

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

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, [arXiv](#)

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

2026 **Polynomial Identity Testing**

OSU MGSA Short n' Sweet Seminar

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 1151 — Calculus I (Fall 2025)
- 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 and Short n' Sweet Seminars**
Current

Professional Experience

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

Summer 2021 **Software Engineering Intern, SitelQ**