

JOSEPH OTHMAN

3-35 Soundview Lane, College Point, NY, 11356
(646) 944-5310 ♦ jothman@mit.edu

EDUCATION

Massachusetts Institute of Technology

Sep 2023 - Jun 2027 (projected)

Majors: Mathematics and Computer Science

- Selected relevant coursework: Algebra I, Algebra II, Algebraic Combinatorics, Introduction to Algorithms, Design and Analysis of Algorithms, Fundamentals of Programming, Knot Theory Seminar, Intermediate Probability Problem Solving

Stuyvesant High School

Sep 2019 - Jun 2023

GPA: 96.07

- Awards: Dr. Richard Rothenberg Award - Highest Honors In Mathematics, High Honors- AP Physics C
- Selected relevant coursework: Multivariable Calculus, Linear Algebra, Complex Calculus, AP Physics C: Mechanics, AP Physics C: Electricity and Magnetism, AP Calculus BC, AP Computer Science A, AP Biology, AP Chemistry, AP Macroeconomics, AP Microeconomics

EXPERIENCE

Private Tutoring

May 2023 -

- Created weekly private lessons in high school subjects such as Geometry and Algebra II; taught online via Zoom.

Math Team Volunteer, Q300 Math Team

Sep 2019 - Jun 2021

- Compiled weekly practices and directly assisted head coach in math team training and problem solving strategies to middle school students.

Intern, Museum of Mathematics

Oct 2019 - Mar 2020

- Interact with Museum visitors at MoMath by explaining and interpreting its cutting edge, engaging math exhibits.
- Explore mathematical concepts and share their love of math with others.
- Train with MoMath's experienced team of interpreters, educators and managers.
- Cut short due to COVID-19.

PROJECTS

Algebraic Combinatorics Research

Oct 2023 - Dec 2023

- Conducted research in the field of algebraic combinatorics with postdoctoral associate Pakawut Jiradilok.
- Researched planar graphs induced in triangular grid polygons from uniform triangular tilings of the plane, generalizing from the previous checkerboard tiling.

ACTIVITIES

HMMT Problem Staff

Sep 2023 -

- Wrote problems and helped testsolve and compile rounds for HMMT, a math competition written and administered by Harvard and MIT students for high school students around the country.
- Attended weekly meetings at Harvard and MIT; collaborated with others to write problems.

NYCIML Problem Writer, New York City Math Team

Jun 2023 -

- Wrote problems and compile contest and solutions for the 2023-2024 NYCIML, taken by high school students across New York City.

NYC Math Team Captain, New York City Math Team

Sep 2022 - Jun 2023

- Wrote problems for and arranged weekly practices of 80 students, as well as team selection tests. Helped head coaches in selecting teams for national contests.
- Wrote, administered, and graded homework with feedback about proof-writing techniques and strategies.
- Participated in high school contests such as HMMT, PUMaC, ARML: team results include 4th place overall at PUMaC and 5th place at ARML in 2023.

Stuyvesant Math Team Captain, Stuyvesant High School

Sep 2022 - Jun 2023

- Created lesson plans and taught lessons throughout the year to senior math team class.
- Organized and hosted weekly practices for all math team students for the AMC and AIME competitions.
- Helped administer weekly practices for underclassmen.

Problem Writing Lead, Downtown Mathematics Invitational

Sep 2022 - Dec 2022

- Wrote problems for and compiled rounds for DMI, a math contest hosted by Stuyvesant Math Team for high school students across New York City.

SKILLS

- **Programming Languages**
 - Proficient in Python and Java.
- Creative mathematical problem solving skills.
- Written and verbal communication of abstract ideas.
- Excellent interpersonal communication skills.

AWARDS

2023 USAMO Bronze Medalist, Mathematical Association of America

Jun 2023

- Qualified for the USAMO, a competition for high school students. Placed top 50 nationwide (score 29), earning a bronze medal.

4-Time AIME Qualifier, Mathematical Association of America

2023 Berman-Rockow Award, New York State Math League

Apr 2023

- Awarded for leadership, dedication, and embodiment of cooperation and teamwork of mathematical problem solving.