
HMMT
February
2026

Hello HMMT February 2026 Contestants!

The HMMT organizing team is delighted to have you join us here in Cambridge! We have all been committed to building this February's competition into an experience that we hope you will recall fondly for many years to come. From crafting the most intriguing of problems to setting up the spaces for optimal test taking, our team of over 100 MIT and Harvard students presents to you the 29th season of HMMT February.

These couple of days every year are truly special for us, and we hope that you all will find that the same statement holds for you. We are honored by how so many in the math community are eager to take part in HMMT. As we gather to celebrate the joy that math brings to all of us, do not forget that even more importantly, we are here to showcase and laud the achievements of all you fantastic mathletes.

Since 1998, HMMT has had the privilege of hosting the most passionate and talented students from around the world. Whether it be through competition or collaboration, each and every one of our competitors has something extraordinary to share. Take the time to speak to bright students around you, but more importantly, take the time to listen. We hope that you will make the most of this convergence of brilliant minds.

To the coaches, parents, and chaperones: we have seen how much you care about granting your students opportunities to pursue their interests in math, and we cannot express enough appreciation for your support of the next generation of mathletes. Through the toils of registration, the anxiety of the lottery, and the logistical burdens of organizing the trip here, your commitment shines. While this weekend celebrates your students, we hope that you will also enjoy our speaker talks, student panels, and cheer on competitors during the guts round.

As you navigate the Harvard and MIT campuses, we hope you will find the maps in this brochure helpful. Please check your team's room assignments carefully and notify any HMMT member (clad in black volunteer shirts or blue officer jackets) if you require any assistance. We understand that the campuses can be hard to navigate at first, and we're here to help!

To competitors, we are excited to have you join us for this weekend's tournament, and we are beyond honored to have been a part of your competition math journey.

Regards,

Alan Lee Zihongbo Wang	Marin Hristov Sarunyu Thongjarast Jessica Wan	Mark Saengrungkongka
Tournament Directors	February Problem Czars	Historian

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FRIDAY, FEB. 13

FRIDAY NIGHT EVENTS

HARVARD

TIME	ACTIVITY	LOCATION
5:45-6:45 PM	PIZZA & COOKIES	SC ARCADE
5:45-7:00 PM	EARLY REGISTRATION	SC ARCADE
6:30-6:45 PM	EVENTS PREVIEW	SC B
7:00-8:00 PM	EVENTS BLOCK 1	SC F1
8:10-9:10 PM	EVENTS BLOCK 2	SC F1/2/3

EVENT DETAILS

JANE STREET ESTIMATHON — SC C

The Estimathon® is a mind-bending mixture of math and trivia. In teams, you'll attempt 13 Fermi problems in 30 minutes, ranging from totally trivial to positively Putnamesque. Be prepared to come up with the best set of confidence intervals!

JUMP POKER NIGHT — SC 104, 105

Poker is a strategy-based game that involves lots of critical social deduction and theory. Come learn and play poker with your friends to battle over chips. Can you outsmart your opponents with a clever bluff or make that daring call?

OPENAI SUDOKU — SC A

Put your logic skills to the test in an exciting Sudoku competition. Tackle clever variants and tricky twists as you reason your way to the correct placement of each number. Think fast and stay sharp — winners will receive ChatGPT Pro!

SUSQUEHANNA BRAINTEASER BATTLE — SC 110, 112

During this puzzle contest, you will work in teams of 4 through a unique blend of puzzles designed by our Quants to test quantitative reasoning and out-of-the-box thinking. More challenging than your typical sudoku, and more fun than your typical math problem set. Winning team will receive a Susquehanna poker set!

FIVE RINGS INTEGRATION BEE — SC E

Display your calculus skills through a fast-paced contest in solving integrals! A qualifying round will be held first, from which four people will make it to the finals. The final four will battle it out 1-on-1 against each other for prizes and the title of grand integrator right before the Saturday awards ceremony!

HRT PUZZLE HUNT — SC D

Step into the HRT Puzzlehunt and investigate a world where the color orange has mysteriously vanished. From city streets to kitchens and gem shops, something feels off, and it's up to you to uncover hidden clues and restore what's missing. Put your observation and creativity to the test in a unique puzzlehunt experience, proudly hosted by HRT.

KARAOKE — SC B

Need a way to destress right before the contest? Come sing your heart out with friends and have fun with fellow competitors! Whether you drop by for a couple of songs or stay the whole time, there's no need to hold back during this exciting singalong.

HOT SAUCE ROULETTE — SC 109, 111

Are normal countdown problems too bland for your tastes? Come try this spine-tingling variant instead! Contestants taste a mystery hot sauce, either mild or super spicy. Those who receive the spicy flavor then battle against both their opponent and capsaicin in a fiery countdown round! May the fastest competitors win!

MATH BOWL — SC 116, 120

Want to flex your math trivia skills in a fast-paced team environment? Interested in reliving your MATHCOUNTS countdown glory days? Math Bowl is a 4v4, buzzer-based competition inspired by QuizBowl focusing entirely on math, from Bridges of Königsberg to where Fermat wrote his last theorem.

PHYSICS IS PHUN — SC 309

Want to apply your math skills to modeling the physical world? Or perhaps you want to show off your insane physical intuition to your friends? Then join us at a team race where you solve physics problems ranging from simple mechanics to puzzles testing the limits of your creativity! Winners get prizes!

POWERPOINT KARAOKE — SC 228

Want to test your creativity and quick thinking? PowerPoint Karaoke is an impromptu speaking game where you present a PowerPoint you have never seen before. No prep, no pressure, just fast thinking, humor, and maybe a little math knowledge. Come present, laugh at bold explanations, and compete for fun prizes.

SATURDAY, FEB. 14

TOURNAMENT DAY

MIT STUDENTS

TIME	ACTIVITY	LOCATION
7:00-8:00 AM	REGISTRATION	LOBBY 10
7:30-8:30 AM	BREAKFAST	LOBBY 13
8:15-8:45 AM	INDIVIDUAL COMPETITOR MEETING	10-250
9:00-10:15 AM	**TEAM ROUND**	**ASSIGNED**
10:30-11:30 AM	**ALGEBRA/NT ROUND**	**ASSIGNED**
11:40-12:40 PM	**GEOMETRY ROUND**	**ASSIGNED**
12:50-1:50 PM	**COMBO ROUND**	**ASSIGNED**
1:50-3:00 PM	LUNCH	LA SALA/LOBDELL
3:00-4:45 PM	**GUTS ROUND**	**ASSIGNED**
5:00-5:20 PM	ACAPELLA PERFORMANCE	26-100
5:30-6:00 PM	INTEGRATION BEE FINALS	26-100
6:00-6:50 PM	AWARDS CEREMONY	ASSIGNED

COACHES & PARENTS

TIME	ACTIVITY	LOCATION
7:00-8:00 AM	REGISTRATION	LOBBY 10
7:30-8:30 AM	BREAKFAST	LOBBY 13
8:10-8:40 AM	**PROCTOR MEETING**	**6-120**
9:00-10:15 AM	**TEAM ROUND**	**ASSIGNED**
10:45-11:45 AM	SPEAKER	2-190
1:50-3:00 PM	LUNCH	LA SALA/LOBDELL
3:00-4:45 PM	GUTS ROUND VIEWING	LOBDELL
5:00-5:20 PM	ACAPELLA PERFORMANCE	26-100
5:30-6:00 PM	INTEGRATION BEE FINALS	26-100
6:00-6:50 PM	AWARDS CEREMONY	ASSIGNED

SPEAKER: NOAH GIANSIRACUSA

From Volcanoes to Robots:
The Hidden Geometric Pattern Shaping our World

On the northern coast of Ireland is a remarkable natural formation called the Giant's Causeway. Nearly perfect pentagons and hexagons reach up from the sea in stone columns. In the 18th century, these shapes helped geologists discover our planet's volcanic past. In the 19th century, the geometric pattern responsible for these shapes helped Darwin shore up a gap in his theory of evolution, and it helped end a cholera outbreak. In the 20th century, this same pattern helped telecom companies design cell tower networks. And in the 21st century, it helps autonomous robots navigate. How can one geometric pattern do so much? Come find out!

Noah Giansiracusa is a math professor at Bentley University (a business school near Boston) and a faculty associate at Harvard. He's appeared on CNN, NBC, BBC, and written for a range of outlets including TIME, Scientific American, Washington Post. He's written two books: How Algorithms Create and Prevent Fake News (2021) and Robin Hood Math: Take Control of the Algorithms that Run Your Life (2025). His work has been praised by multiple Nobel laureates, an Ironman champion, and the most powerful woman in hedge funds, among others.

SUNDAY, FEB. 15

EDUCATION EVENTS

MIT

TIME	ACTIVITY	LOCATION
8:30-8:50 AM	BREAKFAST	STATA LOBBY
9:00-9:50 AM	ROUND 1 TALKS	STATA CENTER
10:00-10:50 AM	ROUND 2 TALKS	STATA CENTER
11:00-11:50 AM	KEYNOTE SPEAKER	32-123
12:00-12:50 PM	LUNCH	STATA LOBBY
1:00-1:50 PM	ROUND 3 TALKS	STATA CENTER

EVENT DETAILS

ILARIA SEIDEL — 32-141

1

The Mandelbrot Set: to Infinity (and Beyond)

Let f be a quadratic function. Consider the sequence z, f(z), f(f(z)), f(f(f(z))). and so on. For which complex numbers z does this sequence approach infinity? For which z does it remain bounded? The boundary between these two sets, where the behavior of this sequence is utterly chaotic, is called the Julia set of f. Julia sets take on many forms, from smooth circles to jagged fractals and Cantor sets. In this talk, we explore how these different shapes arise. Motivated by this discussion, we define a central object known as the Mandelbrot set and uncover some of its mysteries.

FELIX GOTTI — 32-144

1

Irreducibility of Polynomials: From Math Olympiads to Research in Algebra

Determining whether a polynomial can be factored into smaller pieces is a classic challenge that appears frequently in mathematical competitions. In this talk, we will begin by discussing some elegant problems about polynomial irreducibility from recent mathematical olympiads. We will then transition from these "closed" problems to the "open" world of modern research by looking at polynomials through the lens of factorization theory. Along the way, we will discover how the quest to factor polynomials leads directly into the heart of commutative algebra and the study of unique (and not-so-unique) factorization.

SRINIVASAN RAGHURAMAN — 32-155

1

Computation and Complexity

This talk explores fundamental questions about what can be computed efficiently and why some problems resist fast algorithms. Drawing on ideas from algebraic complexity, pseudorandomness, and lower-bound techniques, it highlights how structure and randomness shape the power and limits of computation.

SHAOYUN BAI — 32-141

2

Counting Plane Curves

Given two points in the plane, you know that there is a unique line connecting them. Similarly, given five points in the plane, there is a unique quadratic curve passing through all of them. Here is a question: how many degree d curves in the plane pass through 3d-1 many points? For small d, you may have some approach using elementary methods. I will introduce you some idea, following Kontsevich's work which won him a Fields Medal, which tells you how to answer this question systematically.

MANOLIS KELLIS — 32-144

The Architecture of Intelligence: Representing Knowledge, Ideas, Know-How, and Reasoning with AI

This talk will discuss modern approaches to AI architecture. We will examine how intelligent systems can plan, compose new concepts, and reliably carry out multi-step problem solving rather than just generating text.

IAN BALL — 32-155

An Introduction to Game Theory

Game theory is the study of how rational agents interact when their outcomes are affected by each other's decisions. This talk will cover the fundamental concepts of strategic games, such as best responses, dominant strategies, and rationalizability. Using mathematically rich examples, we'll see how careful reasoning can predict outcomes when players think strategically about others' incentives. The goal is to show how a small set of logical principles can lead to deep insights about competition, cooperation, and strategic thinking.

ERIN WINICK ANTHONY — 32-123

Making Your Own Path in STEM

There's so many paths you can take in STEM, it can be overwhelming to find exactly where you fit best. Science communicator Erin Winick Anthony uses her winding career journey in STEM to showcase exactly how you can craft your own STEM adventures. From getting her mechanical engineering degree to working at NASA to sailing on seafloor mapping expeditions, she'll share how you can use your passions, in and out of STEM to make a fun life in science, math, and more.

GIGLIOLA STAFFILANI — 32-155

Waves: Building blocks in nature and mathematics

In this talk I will start by giving a brief description of my path to MIT. Then talk a little bit about the subject of my recent research: Wave turbulence theory. This is a vast subject and its goal is to formulate for us a multiscale picture of wave interactions. Phenomena involving interactions of waves happen at different scales and in different media: from gravitational waves to the waves on the surface of the ocean, from our milk and coffee in the morning to infinitesimal particles that behave like wave packets in quantum physics. These phenomena are difficult to study in a rigorous mathematical manner, but because of this challenge, mathematicians have developed interdisciplinary approaches that are powerful and beautiful.

UNDERGRADUATE PANEL — 32-144

Research in High School and Undergrad

Curious about how to dive into research? In this panel, we'll be asking current students at MIT and Harvard about how to get started — from cold emailing professors and finding mentors to applying for selective research programs like SSP and RSI. Panelists will share practical advice on how to identify your interests, write effective outreach emails, and make the most of research opportunities both in high school and college. You'll also learn what research is really about, not just producing results, but developing creativity, persistence, and critical thinking. Whether you're aiming for a future in STEM or just want to explore new ideas, this session will show you how research can open doors and shape the way you learn.

VASILIY NECKRASOV — 32-141

How (not) to Cut Squares into Triangles

Try to cut a square into 2, 4 or 6 triangles of equal area, and you will immediately find multiple ways to do it. But can you do it with 3, 5 or 7 triangles instead? We will learn some p-adic analysis and combinatorics to find a somewhat surprising answer to this question.

Officer Team

Tournament Directors

Alan Lee **Zihongbo Wang**

Community
Sophia Hou
Mikayla Lin

Education
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Anton Levonian
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Finance
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Katie He

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Kallie Wang
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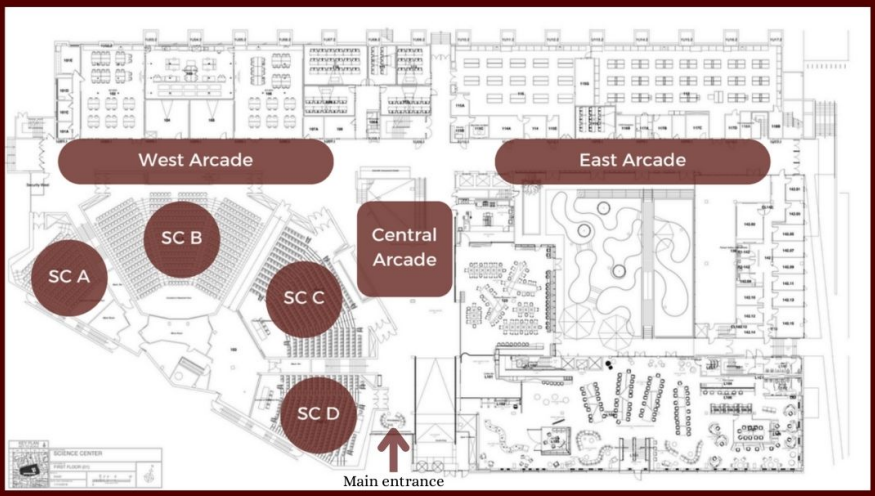
Grace Luo
Ishaan Sinha
Ivy Zhu
Lillian Zhong
Rohan Dalal

SOFTWARE
Angelika Wang
Darwin Li
Sounak Bagchi
Yolanda Hu

MIT Central Campus Map

Harvard Science Center (SC) Map



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map.harvard.edu

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February 2026

Thank you to our sponsors who make HMMT possible! Because of their generosity, HMMT is able to run smoothly and provide food and merch to competitors, as well as provide financial aid to support teams' stays.

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AROUND THE AREA

COFFEE/TEA

Verveine Cafe & Bakery – *lattes, matchas, & croissants*
Tea-Do – *boba and snacks*
Vester – *coffee, brunch, baked goods*

FOOD

Lanner Noodles – *noodles, entrees*
Area Four – *pizza*
CAVA – *build-your-own-bowl mediterranean*

SWEETS

New City Microcreamery – *ice cream*
Toscanini's Ice Cream Co. – *more ice cream*
Praline Patisserie – *pastries*

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