Matthew Kendall

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EDUCATION

Stanford University, Stanford, CA — Sep 2024 – Expected June 2029
Ph.D., Mathematics

Princeton University, Princeton, NJ — Sep 2019 – May 2024
Bachelor of Arts, Mathematics — High honors, GPA: 3.95/4.0

Budapest Semesters in Mathematics, Budapest, Hungary — February 2021 – May 2021

Stuyvesant High School, New York, NY — September 2015 – June 2019

PUBLICATIONS AND PREPRINTS

4. Crossing change maps in filtered grid homology. (2025) — arXiv:2303.04227
   Topology and its Applications, 375:109552.
3. Some algebraic properties of ASM varieties. (2025) — arXiv:2505.10480
   with I. Axelrod-Freed, H. Hao, P. Klein, and Y. Luo.
   Glasgow Mathematical Journal,
   Published online, 2025:1–20. doi:10.1017/S0017089525100840.
2. Bender–Knuth involutions on linear extensions of posets. (2024) — arXiv:2302.12425
   with J. Chiang, A. Hoang, R. Lynch, S. Nguyen, B. Przybocki, and J. Xia.
   Discrete Mathematics, 347(9):114068.
1. Quantitative Helly-type theorems via sparse approximation. (2023) — arXiv:2108.05745
   with V. Almendra–Hernández and G. Ambrus.
   Discrete and Computational Geometry, 70(4):1707–1714.

TALKS AND PRESENTATIONS

JMM AMS Undergraduate Poster Session — Jan 2023
On Cohen–Macaulayness of ASM Varieties

JMM AMS Undergraduate Poster Session — Jan 2023
Bender–Knuth involutions on linear extensions of posets

New York University, Geometry Seminar — Sep 2022
Quantitative Helly-type theorems via sparse approximation

Alfréd Rényi Institute of Mathematics, Combinatorics and Geometry Seminar — Aug 2022
Quantitative Helly-type theorems via sparse approximation

Ohio State University, Young Mathematicians Conference (online) — Aug 2021
Quantitative Helly-type theorems via sparse approximation

AWARDS AND HONORS

Middleton Miller '29 Prize, *Department of Mathematics, Princeton University* — May 2024
Election to the Sigma Xi chapter, *Princeton University* — May 2024

Early election to the Phi Beta Kappa chapter, *Princeton University* May 2024
Andrew H. Brown Prize, *Department of Mathematics, Princeton University* May 2023
Richard B. Geller Memorial Scholarship, *Stuyvesant High School* June 2019
Director's Award, *New York Youth Symphony Chamber Program* May 2019
Berman–Rockow Award, *New York State Math League* May 2019

TEACHING EXPERIENCE

Stanford University, Stanford (CA) September 2024 – present
Teaching Assistant

- Led section, held office hours, and graded for MATH113 (Linear Algebra and Matrix Theory), MATH19 (Calculus I), MATH20 (Calculus II), MATH21 (Calculus III).

Math-M-Addicts Math Program, New York (NY) September 2020 – present
Instructor

- Taught lessons on a range of problem-solving techniques in high school algebra, geometry, combinatorics, and elementary number theory; prepared handouts; facilitated in-class games and contests.

LEADERSHIP AND MEMBERSHIP

Stanford Student Symplectic Geometry January 2026 – present
Organizer

- Organize weekly meetings for graduate students on selected topics in symplectic and contact geometry.

Princeton University Math Club January 2022 – May 2023
Advising Chair

- Organized advising sessions to undergraduates for math course selection; hosted graduate school panels; arranged monthly dinners pairing undergraduates with math graduate students.

Princeton University Orchestra September 2019 – May 2024
Performing Cellist

New York City Interscholastic Math Competition September 2020 – May 2024
Coordinator, Problem Writer

- Oversaw junior-level selection process of city-wide high school competition. Wrote senior-level competition problems (2020–2021).

SKILLS

Languages: Russian (fluent).
Programming languages: LaTeX, Sage, Macaulay2, Python, Java.