Anakin Dey

Curriculum Vitæ

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Research Interests

Algebraic Combinatorics, Algebraic and Geometric Complexity Theory, Computational Algebra

Education

Fall 2024 —
Spring 2030
PhD Mathematics, *The Ohio State University*
Advised by Dave Anderson and Zeyu Guo

Fall 2020 —
Spring 2024
BSLAS Mathematics, *University of Illinois Urbana-Champaign*
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

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**, *SiteIQ*