

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, [ECCC](#)

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**

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

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

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

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)

Seminar Organization

Spring 2025 Commutative Algebra Reading Group

Spring 2025 – MGSA Seminar

Current

Professional Experience

Summer 2022 Software Engineering Intern, CME Group

Summer 2021 Software Engineering Intern, SitelQ