Matthew Kendall

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EDUCATION

Princeton University, Princeton, NJ — Expected 2024
Bachelor of Arts, Mathematics — GPA: 3.88
Relevant Coursework: Topics in Combinatorics: The Probabilistic Method, Algebraic Topology, Advanced Graph Theory, Topology, Accelerated Honors Analysis I and II, Probability Theory, Algorithms and Data Structures

Budapest Semesters in Mathematics, Budapest, Hungary — February 2021 – May 2021
Relevant Coursework: Graph Theory, Discrete and Convex Geometry

Stuyvesant High School, New York, NY — September 2015 – June 2019
Relevant Coursework: Complex Analysis, Multivariable Calculus, Linear Algebra

RESEARCH EXPERIENCE AND PRESENTATIONS

Young Mathematicians Conference, Ohio State University
Online, August 2021

- Presented research from Budapest Semesters in Mathematics REU to undergraduates at REUs in the United States

Budapest Semesters in Mathematics REU
Online, June 2021 – August 2021

- Worked with another student on a project in convex geometry, met 3-4 times weekly with advisor Dr. Gergely Ambrus, presented our research to the other research groups in the REU.
- M. Kendall, V. H. Almendra-Hernández, G. Ambrus, *Quantitative Helly-type theorems via Sparse Approximation*, arXiv preprint arXiv:2108.05745 (2021).

Princeton Office of Undergraduate Research
Mathematics Research Intern, June 2020 – August 2020

- Presented lectures on the irreducible representations of the symmetric group, irreducible representations of special linear Lie algebras, and analysis on compact Lie groups (using Beamer) to Princeton mathematics majors, led by Dr. Mark McConnell.

Princeton Directed Reading Program — September 2020 – June 2021

- Meet weekly with a Princeton graduate student to study and solve related problems in Atiyah and MacDonald's *Commutative Algebra* and Cox, Little, O'Shea's *Ideals, Varieties, and Algorithms* (Fall 2020) and Ziegler's *Lectures on Polytopes* (Spring 2020).
- Wrote a expository paper on Steinitz' Theorem, classifying the graphs of polyhedra.

AWARDS AND HONORS

Richard B. Geller Memorial Scholarship, Stuyvesant High School (2019)
3rd Place Individual, New York State Math League math competition (2019)
AIME qualifier, Mathematical Association of America (2017, 2018, 2019)

PROFESSIONAL EXPERIENCE

Math-M-Addicts Math Program, New York, NY
Instructor, September 2020 – June 2021

- Taught lessons on a range of problem-solving techniques in algebra, geometry, combinatorics, and number theory, prepare handouts, and facilitate in-class games and contests.

New York Math Circle Program, New York, NY
Teaching Assistant, August 2018 – August 2019

- Taught students introductory number theory and combinatorics (2019), Olympiad geometry and inequalities (2018), assisted students in problem sets, organized guest lectures in mathematics for the summer camp, graded material.

LEADERSHIP/MEMBERSHIP

Princeton University Math Competition
Assistant Problem Czar, September 2019 – May 2020

- Created problems for Princeton's annual national high school math competition. Oversaw problem writing and selection process for algebra questions.

New York City Math Team
Math Team Captain, September 2018 – June 2019

- Hosted and organized team practices for all participants, presented contest material to math team members.
- Contestant (Tin Man). Top ten team on American Regional Math League, Harvard-MIT Math Tournament, Princeton University Mathematics Competition.

Princeton University Orchestra
Performing Cellist, September 2019 – Present

SKILLS

Programming languages: LaTeX (and Beamer), Java, Python, Macaulay2
Languages: Russian (fluent), Japanese (proficient)
Musical performance: Cello studies for 16 years. Performed in chamber groups and orchestras.

- New York Youth Symphony Director's Award for Chamber Music (2019); Rondo International Music Festival (2018, 1st place chamber ensemble); International Grande Music Competition (2018, 3rd place solo performance).