornik, University of Illinois Urbana-Champaign

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## Student Organizations

Spring 2025 – **Vice President, OSU [MGSA](#)**

Current Ohio State University Math Graduate Student Association

Fall 2022 – **Founder and President, ACM [SIGma](#)**

Spring 2024 Special Interest Group in Math and Algorithms

Fall 2021 – **Admin, ACM [SIGPwny](#)**

Spring 2024 Special Interest Group in Cybersecurity

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## Teaching Experience

Fall 2025 – **Graduate Teaching Associate, The Ohio State University**

Current ○ Math 3345 — Foundations of Higher Mathematics

(Spring 2026, Grader)

○ Math 1151 — Calculus I

(Fall 2025, TA)

Spring 2021 – **Undergraduate Course Assistant, University of Illinois Urbana-Champaign**

Spring 2024 ○ 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)

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## Seminar Organization

Spring 2025 **Commutative Algebra Reading Group**

Spring 2025 – **MGSA Seminar**

Current

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## Fellowships and Awards

*Fall 2024* — **University Fellowship**

*Spring 2025* The Ohio State University Graduate School

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## Posters

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

TXST REU Poster Session

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## Professional Experience

*Summer 2022* **Software Engineering Intern**, *CME Group*

*Summer 2021* **Software Engineering Intern**, *SitelQ*