

Michael Tang

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Education and Skills

Massachusetts Institute of Technology

Undergraduate, mathematics department (course 18) 2017-present
Minors, computer science (course 6) and music (course 21M)
Expected graduation: May 2021.

University of Minnesota, Twin Cities

U. of Minn. Talented Youth Mathematics Program (UMTYMP) 2010-2016
Intensive middle/high school program; covered linear algebra, multivariable calculus.
Seminar in discrete geometry: <https://www.mathcs.bethel.edu/yang/teaching/umn/4990.15f/>.

Selected MIT coursework

18.112 Complex Analysis Fall 2019
Standard course, following Stein and Shakarchi; proof of prime number theorem.
Taught by Wei Zhang. Grade: A.

18.425 Cryptography and Cryptanalysis Fall 2019
Semantic security, zero-knowledge proofs, multiparty computation, etc.
Taught by Yael Kalai and Noah Stephens-Davidowitz. Grade: A.

18.510 Mathematical Logic and Set Theory Fall 2019
ZFC axioms, first-order logic, incompleteness theorems, inaccessible cardinals.
Taught by Henry Cohn. Grade: A.

18.783 Elliptic Curves Spring 2019
Isogenies, point-counting and primality-proving, complex multiplication, etc.
Taught by Andrew Sutherland. Grade: A-.

18.404 Theory of Computation Fall 2018
Turing machines, decidability; complexity theory, oracle machines, $IP = PSPACE$.
Taught by Michael Sipser. Grade: A.

18.901 Topology Spring 2018
Standard course, following Munkres; brief introduction to algebraic topology.
Taught by Jianfeng Lin. Grade: A+.

Programming

Fluency: Python 3, \LaTeX (about 8 years' experience each).

Proficiency: Java, HTML/CSS/Javascript.

Volunteer & Work Experience

Mathematical Association of America

AMC 10/12 and AIME Panelist 2017–19

Reviewed exam drafts. Submitted original problems for inclusion in exams.

AMC 10/12 Editorial Board 2019–present

Continuation of above work.

Most recent contributions: 2020 AMC 10A #17, 22, 25 and 2020 AMC 12A #25.

MIT Primes Circle

Student mentor (*paid*) Spring 2019

Taught elementary number theory to two local high school students.

Students wrote an expository paper on a topic of their choice (Möbius inversion).

Art of Problem Solving

Intern, curriculum development team (*paid*) Summer 2018

Led efforts to expand Alcumus, an adaptive math contest training game.

Teaching assistant and grading contractor (*paid*) 2018–present

Attended to student questions and issues during AoPS online classes.

Graded student assignments and critiqued mathematical writing style.

Harvard-MIT Math Tournament

Problem Czar, 2017 November tournament Fall 2017

With other Czars, coordinated creation, testing, and editing of competition exams.

Selected Honors

Putnam competition, honorable mention (ranks: 34th, 70th, 73rd place) 2017–19

USA Mathematical Olympiad, qualifier 2016–17

USA Junior Mathematical Olympiad, qualifier 2014–15