MIT's Oldest and Largest Newspaper

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Volume 145, Number 18

Thursday, October 30, 2025

WEATHER, p. 2

THU: 58°F | 53°F
Chance of showers.

FRI: 61°F | 46°F
Chance of showers.

SAT: 55°F | 39°F
Mostly sunny.

U.S. Senator Alex Padilla '94 discusses politics

The California Senator talks about policy, higher education, and immigration

By Samuel Yuan and Vivian Hir
NEWS STAFF WRITERS

U.S. Senator Alex Padilla '94, Democrat from California, first decided to pivot from engineering to politics because of what he saw as cynical messaging around California's Proposition 187 — an effort to bar unauthorized immigrants from social services like public education. He thought the proposition was a poorly-disguised stab at "scapegoating immigrants" by then-Republican Governor Pete Wilson. Prop 187 passed, but it was later deemed unconstitutional by a federal district court.

That was back in 1994, shortly after he graduated MIT. These days, the White House has intensified its crackdown on both immigration and higher education. And, in June, federal agents tackled and forcibly removed Padilla from a homeland security press conference on immigration-related protests in Los Angeles.

On Friday, Oct. 17, *The Tech* interviewed Sen. Padilla by phone. The senior Senator from California discussed his switch from engineering to politics, President Trump's higher education and immigration policy, and his vision for the future; he also shared advice for those at MIT — and, more broadly, those from engineering backgrounds — who have aspirations in public service.

The son of Mexican immigrants, Padilla was born and raised in California's San Fernando Valley, north of downtown Los Angeles. His mother was a housekeeper, and his father was a short-order cook. After attending San Fernando High School, he made his way across the country to Cambridge to attend MIT, where he graduated with a Bachelor's in Mechanical Engineering. Before entering politics, he had a brief stint as a software engineer for aerospace contractor Hughes Aircraft.

Spurred by Proposition 187, Padilla began his political career back in California as a campaign manager: first for Assemblyman Tony Cárdenas, then for Assemblyman Gil Cedillo, and finally for State Senator Richard Alarcón. He also worked as a field representative for the late Senator Dianne Feinstein. In 1999, Padilla entered electoral politics, winning a seat on the Los Angeles City Council at age 26. He was elected to the California State Senate in 2006 and sworn in as California Secretary of State in 2015. The corridors of Washington finally welcomed Padilla in 2021, after Gov-

Senator, Page 3

PHOTO PROVIDED BY EDGAR RODRIGUEZ

U.S. Senator Alex Padilla '94 displaying his Brass Rat at a MIT Club of Washington D.C. event on May 30, 2023.

Karen Knutson appointed as VPGA, role starts on Nov. 1

The Vice President for Government Affairs was a former lobbyist for Oxbow and Chevron

VIVIAN HIR—THE TECH

Memorial Lobby with an outside view of Killian Court on Monday, Oct. 6, 2025.

By Boheng Cao, Vivian Hir, Jada Ogueh
NEWS STAFF WRITERS

On Thursday, Oct. 23, President Kornbluth sent an email to the MIT community announcing that Karen Knutson had been appointed as the Vice President for Government Affairs (VPGA), a new position that will oversee the Office of Government and Community Relations (OGCR) and the MIT Washington Office. Knutson will start her role on Nov. 1.

According to the letter, Knutson will be responsible for "advancing the Institute's educational and policy interests at the federal, state, city and community levels" and will serve as Kornbluth's senior advisor for government engagement. David Goldston, the previous director of the MIT Washington Office, stepped down in February 2025. In the interim, Maria Zuber, Presidential Advisor for Science and Technology Policy, was in charge of MIT's governmental engagement.

Institute administration welcomes Knutson to MIT

In a statement to *The Tech*, MIT spokesperson Kimberly Allen said that the MIT administration "looks forward to welcoming Karen [Knutson] to MIT." Zuber believes that Knutson is well-qualified for the role due to her expertise in government and industry as a political strategist, stating that Knutson will help "MIT navigate the challenges we face." According to Zuber, the "importance of [MIT's] mission" drew Knutson to the Institute.

President Kornbluth also stressed in her letter that Knutson will "make the case at all levels of government for the value of MIT and of the unique partnership between the US government and its research universities."

A career in oil and gas lobbying

Knutson's political career began with her appointment as a legislative assistant for Senator Frank Murkowski (R-Alaska) in 1989. She became the legislative director of Senator Sam Brownback (R-Kansas), notable for his strong pro-life stance and opposition to LGBTQ+ rights, from 1999 to 2001. Brownback, who was funded in large part by the Koch brothers, a pair of billionaire libertarians who built their fortunes on the petroleum industry, has advocated for income tax cuts and business deregulation.

Knutson pivoted to energy policy when she joined the Energy Task Force under then-President

VPGA, Page 6

IN SHORT

The last day to add half-term subjects offered in the second half of the term is Friday, Oct. 31.

Halloween is on Friday, Oct. 31.

The Day of the Dead (Día de Muertos) is on Sunday, Nov. 2.

Daylight saving time ends on Sunday, Nov. 2 at 2 a.m. Set your clocks back by one hour.

The Cambridge half marathon is on Sunday, Nov. 2 at 7 a.m., starting and ending at Cambridgeside Mall.

Interested in joining *The Tech*? Email *tt-join@mit.edu*

Send news and tips to *tt-tips@mit.edu*

Meet MIT's new provost, Anantha Chandrakasan

Chandrakasan: "Whatever it means to enable impact, that's my single goal"

By Beatriz Valero de Urquia and Vivian Hir

On Oct. 15, *The Tech* interviewed MIT Provost Anantha Chandrakasan, discussing his first few months as provost. He stressed the importance of collaboration, community, and diversity in research, highlighting his aim to support faculty and encourage students to make a global impact. Chandrakasan also reflected on MIT's financial challenges and provided insights on how AI will shape the future of education.

Amidst new challenges for higher education in the U.S., Chandrakasan is focused on solving the Institute's most complex problems. "Whatever it means to enable impact, that's my single goal," he said.

Transitioning from Dean to Provost

Chandrakasan has been a faculty member at MIT since 1994. He served as the head of the Department of Electrical Engineering and Computer Science from 2011 to 2017. In July 2025, Chandrakasan succeeded Cynthia Barnhart SM '86 PhD '88, having previously served as the Dean of Engineering and as the Institute's first Chief Innovation and Strategy Officer (CISO).

As Dean, Chandrakasan oversaw the hiring and promotion of faculty members, which allowed him to "see the diversity of research" within the School and gave him a "broad appreciation for all the types of scholarship." During the pandemic, former provost Martin Schmidt PhD '88 appointed Chandrakasan as the lead dean, allowing Chandrakasan to collaborate with the deans of other MIT schools and colleges. Now that he is provost, it is the MIT community at large that helps him "in formulating important decisions."

Chandrakasan said it was "a huge honor" to be appointed as the provost. "MIT has done so much for me," he said. In regard to the transition from dean to provost, Chandrakasan described it as "seamless," as he is able to "do many things in parallel" and make difficult decisions "in a timely manner." He joked that the biggest adjustment was getting used to the large office space and longer working hours.

The role of a "facilitator"

As provost, Chandrakasan said he is here to help the entire MIT community. In his eyes, his role is to be a "facilitator," someone who can "bring in resources" to help faculty and students "thrive in research, education and entrepreneurship" so they can have an impact not only in the U.S., but also in the world.

As part of his efforts to support students, Chandrakasan has been working with the Chancellor's office to hold the first-ever UROP mixer, which connects students with research opportunities. He acknowledges that the initiative will "start small," but he expects it to soon resemble the Institute's Fall Career Fair.

The role of provost also comes with unexpected challenges. "We're problem-solving from day one," said Chandrakasan, stressing his aim to support faculty and students as they navigate changing funding landscapes and new governmental decisions. He aims to "do as much as possible" to bring in resources and drive the strategic priorities set by President Sally Kornbluth. These initiatives include The Climate Project at MIT, the MIT Human Insight Collaborative (MITHIC), and the MIT

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CREEPY AND CRAWLY
Spooktacular entertainment. **ENTERTAINMENT, p. 15-16**

YUNCHAN LIM PERFORMS
Johann Sebastian Bach's Goldberg variations. **ARTS, p. 8**

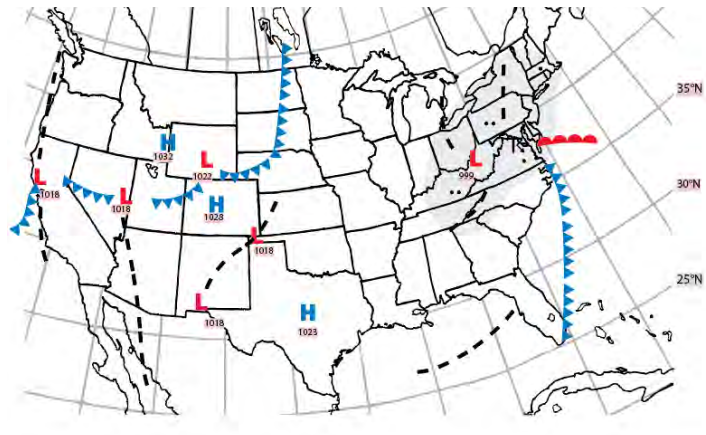
TRIFONOV'S SCHUBERT IS SHAKY.
ARTS, p. 10

GAZA POP-UP IN CENTRAL
Custom embroidered keffiyehs, anyone? **NEWS, p. 2**

NEXT-GEN SCIENTISTS
at the 2025 URTC. **SCIENCE, p. 13**

SECTIONS

WEATHER FORECAST



Weather Systems	Weather Fronts
H High Pressure	Trough
L Low Pressure	Warm Front
§ Hurricane	Cold Front
	Stationary Front

Precipitation Symbols	Snow	Rain
Showers	*	•
Light	*	•
Moderate	**	••
Heavy	***	•••

Other Symbols
Fog
Thunderstorm
Haze

Compiled by MIT Meteorology Staff and The Tech

Windy weekend in the works

By Lou Lahn
CHIEF METEOROLOGIST

Worsening conditions today are expected to give way to a moderate to heavy rainfall into tonight. Friday and onward looks to be drier but with high winds and gusty conditions. Temperatures are expected to be colder than usual into the weekend.

OCTOBER 30
SITUATION FOR NOON (ET)

Extended Forecast

Today: Chance of showers. High around 58°F (14°C). East wind 10-18 mph with gusts up to 30 mph.
Tonight: Showers. Low around 53°F (12°C). East wind 16-21 mph.
Friday: Chance of showers. High around 61°F (16°C) and low around 46°F (8°C). Southwest wind 14-21 mph.
Saturday: Mostly sunny. High around 55°F (13°C) and low around 39°F (4°C). West wind 20-22 mph.
Sunday: Mostly sunny. High around 52°F (11°C) and low around 39°F (4°C). West wind 10-14 mph.

Central Square pop-up supports families in Gaza

Since mid-August, the pop-up has raised around $500 to $1,000 each week

By Sabine Chu
ASSOCIATE NEWS EDITOR

Since mid-August, Cambridge local Mary Anne Fox has sold clothes, shoes, books, and household items at her "Thrift-4Gaza" pop-up in Central Square every weekend. According to Fox, the proceeds from sales after expenses, which amount to around $500 to $1,000 each week, go directly to individuals, families, and micro non-governmental organizations (NGOs) in Gaza.

Even before the pop-up, Fox had been using her own income to support Gazan residents for several years. Still, she found herself "frustrated with doing nothing," stating that individual aid "never feels like enough." Following the lead of a friend who was selling art to raise funds for Gaza, Fox decided to sell items she had already meant to donate on a patio in Central Square.

Although Fox initially only set out a couple flyers advertising the pop-up, she found the reaction to be "truly overwhelming." She saw that people were often thrilled to contribute to a humanitarian cause through donations or purchases. A customer once bought a dish, then donated $1,000; another brought a bottle of wine and a card with their donation.

The effort has since expanded, now including several paid staff. Fox's business partner, who is from Gaza, helps to locate and verify fundraisers. In addition, the pop-up now has around a dozen volunteers. Some live in Cambridge, but others come from Brookline, Concord, or other parts of the greater Boston area to help Fox each weekend.

Fox is also involved with Cambridge for Palestine, a local advocacy group that has advertised the pop-up on social media and helped move and set up items. Dan Totten, speaking on behalf of Cambridge for Palestine, called aid "a desperately needed lifeline for many families" and praised Thrift-4Gaza's "incredible work."

Work begins at around 7 a.m. for Fox, who states that the "set-up and break-down are the most challenging component[s]" of the pop-up. Volunteers help bring items from a nearby storage item, set up tables, and later interact with customers once everything is in place.

On Saturday, Oct. 25, *The Tech* visited the pop-up to interview Fox, her staff and volunteers, and customers. For the first time, they were operating out of the patio of Darling, a bar on the stretch of Massachusetts Avenue between Sidney and Brookline St. In the past, the pop-up was located five storefronts down in front of MoreFun Café. Fox said that nearby stores were fine with the pop-up, as the increase in foot traffic generated business for everyone.

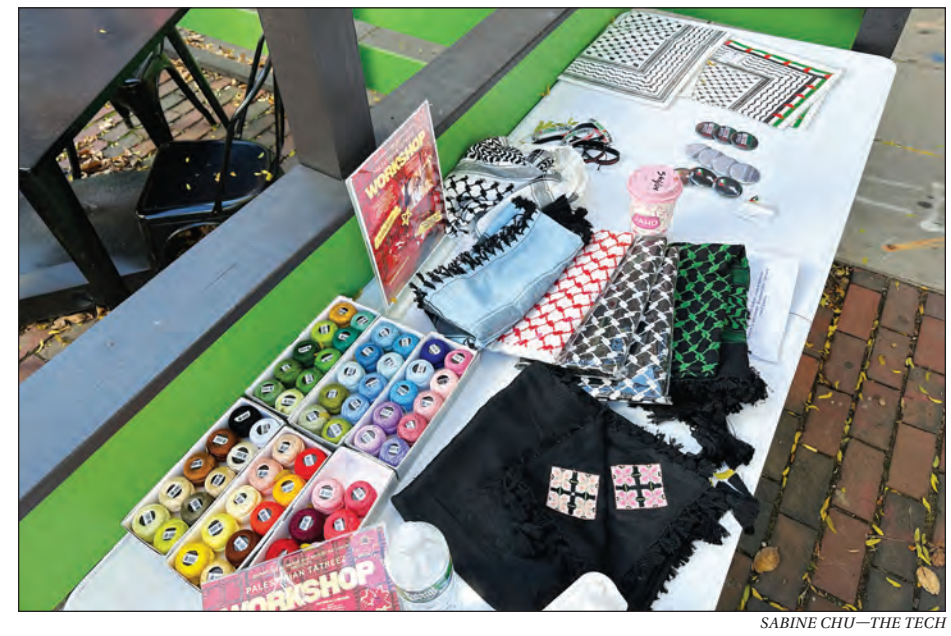
However, Fox found out that the MoreFun patio is owned by the MIT Management Company (MITIMCo). Although Central Square is outside MIT's official campus, MITIMCo owns the University Park property, which encompasses several buildings in the area. Upon learning this fact, Fox decided to relocate so as not to violate any rules.

Fox said that Darling's proprietors welcomed the pop-up, which has also been granted permission to operate out of the Cambridge Community Center on Nov. 9 and 23. Neither MITIMCo nor Darling has responded to *The Tech*'s request for comment as of publication.

The pop-up's wares, mostly sourced from donations and the Internet, are wide-ranging and tend to sell for around $15 per purchase. They include Palestine-themed goods, including pins, wristbands, and keffiyehs, the traditional Middle Eastern headscarf that has become a symbol of pro-Palestinian activism.

Skylar Augusta Jakoujŏvic, a staff member at the pop-up, noted that she also embroiders keffiyehs, which increases the item's price from $50 to $75. In addition, Jakoujŏvic teaches participants the craft and history of tatreez, a traditional Palestinian embroidery technique, at the Palestinian café and restaurant Andala Coffee House every week in Central Square.

Ruth Economou has volunteered at the pop-up every Saturday morning for the past month and a half. In the past, she often felt "powerless and anguished about what's happening" in Gaza, and volunteering at the pop-up is a "simple and direct" way to help. Still, Economou believes that "it's not enough."



SABINE CHU—THE TECH

The pop-up sells traditional Palestinian keffiyehs, as well as embroidered ones made to order.

As the volunteers finished setting up, one passerby stood outside the pop-up and gave them a round of applause. "Thank you, good job!" the passerby exclaimed.

Fox has committed to holding pop-ups through at least the end of the year. She emphasized that the pop-up has allowed customers to turn "extra stuff into food, tents, and medicine" as well as their grief and anger into positive action. In an email, she told *The Tech* that she is currently working to create a larger nonprofit that will aid people affected by displacement globally; Thrift4Gaza would be a part of this effort.

Customers appreciated the cause and range of items at the pop-up. Emily Vu was "just walking down" and noticed the tables. She said that she hoped to "help in any way," even though she believed she couldn't do "as much as [she wanted] to."

Shannon Riley and Sarah Mullen were searching for a brunch place when they came across the pop-up, hoping to find Halloween costumes. Mullen said that it was "nice to find something that aligns with my values."

Ahmad Elrefaie and his wife, Nada Mohamed, stopped by the pop-up with Souha Saleh, Elrefaie's mother. "Anytime I see anything to do with Palestine, I'll stop," stated Elrefaie, a Palestinian-American. The couple, who lives in upstate New York, said that the urban environment of Cambridge is much more conducive to organic pop-up efforts than their area.

Before Oct. 25, Saleh, who lives in North Attleboro, had never been to the Gaza pop-up. Echoing her son's words, Saleh said that she notices "anything with Palestine" and does "everything [she] can" to advocate for her homeland. "It's amazing," Saleh said when describing the pop-up, adding that raising awareness for the Palestinian cause is "what [Gazans] need."

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Padilla shares his MIT experience and gives advice

PHOTO PROVIDED BY EDGAR RODRIGUEZ

U.S. Senator Alex Padilla '94 (right) while a Mechanical Engineering student at MIT.

Senator, from Page 1

ernor Gavin Newsom appointed him to the senate seat vacated by former Vice President Kamala Harris. He later won an election for a full term in 2022.

Padilla is the only current United States Senator who graduated from MIT, and he is one of six currently on Capitol Hill with ties to MIT. In the House, Rep. Thomas Massie '93 SM '96 (R-KY) and Rep. Luz Rivas '95 (D-CA) also completed their undergraduate education at the Institute. Rep. Jake Auchincloss MBA '16 (D-MA) and Rep. Chrissy Houlahan SM '94 (D-PA) both earned graduate degrees, and Rep. Marcy Kaptur (D-OH) briefly attended a PhD program at MIT. Padilla is also unique for being the sole former engineer in a Senate where nearly half hold law degrees — although the percentage of lawyers in Congress has been declining over recent decades.

According to *The New York Times*, Sen. Padilla is known in Washington for being "kind and nerdy" and not as "spotlight-seeking" as other politicians. Yet he has recently been attracting increased national attention in part due to his deeply personal resolve for issues that are top of mind for many Americans. Below is a transcription of *The Tech*'s conversation with the Senator.

The following has been lightly edited for length and clarity.

***The Tech*: How have your experiences at MIT prepared you for a career in public service? Have the problem sets or the engineering mindset helped you with thinking about politics? How did issues in California like Proposition 187 make you decide to change careers in the first place?**

Padilla: Well, to answer the first question: people do ask me all the time, how do you go from engineering to politics? Because for a lot of people, it may seem like a stretch. And I jokingly tell people: well, to me, it's pretty logical — engineers are trained to solve problems, and I think that's what policymakers are supposed to be doing. That's why people run for city council. That's why people run for the legislature. That's why people seek office, including in the United States Senate. There are a lot of issues to work on. And we do need more of that critical thinking, problem-solving approach to govern and improve the lives of people across the country.

The full story is, as you mentioned, when I first returned home from MIT — right after graduation — there was this measure on the ballot in California known as Proposition 187. It was the first major sort of immigrant scapegoating, villainizing political effort that I recall not only observing but also experiencing. The negativity in that campaign was very, very palpable. So even though I was at the point of beginning my career, I knew that I needed to get involved in electoral politics to try to defend the honor of the community that I grew up in, including my own family, and try to move California in a better direction. The engineering degree still looks nice on the wall, but I never looked back in terms of public service. I started off with campaign and organizing work. A few years later, I ran for office and I've worked in city government, state government, and now at the federal level.

Along the way, I really do think that my MIT education has been very helpful. If you look at some of the most critical policy issues today — whether it's tackling climate change, improving healthcare, cybersecurity, or even leveraging the promise and potential of new technology like artificial intelligence — having technical background and proficiency is extremely valuable in thinking through these big questions.

***TT*: What advice do you have for MIT students who have aspirations in public service, but don't know where to start?**

Padilla: I think it's great to have aspirations in public service. And it's not an either/or — I think everybody, regardless of your degree of study, is passionate about some issue, and there are opportunities to weigh in civically on those specific issues. Public service comes in many shapes and forms. It doesn't require you to run for office to be engaged. There's a lot of opportunities to serve on different boards or commissions to lend your perspective and expertise. Even being on staff in a policymaker's office or in a relevant department or agency can help inform public policy and key decision making.

So my advice, I think, is first for somebody to consider what issue it is that they're passionate about — maybe it's climate change, maybe it's healthcare, maybe it's improving education, maybe it's immigration, maybe it's something else — because that can at least serve as a guide to pursuing opportunities at the federal level, or the state level, or the local level. So that's number one. But there's no shortage of opportunities to be a volunteer or an intern initially, just to get your foot in the door.

***TT:* Marc Rowan, an author of the White House's college compact, wrote in an op-ed that elite colleges lack ideological diversity, and that the government should play a role in reform since taxpayers fund research. What do you say to that? How do you feel about the President's position on higher education, research funding, and MIT's decision on the compact?**

Padilla: So a few things: First of all, their claims couldn't be any further from the truth. A lot of the best universities in America are good because of their diversity [of people] and diversity of thought on campus. The rigorous intellectual debate that is part of the learning experience at these schools is created by the diversity on campus. So that's what I think about that. I am proud that MIT was the first university to say no to the proposed compact and the conditions that the Trump administration is seeking to impose.

But I would also like to remind ourselves that there's a bigger picture here: for as much as the Trump administration would like to reshape institutions of higher learning to align with their values and vision sets, their target is not just universities. He has politically pressured Congress to try to do his bidding and fulfill his agenda; he's trying to reshape the judiciary to grant him unprecedented powers; he has gone after media organizations — not just the Paramounts, the CBSs, and the cancellation of Stephen Colbert, but look at what happened with Jimmy Kimmel not that long ago.

Nonprofit and advocacy organizations are his target, and universities are as well. So universities are part of a more comprehensive attack on our democratic institutions and our norms as a country that this Trump administration is focused on.

***TT*: Immigration is obviously very important to MIT and, more broadly, to research. Recently, the White House has cracked down on immigration and announced fees for H1-B visas. What's your vision for ideal immigration policy in the United States?**

Padilla: Again, the best universities in America are good because of the diversity of thought and perspectives that faculty and students bring, which lead to rigorous debate and critical thinking as we solve problems. And I think it's important to maintain that our immigration system as a whole in the United States is in desperate need of modernization. But as we update our politics, our programs, and our systems, we should keep in mind the benefits of diversity and inclusiveness in our economy, in our education system, and beyond.

***TT:* We want to end on a hopeful note, so what's your hope for higher education policy going forwards?**

Padilla: My hope for higher education policy is that colleges and universities stick to their values and their commitment to training the leaders of tomorrow. And I know that I speak for a lot of my colleagues when I say that we should be investing more in our universities, in research, and in students — not less.

Sabine Chu '26 contributed to reporting for this article.

6.1200 ASE starts in 2026

The first exam is on Jan. 26 from 1-4 p.m.

By Rohan Dhillon

In September, the EECS Department posted on their website that they would start offering an Advanced Standing Exam (ASE) for 6.1200 (Mathematics for Computer Science) this IAP. The first sitting will take place in person from 1–4 p.m. on Jan. 26, 2026.

The course is a degree requirement for MIT's popular 6-3 and 6-4 majors and is a prerequisite option for many subsequent theoretical computer science classes like 6.1210 (Introduction to Algorithms), which is a requirement in almost all Course 6 degrees.

In previous years, however, the EECS department noted that "courses with a 6.120[0] prerequisite often enforced this prerequisite in an ad hoc fashion." Now, students who "enter MIT with prior experience in discrete mathematics and writing proofs" can take the 6.1200 ASE to "demonstrate that understanding and earn credit for it." In other words, the ASE is meant to "create a clear and consistent system" for determining whether students are ready for further computer science courses.

A substantial fraction of students take 6.1210 in their freshman year. According to the internal EECS Information System page "Who's Taken What," 30.9%, or about a third of Course 6-3 students took 6.1210 in their first year; this percentage is based on transcript counts that includes students who received their SB in Course 6-3 after Fall 2017 and onward. For the past few years, in order to take 6.1210 without 6.1200, students had to "waive" 6.1200 as a prerequisite. The "waiver" usually consists of freshmen signing up for 6.1210 and either receiving no complaints from their advisor, or obtaining approval from an instructor in 6.1210.

Merely waiving 6.1200, however, does not absolve students from taking some discrete math course during their time at MIT. Students who begin with 6.1210 must substitute a discrete math course — such as 18.600 or 18.05 — for 6.1200 to satisfy degree requirements for applicable computer science majors.

The EECS department has stated that beginning in spring 2026, the 6.1210 instructors will require students to "have passed either 6.120[0], or 6.120[0]A plus a probability course, or the 6.120[0] ASE." This information is mirrored in the syllabus of 6.1210, which states that "prerequisites will be strictly enforced starting in Spring 2026" even though "as of Fall 2025, they are not strictly enforced."

Unlike many other popular ASEs, the Theory of Computation Group — the subset of EECS faculty who oversee theoretical computer science courses like 6.1200 and 6.1210 — plans to only offer the 6.1200 ASE once per year, during IAP. Their reasons are not immediately clear.

Alan Duan '29 mentioned that he came into MIT feeling fairly comfortable with proofs and is glad he does not need to take a 12-unit class when he could instead show his knowledge through a three-hour exam, though he is slightly frustrated that 6.1210 has made 6.1200 an enforced prerequisite.

Ray Zhang '29 is currently taking 6.1210, but doesn't wish to take a future class merely to satisfy the 6.1200 requirement for the computer science degrees he is considering. Although he doesn't need 6.1200 to satisfy prerequisites, he is glad he can take the ASE to get credit for the class.

Second "No Kings" protest attracts thousands

MIT student groups and alumni attended the event at Boston Commons on Oct. 18

By Vivian Hir, Sabine Chu, Samuel Yuan
NEWS STAFF

From 12 to 3 p.m. on Saturday, Oct. 18, tens of thousands of people gathered at Boston Common to protest President Trump's administration. This event was part of a second installation of the nationwide "No Kings" series of protests, the first of which was held this June. It is organized by a coalition of groups including 50501, Indivisible, and large labor unions. Saturday's event attracted over seven million people in around 2,700 protests across the country, including hundreds of events in the New England area.

In the four months since the previous "No Kings" protests, the President's nationwide approval ratings have only slightly declined. Yet, to many who attended the rally, much has changed in terms of policy and precedent.

Recently, President Trump has sent National Guard troops to several heavily left-leaning cities, including Portland and Los Angeles, in an effort to preserve "law and order." He has also cracked down on unauthorized immigration via mass deportation, sought to limit lawful immigration, and dramatically reduced the size of the federal government.

Moreover, the current Department of Justice has filed charges against some of the President's political enemies — moves that some see as retribution for attempts at prosecuting Trump during his 2024 presidential campaign. There has also been significant controversy over President Trump's associations with the disgraced financier Jeffrey Epstein.

In light of these recent events, courts have been facing tough questions about the balance of executive power. This term, the Supreme Court will tackle a docket full of soon-to-be landmark cases that will define the bounds of the President's authority. Furthermore, the October protests occurred during a government shutdown that has become a political headache for both parties and instilled uncertainty for tens of thousands of federal workers, including in Massachusetts.

The Boston event drew several high-profile Bay State politicians, including Boston Mayor Michelle Wu, who kicked off the event with a speech, as well as the state's Attorney General Andrea Joy Campbell, U.S. Senators Ed Markey and Elizabeth Warren, and U.S. representatives Katherine Clark, Ayanna Pressley, and Seth Moulton. In addition, representatives of organizations including the American Civil Liberties Union (ACLU) and Boston's New Roots AME Church spoke at the event.

Besides speeches, the event also included performances from various musicians and bands. Emcee Rahsaan Hall, President and CEO of the Urban League of Eastern Massachusetts, argued that music and protest are interconnected, citing singer Aretha Franklin's protest anthems during the 1960s Civil Rights Movement. Songs performed at "No Kings" stayed on theme by celebrating freedom and decrying war, and the performers encouraged the audience to sing along and dance.

Mayor Wu called the rally a "national day of action," and proudly proclaimed that "every day is a 'No Kings' day" for the past 250 years of U.S. history. Wu highlighted Boston's significance in the country, stating that Boston Common was the first public park in the U.S., and noted that the city is home to many immigrants and workers. She criticized the Trump administration for its recent Immigration and Customs Enforcement (ICE) deployment surge in Boston, stating that "Boston doesn't back down" and that "our city is not for sale."

In her speech, Attorney General Campbell said that she has filed nearly 40 lawsuits against the Trump administration, and has fought for the protection of the state's funding in public school education, healthcare, and investments. Campbell applauded the audience for attending the rally, stating that collective effort is essential to "win[ning] this fight." Citing her difficult upbringing, Campbell said that she understands what "struggle" feels like, but also knows what "faith" looks like, referring to the rallygoers.

U.S. Senator Elizabeth Warren of Massachusetts began her speech by underscoring the state's important role in the country's founding history, from the Boston Tea Party in 1773 to the Patriot army's victorious Siege of Boston in 1776. Warren condemned Trump as a king who "wants to put on a shiny little crown and prance around." Warren also disagreed with Republican politicians who called the protests "anti-American," arguing instead that the demonstrators' commitment to protecting democracy and standing up to the Trump administration was a testament to the patriotism of "No Kings."

On the other side of the political aisle, Speaker of the House Mike Johnson, Republican from Louisiana, congratulated protestors for conducting a "violence-free, free-speech exercise" but decried the events as "hate America rallies" that serve as a "cover" for Senate Minority Leader Chuck Schumer. "The irony of the message is pretty clear for everyone. If President Trump was a king, the government would be open right now," Johnson added in an interview.

At the event, protesters held picket signs and posters with messages criticizing President Trump and his administration's actions, such as mass deportations and threats to freedom of speech. A few wore satirical costumes mocking Trump, including one attendee donned with a full face of orange makeup, a golden golf club, and a royal cape, drawing significant attention from protesters.

VIVIAN HIR – THE TECH

Rev. Mariama White-Hammond from the New Roots AME Church gives a speech at the No Kings Rally on Boston Common on Saturday, Oct. 18, 2025.

Some attendees dressed up in inflatable animal costumes, including unicorns and frogs, to challenge assumptions from Republican politicians that the rally was hateful and anti-American. Protesters chanted, "The people, united, will never be defeated!"

The Tech spoke to multiple MIT affiliates attending the event. Steve Atkins '91 SM '93 PhD '98, now a resident of Westford, shared that he was "glad that MIT rejected the administration's attempt at bribing universities." Referencing the Life is Good shirt he was wearing, he added, "'Peace, Love, Science' seems to summarize it pretty well."

Alumna Marnie Crawford MBA '78, daughter of renowned former MIT Economics Professor Paul Samuelson, stated that her father would have been proud of MIT for not signing the college compact. Referencing the Vietnam War protests, she said that her generation has "been protesting since we were in our 20s."

MIT Graduate Student Union (GSU) President Lauren Chua G came with a group of GSU members to the event because they "wanted to stand up against attacks on working groups," citing that many people "across the board" have been impacted by the Trump administration's actions.

First-year graduate student Ben Weiss G said that he felt "hope seeing this many people" at the protest. Echoing many, he called the present a "moment in history where there's a clear movement against democracy." Weiss was excited to protest "in the context of a collective like MIT students."

Of course, the vast majority of protesters were not affiliated with MIT. David Greenleaf, an Arlington resident, carried a poster that said "Nixon wasn't so bad." He told *The Tech* that Trump's behavior had a "habituation effect" on the American public, who went from a "decisive response" in the Watergate era to being "rattled" by Trump's "quantum leap." Greenleaf said, "To have a voice of opposition is so important right now."

Jennifer Reif is from Seattle and happened to be in Boston on the 18th. Nevertheless, she attended "No Kings" because she "wanted to show up." Reif stated that she fears for "our country," as well as "my children and everyone's children." Emphasizing America's status as a global superpower, she added, "It's not just our country," but also the country's image.

As America's political left protests the Trump administration, it also contemplates its own way forward. Following a dramatic loss in the 2024 presidential election, when former Vice President Kamala Harris emphasized democratic norms but was accused of lacking concrete policy positions, Democrats are striving to define themselves beyond their opposition to Trump.

Some, like Zohran Mamdani, the 34-year-old self-identified Democratic Socialist who shocked the nation by winning New York City's mayoral primary in June, have chosen to focus on everyday issues like affordability, housing, and transit while maintaining an unabashedly left-leaning public image. Others, such as Michigan Sen. Elissa Slotkin or Maine Rep. Jared Golden, have urged a move towards the center.

Despite the "No Kings" rally's message of unity, two of the speakers at Boston's event exemplified two of the major rifts — age and ideology — that have emerged in 2025's Democratic party. Senator Ed Markey, the 79-year-old junior senator from Massachusetts, is a committed progressive who co-sponsored the Green New Deal. On the stage, Markey draped himself in a trans pride flag and said, "We do not coronate; we liberate. We do not agonize; we organize," which elicited cheers from the audience.

On the other hand, Rep. Seth Moulton is far more centrist. The representative, age 46, announced earlier this week that he will challenge Markey in the upcoming primary for the Democratic candidacy for Senate. In November 2024, Moulton suggested that Democrats should spend their time "being brutally honest about the challenges many Americans face," instead of "trying not to offend anyone." Moulton continued by criticizing "male or formerly male" athletes on "a playing field" with "little girls," a seeming dig at transgender athletes.

When Moulton spoke at the "No Kings" protest, he was met by boos from some attendees. According to MassLive, one attendee cried, "You sold out trans kids!"

Despite these interruptions, the protesters remained largely unified. During her remarks, Rep. Ayanna Pressley celebrated allyship, encouraging the crowd to "draw strength from each other." Pressley ended with a rallying cry: "Peace over war; hope over fear, love over hate; freedom over fascism. No Kings!"

Stata Center's Forbes Cafe now offers breakfast

The hot breakfast includes omelets, pumpkin spice pancakes, bacon, and more

By Vivian Hir
NEWS EDITOR

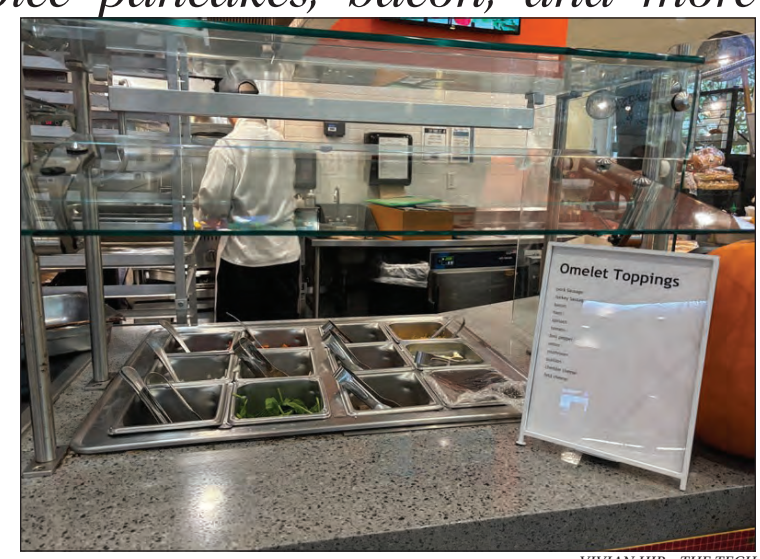
Starting on Oct. 6, the Forbes Family Café in the Stata Center has begun to offer breakfast from 7:30 a.m. to 9:30 a.m. The new offering is an expansion of the existing Dean's Beans shop, which mainly serves coffee, pastries, and snacks. Besides Forbes Café, on-campus breakfast options include Bosworth's Café in Lobby 7, Courtyard Cafe in Hayden Library, and 100 Main Marketplace at Sloan. Senior Director of Campus Dining Andrew Mankus said that the office is "excited" about the new service and expects regular weekday customers to eat at Forbes Cafe.

According to Eric Macharia, Director of Operations for Bon Appétit Management Company, Bon Appétit wanted to offer breakfast at Forbes Café to "increase morning service coverage and meet demand for hot breakfast options in the Stata Center," given that previous offerings were limited to coffee and pastries at Dean's Beans. The hot breakfast menu includes omelets ($6.99), pumpkin spice pancakes ($2.79), and sides like bacon ($1.29). In addition, Forbes Café also offers grab-and-go items such as Chobani yogurt and overnight oats.

Macharia stated that Bon Appétit Management wants to "go beyond simply serving customers" and recognizes Forbes Café's status as a major community hub. Currently, the team is modifying the menu to include "high-demand" items and introduce targeted promotions for greater morning traffic. Furthermore, the team is creating a feedback system and conducting reviews to improve the breakfast menu.

Although business has been slow, customers appreciate the hot breakfast. Michelle Antunes, a financial assistant for the Kavli Institute, got tater tots, pumpkin spice pancakes, and an omelet for breakfast. With a long commute that requires her to leave home early, she anticipates buying breakfast at Forbes Café in the future. Atunes considers the hot breakfast options an improvement from Dean's Beans, finding the previous selection of pastries and yogurt to be limited. "I am really happy they have done this," Antunes said. "I think this is great."

The daily menu for breakfast at Forbes Cafe can be found at mit.cafebonappetit.com/cafe/forbes-cafe/.



VIVIAN HIR—THE TECH

The omelet line at the Forbes Family Cafe in the Stata Center on Monday, Oct. 20, 2025.

Cambridge residents rally to promote bike safety

Cambridge Bike Safety advocates for safer road infrastructure for cyclists

PHOTO PROVIDED BY ALEXA GOMBERG

MIT Graduate Student Council Bike Safety holds an orientation in Kendall Square.

By Beatriz Valero de Urquia, Grace Zhang

On June 21, 2024, MIT PhD student Minh-Thi Nguyen was killed by a truck turning right on Portland St. from Hampshire St. while riding her bike from her home in Cambridge to campus. "That morning, I left the house probably 10 minutes before her to get to work," said fellow PhD student Alexa Gomberg G, Nguyen's childhood friend and then-flatmate. Gomberg recalled Nguyen's steadfast attention to safety while biking, even buying her a helmet when the two started biking around Cambridge. "We hit the same route every single day," Gomberg recalled.

Nguyen's death caused immense pain to many in the MIT community. "I could not believe it, because she was so full of life," said Catherine Benedict G, another close friend of Nguyen. They had been texting the morning Nguyen died; the two had planned to attend a concert together the very next day.

Yet Benedict stressed that she doesn't consider Nguyen's death an accident, as she believes the existing road infrastructure played a part in the tragic event. "Our government is capable of making safer biking infrastructure," Benedict said.

Both Benedict and Gomberg joined Cambridge Bike Safety after their friend's death, hoping to prevent similar tragedies from happening. "It's really meaningful to be in a group of people who didn't know Minh-Thi, but that care so much about making sure that what happened to her doesn't happen to anyone else," Benedict said.

Advocating for bike safety

Cambridge Bike Safety (CBS) is an advocacy group of Cambridge residents interested in promoting safety for cyclists of all ages and abilities. The organization was formed after the death of Amanda Phillips, 27, who was hit by a truck in 2016 while cycling in Inman Square. Although the District Attorney's report found that Phillips's fatal crash was "unavoidable," CBS argued that "protected bike lanes would have saved Amanda's life." Since then, the group has worked to promote laws that protect cyclists' life and create a complete network of separate bike lanes connecting the city of Cambridge.

The deaths of cyclists like Phillips, Nguyen, and others (such as John H. Concoran, 62), have led to improvements in bike safety at the sites of certain fatal crashes. However, Benedict said it seems like the city is "playing 'whack-a-mole.'" According to her, the city seems to redesign infrastructure only "if someone dies in this area," rather than preventing crashes by building a complete network of separate bike lanes.

In the past five years, Boston and Cambridge logged 2,287 roadside accidents involving cyclists, and six people have lost their lives while cycling in Cambridge in the last decade. The Cambridge Police Department's data reports an average of 160 crashes per year between 2000 and 2015. CBS claims the installation of protected bike lanes would prevent 40% of crashes, mainly those that occur away from intersections; these include doorings, sideswipe crashes, rear-end crashes, and head-on crashes.

CBS's advocacy led to the passing of the Cycling Safety Ordinance (CSO) in 2019, requiring Cambridge to construct separated bike lanes when streets are reconstructed. The CSO was amended in 2020 to include the goal of approximately 25 miles of separated bike lanes by 2026, or five miles per year. The streets selected for this target include all of Massachusetts Avenue, Broadway from Quincy St. to Hampshire St., and Cambridge St. from Oak St. to Second St. According to the City's Fourth Annual CSO Report, 14.22 miles of bike lanes were installed or under construction by April 2024.

The long road ahead

Shortly before Nguyen's death, the Cambridge City Council voted to delay the installation of these separated bike lanes by 18 months, citing inadequate planning for disruptions to traffic patterns and small businesses, alongside parking issues. Only after Nguyen and Corcoran's deaths did the Council reinstate some deadlines: the bike lanes on Cambridge St., Main St., and Broadway were scheduled to be completed by November 2026.

CBS members stressed that the job is not yet finished. "It takes a lot of people to make something happen," said CBS member and MIT lecturer Christopher Cassa '03 MEng '04. Even though the City Council has long sought to make the city's streets safer for cyclists, Cassa observed that concrete measures would often take too much time to be implemented, or get derailed by opposing interests and priorities.

After the passage of the CSO, CBS's "number one priority" shifted towards the punctual completion of the bike network, according to Benedict. She and Gomberg helped organize events such as the "Ride for Your Life" bike ride in November 2024 to memorialize Nguyen and other victims while demonstrating public support for cyclist safety policies.

To encourage safer practices among individual cyclists, CBS has promoted the usage of helmets and night lights. Volunteers raise awareness about biking best-practices at schools, give away free bike lights, and host educational panels.

CBS has also supported automated enforcement for speeding and red-light cameras through a petition to the state legislature. The City Council has since agreed to draft a petition requesting the authority to use automatic cameras for enforcement, an achievement Gomberg believes to be "thanks in part to [CBS's] advocacy."

The role of trucks in bike accidents

Although Gomberg recognizes that the state of Massachusetts has "some of the best truck safety regulations in the country," she believes there's still room for growth.

Nguyen's death was caused by a "right hook crash," a collision in which a driver turns right and hits a cyclist or pedestrian. What makes these crashes more deadly is the likelihood of the victim getting stuck in the space between the truck's wheels. Two weeks before Nguyen's crash, Kim Staley, 55, was killed in Cambridge "in the exact same way," according to Gomberg.

To protect pedestrians and cyclists, countries such as China, Brazil and members of the European Union have mandated the installation of lateral protective devices (LPDs), barriers that cover the open space between the front and rear wheels of a truck. Currently, Cambridge's Truck Safety Ordinance requires the installation of such devices, but only for "Large Vehicles" used by vendors under city contracts. After the 2024 crashes, the City Council voted unanimously to ask the City Manager to extend truck safety legislation, including these provisions. For Gomberg, this is the "biggest safety issue," as she believes these devices "could have saved my friend's life."

Alongside Harvard and Boston University, MIT now requires that their own trucks have LPDs. However, not all its vendors' trucks do. In response, Gomberg encouraged the creation of a working group on bike safety with the support of MIT's Graduate Student Council.

The first step was creating awareness of the severity of the problem. In June 2025, MIT published the results of a survey of its vendors' truck safety measures, which concluded that "the greatest opportunity for improvement" is the use of LPDs. Moreover, following MIT's communication to the vendors, "Eight [...] noted they were ordering and would install these devices."

"I think that our advocacy and bringing this issue forward after Minh-Thi's crash is really what spurred that action and that survey," Gomberg said. Now, her goal is to encourage similar efforts from other schools. "I'm hopeful that further action will get more vehicles to be safer."

In addition to truck safety, Gomberg is working to create a form where MIT students can report the places where they've had crashes and near misses. At the same time, she hosts "bike-safety-focused rides" to help students feel safer cycling in Cambridge, conducted in collaboration with the MIT Office of Graduate Education, MIT Police Department, and MIT Transportation.

A city with more cyclists

In 2024, Cambridge was recognized as the second-best US city for biking. The 2023 Biking in Cambridge Data Report showed a 23% increase in Cambridge residents bicycling to work from 2018 to 2022.

"So much progress has been made since I moved here," said Cassa, who has lived in the city since the start of his undergraduate degree and has been able to witness how the city has increasingly accommodated its biking community. Although infrastructure and attitudes regarding biking have "transformed dramatically," he emphasized that work still needs to be done to ensure the safety of the city's roads. He was involved in a crash himself a couple of years ago, and admitted that it was hard to get back on a bike after the experience.

According to a 2020 survey, 53% of residents did not bike in 2019, but 85% of residents who biked once wanted to bike more in Cambridge. People cited safety as the main barrier to biking, with 89% of non-biking residents reporting they do not feel safe doing so. Moreover, research published in 2025 in Nature Cities showed that protected bike lanes are associated with nearly double the number of bike ridership, compared to standard bike lanes.

In Cambridge, biking is not only a mode of transportation, but also a way to engage with the community. In Cassa's case, biking was "a staple" of his life as a student, and is now a "powerful" way in which he can feel much more connected to campus than if he was simply driving to class.

Gomberg, Benedict, and Cassa stressed that the MIT community is crucial in promoting bike safety efforts. MIT sponsors four Bluebike stations, with a total of 207 docks, on campus. According to the 2024 MIT Facts booklet, the MIT community completed more than 633,600 bike-share trips in 2023. In 2019, the most used Bluebikes station in the entire ride-sharing system — recording nearly 120,000 trips — was the one at the corner of Massachusetts Avenue and Amherst St. on MIT's campus.

Voting for pro-bike change

"Bike safety is a critical issue for MIT students," Benedict said. She encouraged students to be safe when biking, get involved in community advocacy, and to register to vote in local elections.

The Cambridge Bicycle Safety Independent Expenditure Political Action Committee, which works to elect pro-bike safety Cambridge City Council candidates, recently published its endorsements for the upcoming elections based on candidates' responses to their questionnaire and voting track record regarding bike safety issues. The seven "Bike Champions" include former Mayor of Cambridge Sumbul Siddiqui and Burhan Azeem '19, an MIT alumnus and current city councilor.

"Even if you don't bike, someone you know [does] and loves bikes," Benedict said. She emphasized that if a "pro-bike safety" City Council is elected, "we won't have to fight for every single street." The Cambridge City Council Election will be held on Nov. 4, 2025, with voting registration due on Oct. 25, the same day early voting will begin. MIT students who are U.S. citizens and will be at least 18 years old on or before Election Day are eligible to vote in the election.

"If you walk or bike in Cambridge, you deserve safer streets," said Cassa, emphasizing that it is "critical" that students' and cyclists' rights are represented. Benedict added, "None of us are safe until all of us are safe."

MIT Divest criticizes Knutson's role in lobbying

VPGA, from Page 1

George W. Bush. As the Task Force's Deputy Director, Knutson led the drafting of the nation's energy policy. Environmental groups later found that the energy report was influenced by oil and gas companies, including British Petroleum and the now-defunct Enron Corp. From 2007 to 2011, Knutson was the chief of staff for Senator Lisa Murkowski (R-Alaska).

Save for a brief stint at Tyson Foods, Knutson has served as a lobbyist for oil and gas companies over the past decade, ranging from Oxbow Corporation to General Electric Oil & Gas to Chevron. Oxbow, her employer from 2011 to 2015, is a vendor of natural gas and refinery byproducts owned by businessman William "Bill" Koch '62, SM '63, PhD '71, a member of the Koch family known for his considerable donations to Republican candidates.

Describing Knutson's role as vice president and general manager for governmental affairs of Chevron, President Sally Kornbluth lauded her for "advoca[ting] for [Chevron's] new energy portfolio, from hydrogen to carbon capture, utilization and storage." According to a 2023 Chevron lobbying and trade associations report, Knutson was responsible for shaping energy security and development policies. Opensecrets reports that Knutson's cumulative lobbying activity for the oil and gas industry has amounted to over $46 million. In 2024, *The Hill* included Knutson in their list of top corporate lobbyists.

A Q4 2024 LD-2 disclosure report for Chevron cites the company's lobbying activities across many areas, including "access to oil and natural gas resources on public lands" and "carbon capture and sequestration" — basic tenets of Chevron's traditional petroleum operations. According to Opensecrets, Chevron has spent $6.35 million on lobbying so far in 2025.

While Chevron has expressed interest in transitioning to sustainable energy, critics accuse the corporation of greenwashing — that is, hiding fossil fuel interests behind misleading environmental messaging. In a dormspam email sent on Oct. 23, Skipper Lynch '26 wrote on behalf of MIT Divest: "MIT's shameful decision to appoint fossil fuel lobbyist Karen Knutson is yet another way that MIT remains invested in climate injustice."

Although MIT founded the Climate Project in 2024, the Ad Hoc Committee on Climate-Related Industry Engagements has yet to come to a decision on whether the Climate Project should engage with fossil fuel industries. In the past, the MIT Energy Initiative (MITEI) received funding from major fossil fuel companies, including Exxon Mobil and Shell, drawing criticism from MIT Divest and other environmentalists on campus.

MIT's endowment rises 11.4% in 2025 fiscal year

The Institute's net assets reach an all-time high despite federal pressures

By Samuel Yuan and Alex Tang
NEWS STAFF WRITERS

The Institute reported a strong gain in net assets for the 2025 fiscal year ending on June 30, 2025. According to the Report of the Treasurer released on Oct. 10, MIT's net assets now stand at $37.7 billion, up from $33.6 billion last year; its endowment grew by 11.4% to $27.4 billion. This year's numbers, combined with a modest increase in assets from the last fiscal year, propelled the Institute's highest ever net asset value.

The numbers

The Institute posted a net operating surplus of $425.9 million. Executive Vice President and Treasurer Glen Shor highlighted philanthropy as a "significant contributor to strong growth in revenue." In fiscal 2025, philanthropic contributions rose 13.2% to nearly $680 million. Shor wrote that the increase was due to positive returns on donor-endowed pooled investments and new gifts and pledges.

Pool A, which is MIT's primary investment pool, netted a 14.8% return in fiscal 2025, a marked increase from the 8.9% reported in fiscal 2024. Furthermore, Pool A outperformed the S&P 500 over the same time frame.

For MIT faculty and staff, the basic retirement benefit pension plan's assets increased nearly $700 million to a total of $6.2 billion, and the retiree welfare plan's assets rose to $1.1 billion.

Meanwhile, operating expenses climbed 7.0%, a result of the Institute's investments in long-term capital projects and broader cost trends.

Peer institutions performed similarly

On the basis of the endowment return alone, the Institute fared similarly to peer institutions. Harvard reported an 11.9% increase, but reported its first deficit of over $100 million since the pandemic, as it continues negotiations with the Trump administration. Stanford reported a 8.5% increase. The University of Pennsylvania, had a 12.2% increase. At the time of publication, Yale and Princeton have yet to report their returns for fiscal 2025.

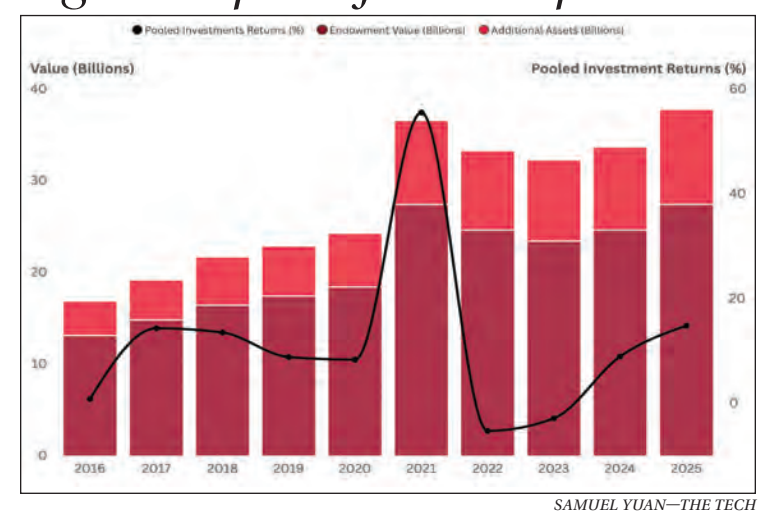
Uncertainty trickles down

Although the Institute fared well in fiscal 2025, Shor wrote that this year's report was clouded with "with accompanying caution and concern." According to Shor, in fiscal 2027, the "endowment tax" will increase six fold from 1.4% to 8%. Recently, MIT rejected the White House's compact for federal funding preferences.

Earlier this year, MIT filed lawsuits against the National Institutes of Health (NIH) and the Department of Energy (DOE) for imposing caps on indirect costs, including costs for equipment and building maintenance. Data from MIT's Office of the Vice President for Research obtained by *The Tech* showed that in 2024, the NIH and DOE were MIT's largest and sixth-largest sponsors of funding, respectively. The NIH accounted for 20.8% of sponsored research funding, and the DOE represented 10.6%.

The Institute is continuing to pursue steps towards maintaining financial vigilance. In September, MIT Provost Anantha Chandrakasan and Executive Vice President and Treasurer Glen Shor announced the formation of a "Financial Scenarios Working Group." In a letter to the MIT community, Provost Chandrakasan also noted the importance of donations for the Institute.

"Like the other institutions affected by this [endowment] tax hike, MIT has turned endowed gifts from generations of alumni and friends into a substantial charitable resource," Chandrakasan wrote.



SAMUEL YUAN—THE TECH

MIT endowment and investments performance from fiscal year 2016 to 2025. Data from 2025 Report of the Treasurer.

Family Weekend '25

Parents enjoy MIT's campus

LEVY LE—THE TECH

The MIT Alumni Association puts a sculpture of MIT's logo on campus between the Stud and Lobby 7 on Wednesday, Oct. 22, 2025.

By Vivian Hir
NEWS EDITOR

From Oct. 24 to Oct. 25, hundreds of MIT families attended Family Weekend, a two-day program with over 50 events, including open classes, department receptions, student group events, athletic games, and musical performances.

On Friday, Oct. 24, families experienced academic life at MIT. Many sat in on lectures across various departments, from 7.012 (Introduction to Biology) to 6.6400 (Applied Quantum and Statistical Physics). In addition to open lectures, various departments — such as Mathematics and Mechanical Engineering — held receptions with opportunities to talk with faculty and learn more about relevant academic programs.

The day concluded with the Annual Family Weekend Concert, which featured the MIT Wind Ensemble and MIT Festival Jazz Ensemble. The repertoire primarily showcased pieces with a joyful tone, including Shostakovich's *Festive Overture* and Dvorák's *Slavonic Dances* No. 3.

The next day, families watched athletic games and participated in events hosted by student groups and FSILGs. Notable events included the Department of Chemistry magic show and the Glass Lab tour. Family Weekend concluded with an a capella concert featuring all ten MIT student a capella groups, from the Logarhythms to Asymptones.

The Tech spoke with a few parents about their Family Weekend experience.

Marina Rolbin from Colorado sat in on her son's classes, which were 5.111 (Principles of Chemical Science) and 18.02 (Multivariable Calculus). Although she did not understand the material taught in the classes, Rolbin said that "[the] professors were great."

John and Lily Frimprong from Virginia went to the Black Student Union (BSU) cookout, describing their experience as "awesome" and "amazing" because they met many families and students. Other affinity groups, such as the MIT South Asian Association of Students (SAAS) and Latino Cultural Center (LCC), also held events during Family Weekend, such as "Chai and Chaat" and "Cena a Las Seis," respectively.

For Yu Zhou from New Jersey, this year marked her fourth Family Weekend. She was motivated to come back to visit her daughter and "enjoy the beautiful campus." Zhou enjoyed touring the MIT Glass Lab and viewing the animations of MIT Borderline's augmented reality-enabled murals in the tunnels below campus.

Michal and James Holmes from Montana had a positive experience at Family Weekend, as they got to visit their son and learn more about academic programs like Terrascope. "We met a few of his buddies that he has made here, so that was cool," Michal Holmes said. "Just seeing him was great."

Chandrakasan: "We're problem solving from day 1"

Provost, from Page 1

Generative AI Impact Consortium (MGAIC).

Chandrakasan added that these platforms and initiatives are a great way for the Institute to receive and distribute funding "through a competitive process." He said that he expects this funding to trickle down to students, researchers and staff working on these projects.

Industry and innovation

When Chandrakasan was announced as the new provost, his colleagues praised his commitment to driving innovation and fostering connections between research institutions and the private sector. As the inaugural CISO, Chandrakasan founded industry initiatives such as the MIT-IBM Watson AI Lab and the MIT-Takeda Program. He will continue to engage in these initiatives, as he now oversees the Office of Innovation and Strategy.

One new initiative that Chandrakasan became involved in is the MIT-MGB Seed Program, a collaboration between the Institute and Mass General Brigham with support from Analog Devices, Inc. MIT-MGB will fund joint research projects that advance technology and clinical research in human health with the goal of developing next-generation therapies, diagnostics, and digital tools.

Chandrakasan said that this model of collaborating with hospitals and companies will "unlock access to incredible health data" and "allow us to create cures for rare diseases." Although he recognizes that there is brilliant research happening in these fields, he believes that faster progress must be made to make the most impact. "My goal is to say, 'How are we not just going to do the basic research? How are we going to accelerate this out to commercial?'" Chandrakasan said.

How AI will reshape research and education

When asked about the use of artificial intelligence (AI) models in higher education, Chandrakasan stated, "Every field is going to be impacted." The provost expects AI to transform research and education, but admitted it's too soon to know exactly how. According to him, more information needs to be collected to determine how MIT can best leverage AI in education and research.

Despite these open-ended questions, Chandrakasan believes that some applications of AI are improving education; for example, large language models (LLMs) can help students learn by acting as "personalized tutors." He also highlighted recent initiatives such as Universal AI, a series of modules that teach the underlying theories, concepts, and technologies of artificial intelligence.

"Sloan has already incorporated [AI tutors] into some of their classes, and that's the baseline," Chandrakasan said, pointing out that this approach could extend to personalized support for UROPs or research initiatives, particularly in cases such as curating information.

Chandrakasan added that he has seen interesting work in the usage of generative AI in classes or software design. "These experiments are going to be very important and insightful as we lay out a full road map of technologies," he said. Initiatives such as MGAIC are expected to support this research. So far, MGAIC has granted funding to 60 projects that aim to explore high impact uses of generative AI models.

In addition to academia, Chandrakasan would also like to leverage AI in other fields. "The vision of the college is to create computational bilinguals," he said.

Thoughts on finances

In a letter to the MIT community sent last month, President Sally Kornbluth said the university faces "significant new financial pressures" that include an increased tax on its endowment, which will rise from 1.4% to 8% in fiscal year 2027.

When asked about these challenges, Chandrakan admitted there is a "lot of activity happening," pointing out that the increased endowment tax imposed on MIT amounts to $300 million per year. "We greatly rely on the endowment payout for us to operate the Institute, and that's a large amount of recurring costs that we have to absorb," he said.

To address these challenges, Chandrakasan and Executive Vice President and Treasurer (EVPT) Glen Shor have formed a Financial Scenarios Working Group to hear from experts and faculty. Chandrakasan emphasized the importance of considering various factors, and added that the university is currently doing "as much as [they] can, centrally, to minimize the impact on the academic programming."

Despite the future budget reductions, Chandrakasan wants to prioritize and preserve the undergraduate financial aid program and graduate student fellowships program. In return, however, he must consider cutting funding from other areas, which requires fielding input from various student and faculty perspectives, even if the proposed ideas may lead to disagreement. "Taking money out of the endowment itself to solve [it] doesn't help," Chandrakasan said. "Because eventually, the endowment will go to zero."

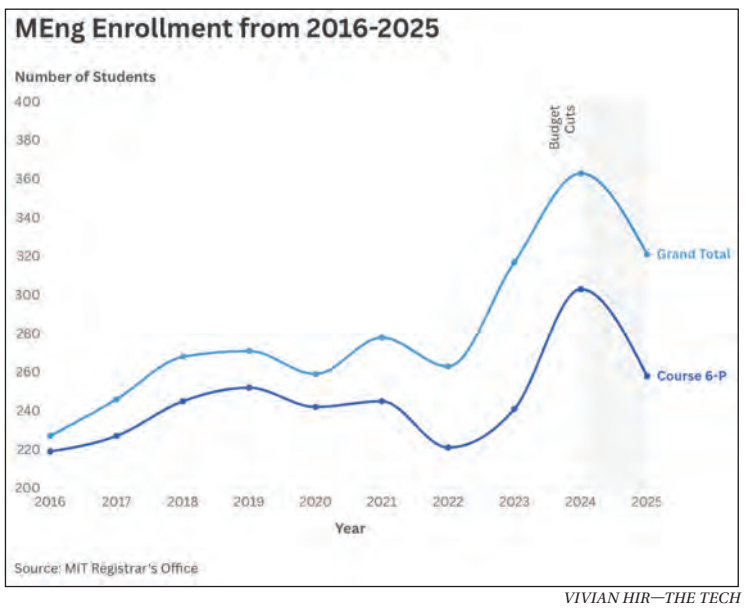
Hearing students' voices

As Chandrakasan settles into his new role, he told *The Tech* that his main priority is to help the community, and he is very open to hearing the voice of the student body. "That's why I took this job," he said.

"I greatly benefited from MIT and what it did for me," he added. "Let me be very clear: I'm here for the students. We're here to create the next generation of leaders."

MEng enrollment peaked at 363 in 2024

Enrollment increased by 41.4% from 2016 to 2025, but dropped to 321 in 2025



VIVIAN HIR—THE TECH

The number of MEng students has dropped by 11.6% from 2024 to 2025, from 363 to 321.

By Vivian Hir
NEWS EDITOR

From 2016 to 2025, Course 6 MEng enrollment increased by 41.4%, from 227 to 321 students, according to enrollment data from the MIT Registrar's Office. However, enrollment dropped from 363 in 2024 to 321 in 2025, amounting to a 11.6% decrease.

The MEng program allows MIT undergraduates who major in Course 6 (Computer Science) to receive a bachelor's and master's degree in five years. Degrees that fall under the MEng program include Course 6-P (6-1, 6-3, 6-4, 6-5), interdisciplinary computer science tracks (6-7, 6-9, 6-14), and the internship-based Course 6-PA.

Since funding for the MEng program is not guaranteed, students often get funded by holding a teaching assistant or research assistant position. These appointments only last for one term, and students must reapply or renew their appointments for the following term.

Besides slight fluctuations from 2020 to 2022, MEng enrollment steadily increased from 2016 to 2024. The most significant increase happened from 2022 to 2024, climbing from 263 in 2022 to 317 in 2023 — a 20.5% increase. In 2024, MEng enrollment peaked at 363 students. In 2025, however, the number fell to 321, which is similar to MEng enrollment in 2023.

The number of undergraduate students who declared Course 6 as their primary major has also steadily increased, from 1,270 in 2016 to 1,482 in 2025, a 16.7% rise. From 2023 to 2025, however, the number declined from 1,544 to 1,482, a 4.0% decrease.

The overall growth in MEng enrollment seems to stem not only from the increase in undergraduates majoring in computer science, but also from the introduction of new Course 6 S.B. and MEng degrees in the last ten years. The Course 6-14 S.B. was founded in 2017, followed by its respective MEng in 2022, while the Course 6-9 S.B. and MEng were established in 2019. More recently, the Course 6-4 S.B. and MEng was created in 2022. Notably, according to a Business Insider article, this significant increase in MEng enrollment may correlate with the recent economic downturn in the technology sector, which has caused some recent computer science graduates to return to university for a master's degree.

Meanwhile, the 5-10% funding cuts for MEng students enrolled in the 2025-2026 academic year may have played a role in the decrease in enrollment from 2024 to 2025. In spring 2025, President Kornbluth implemented these cuts across all academic and administrative units due to reductions in federal funding.

According to EECS Undergraduate Officer Katrina LaCurts SM '10, PhD '14, the department is not sure what factors have contributed to fluctuations in MEng enrollment from 2016 to 2025. "It may be that we just had a large burst of MEng students in [2024-2025] that's calming down," LaCurts wrote.

Despite budget reductions, students are still pursuing the MEng degree this academic year. Liane Xu '25, a Course 6-4 MEng student, pursued a MEng to gain more research experience after joining the MIT Biomimetics Robotics Lab in the spring of her senior year. She hopes that the extra year will help her decide on further graduate studies.

Ananth Shyamal '25, a Course 6-7 MEng student, considered the MEng a productive option to spend a gap year before his MD-PhD program. "I wanted to focus on research during [my] gap year, specifically improving my ML skills," Shyamal wrote. "Also, being at MIT around many of my undergrad friends [sounded] nice."

Jay Lu '25 aimed to use her fifth year as a Course 6-9 MEng student to explore opportunities at MIT that she didn't have time to explore beforehand. "I wanted some more time here to take some extra classes, have a research project I can take ownership of, and try things I didn't get to do as an undergrad," Lu wrote.

Oct. 20 AWS outage takes down Canvas and Piazza

Om Joshi G: "All the important content is on Piazza, and the exam is tomorrow"

By Vivian Hir
NEWS EDITOR

On Monday, Oct. 20, MIT students were unable to access Canvas and Piazza because of an Amazon Web Service (AWS) outage that affected more than 1,000 businesses across the world, according to Downdetector.

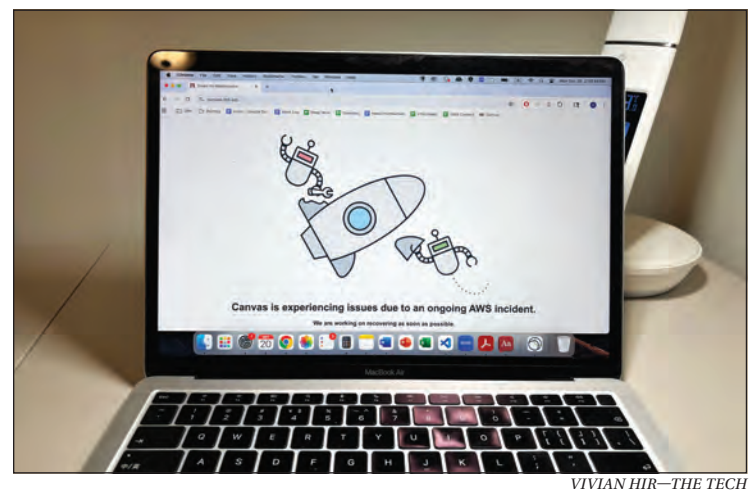
At 3:11 a.m., AWS reported "increased error rates and latencies" for many AWS services in the US-EAST-1 region, which continued into the morning and afternoon. Other school-facing websites impacted by the outage included Panopto and Adobe Creative Cloud. Gradescope, however, was not impacted by the outage. Besides work-related sites, many other websites and apps, such as Reddit and Venmo, were down in the morning. According to a 2025 Statista report, AWS made up 32% of the global cloud infrastructure services vendor market from 2017 to 2024, sustaining widespread usage across businesses.

Students first noticed the error when they attempted to log into Canvas early in the morning: the website showed a cartoon error screen of robots fixing a broken spaceship and read, "Canvas is experiencing issues due to an ongoing AWS incident. We are working on recovering as soon as possible." When Kami Wendelken '29 saw that Canvas was down around 9 a.m., she first texted her friends to make sure she "wasn't crazy," only then to realize that her friends from other colleges also had the same issue.

Elizabeth Wright '26 woke up early to study for a midterm later that day, but noticed that Canvas was unable to load previews of the course's files. "I was thankfully able to download the practice exams I needed to study before around 8 a.m. when I realized that the entire site just didn't seem to work," Wright wrote.

As for Piazza, the site's outage affected students' progress on problem sets and preparation for midterms, as they were unable to ask questions or review previously answered queries. Jada Ogueh '29 found it "really annoying" that she was unable to use Piazza to ask for help on the 6.1200 (Mathematics for Computer Science) problem set, which was due the next day at 12 p.m. Om Joshi G, a student in 6.7960 (Deep Learning), was also frustrated, writing, "All the important content is on Piazza, and the exam is tomorrow."

Some students said that their professors did not provide any information on the issue and inadequately responded to the outage, while others reported that their instructors were more helpful. "They have already gotten us the work we need for this week and are trying to get the TAs up to speed so they can continue to help us," Jaylee Bouwhuis '29 wrote. MIT Information Systems & Technology did not send an email or publish an announcement regarding the AWS outage.



VIVIAN HIR—THE TECH

The MIT Canvas website is down because of the worldwide AWS outage on Monday, Oct. 20, 2025.

After more than 12 hours of being down, Canvas became accessible for most users at 7:16 p.m, and the issue was resolved at 9:02 p.m. according to Instructure's status page. Meanwhile, Piazza's service was restored around 3 p.m.

"Rain AND Canvas being down are usually not good signs for the start of the week," Wendelken wrote.

CONCERT REVIEW

Yunchan Lim's performance of Bach's Goldberg Variations takes us through the cycle of life

Yunchan Lim performs Hanurij Lee's *…Round and velvety-smooth blend…* and Bach's *Goldberg Variations* in his Celebrity Series of Boston debut

Hanurij Lee's …*Round and velvety-smooth blend…*, Bach's *Goldberg Variations*

Celebrity Series of Boston

Yunchan Lim

Piano Recital

Boston Symphony Hall

Oct. 22, 2025

By Kristine Lu
COPY STAFF WRITER

On Wednesday, Oct. 22, renowned pianist Yunchan Lim performed the *Goldberg Variations* at Boston's Symphony Hall. He took the world by storm in summer 2022, when, at age 18, he became the youngest contestant in history to win the Van Cliburn International Piano Competition, one of the most prestigious piano competitions in the world. This appearance was his first return to Symphony Hall stage since his iconic Rachmaninoff Concerto No. 2 performance in March 2024.

He began the recital with *…Round and velvety-smooth blend…*, a commissioned piece by Hanurij Lee, an 18-year-old composer from Korea. It started with an eerie yet gentle theme that primarily occupied the highest registers of the piano. Then, the notes of Élégie twinkled softly and mysteriously, coalescing into an exotic, agitated chase in Rudepoema that traversed through all registers of the piano until it overflowed in a burst of drama. The original theme returned, haunting yet sweet with a hint of nostalgia; the piece ended as quickly and quietly as it began, and the audience held their breath.

Interestingly enough, this sub-five minute-prelude to the *Goldberg Variations* took the audience through a miniature life journey, the same way the *Goldberg Variations* does: the work starts with a serene Aria, then builds complexity and drama throughout the variations, and ultimately ends with an Aria de Capo completely transformed by the kaleidoscopic experience of 30 variations.

Lim opened the *Goldberg Variations* with the famous Aria, playing each note with depth yet lightness, a recurring theme throughout his performance. His high notes were sung serenely, and the bass line provided gentle support. Unlike many other renditions, Lim was generous with his pedal and his use of timing, pulling back before anticipated moments and then making them shimmer earnestly, imbuing a hint of romanticism into one of Bach's most intellectual works.

At times, the pedal turned the lower registers into a slightly incomprehensible blur, exacerbated by echoes through Symphony Hall that made the music slightly chaotic. Yet the lyricism and color brought a special human sincerity into the otherwise technical music. When the Aria ended, Variation 1 took off in a grand contrast. Lim was not afraid to bring a bright, soulful liveliness to the melody and a rhythmic tenacity to the bass line. All of his melody lines carried depth, reaching the bottom of the keys while remaining light and sharp. Those who have studied Bach know how difficult it is to comprehend and play the polyphony, yet Lim slid through the voices and registers naturally.

Variation 5 is characterized by its lightness and speed, and each of Lim's notes was like a pebble falling into a clear lake with a floating and precise quality. Even in the light, high variations in Variation 7, Lim achieved a great depth of sound, creating an elegant yet youthful tone. In Variation 8, the bass lines were brought out refreshingly, resulting in a rushing, grounding energy. Throughout the performance, I found myself wishing that he would bring out more of the lower-register voices for a higher variety of sound. The best sections in Lim's rendition were Bach's tender, lyrical variations, in particular Variations 13 and 14. He masterfully created tension using both time and volume throughout the long sweeping phrases, from effortlessly weaving ornaments and different voices together to melodies that sang plainly and pleadingly.

The *Goldberg Variations* carry us through many walks of life, from youthful confidence to somber periods of reflection. At Variation 15, Lim's bright notes embodied a dark overtone as the music switched from G major to G minor. His stronger adherence to rhythm, with more stillness and long presses of the keys, as well as the variation's crawling, restricted range created an anguished sound at the midpoint of the piece. The same emotional effect returned in Variation 25 — a slow, reflective and philosophical movement in which Lim's rendition resembled exhausted, heartbreaking grief.

PHOTO COURTESY OF ROBERT TORRES

Yunchan Lim plays Bach's Goldberg Variations in his Celebrity Series solo recital debut in Boston's Symphony Hall on Wednesday, Oct. 22, 2025.

As if in recovery, the final few variations were grand, open and confident. Lim's trills in Variation 28 were even and shimmering, and he roamed the entire piano, infusing the music with a grandiose energy. The quodlibet (Variation 30) humorously incorporates two well-known German folk songs, and Lim played it with strength and finality, as each note was firm, deep, and filled with energy.

Then, out of nowhere, the Aria reappeared. It was as peaceful and tender as it began, but this time carried the nostalgia of a conclusion to a great journey. The Aria was sweet and soft, but a goodbye nonetheless, evoking a strong sense of longing, sorrow, and repose. With this final flourish, Lim truly carried the audience through a lifetime of experience and emotion.

What made Lim's performance special was the amount of attention every single note received. Not a single one lacked depth or direction, making Lim's playing passionate, interesting, and most distinctly, sincere. Many know Bach's music to be deeply religious, intellectual, and markedly unannotated, causing pianists such as Glenn Gould and Andras Schiff to produce contrasting interpretations. Lim played the *Goldberg Variations* lyrically and freely, and he was unafraid to explore all colors, dynamics, and textures of the modern piano.

Bach's *Goldberg Variations* carry us through a grandiose life, and the 30 variations transform the Aria, which returns to complete the cycle. Lim's rendition was humble, human, and remarkably earnest, much like himself. In a press conference at the end of the Cliburn, Lim said, "I made up my mind that I will live my life only for the sake of music, and I decided that I will give up everything for music." At the end, the audience gave him a standing ovation, and he returned to give a reflective encore of Largo from Bach's F Minor Harpsichord Concerto, a dreamy piece that beautifully concluded the recital.

CONCERT REVIEW

The Balourdet Quartet and Rob Kapilow highlight Haydn's brilliance

Kapilow's critical discussion about Haydn's final string quartets preceded the Balourdet Quartet's energized performance

Haydn's String Quartet in G Major, Op. 76, No. 1

Celebrity Series of Boston

Rob Kapilow and the Balourdet Quartet

Chamber Music

NEC Jordan Hall

Oct. 18, 2025

By Chloe Lee
COPY STAFF WRITER

On Oct. 18, conductor and commentator Rob Kapilow presented a segment of his "What Makes It Great?" series, featuring the Balourdet Quartet's performance of Joseph Haydn's String Quartet Op, 76, No.1.

The Balourdet Quartet — comprised of violinists Angela Bae and Justin DeFilippis, violist Benjamin Zannoni, and cellist Russell Houstin — is well-known for their vibrant energy and masterful blend of technical precision and emotional depth, which were present in their performance of Haydn's String Quartet No. 1.

Robert Kapilow is a distinguished composer, pianist, and one of America's most popular commentators on classical music. Holding degrees from Yale University and the Eastman School of Music, Kapilow is best known to younger audiences as the composer of the *Green Eggs and Ham* musical. Through his "What Makes It Great?" series, Kapilow has made a career out of helping others understand how music can electrify their daily lives as he reveals the artistry behind complex and highly regarded compositions.

Before the show, Kapilow held a discussion to encourage the audience to explore one of Haydn's greatest and final quartet compositions. He guided audiences through the inner workings of Haydn, asking the Balourdet Quartet to demonstrate themes, harmonic progressions, and structural elements before they performed the complete work. For those expecting to simply attend a concert, these interactive elements enhanced the listening experience, allowing the audience to understand Haydn's choices and appreciate details they might have otherwise missed.

PHOTO COURTESY OF KEVIN W. CONDON

The Balourdet Quartet performs Hadyn's String Quartet in G Major, Op. 76, No. 1 under the direction of Robert Kapilow on Saturday, Oct. 18, 2025.

Haydn's Op. 76 quartets, which he composed in 1797 at the age of 64, represent the culmination of over 40 years of quartet writing. Having just returned from his tours in England, Haydn was at

Kapilow, Page 9

CONCERT REVIEW

Yuja Wang joins the BSO in works of 20th-century composers

Wang's dazzling virtuosity shined in Prokofiev's Piano Concerto No. 2

Bernstein's Three Dance Episodes from *On the Town*, Prokofiev's Piano Concerto No. 2 in G minor, Copland's Symphony No. 3

Boston Symphony Orchestra

Conducted by Domingo Hindoyan

Boston Symphony Hall

Oct. 24 – Oct. 26, 2025

By Noah McAllister and Chloe Lee

On Oct. 26, the Boston Symphony Orchestra (BSO) presented a concert of 20th-century music, including Leonard Bernstein's suite from his musical *On the Town*, Sergei Prokofiev's Piano Concerto No. 2, and Aaron Copland's monumental Third Symphony. Domingo Hindoyan was the guest conductor for the BSO, and world-renowned pianist Yuja Wang was the soloist for the Prokofiev concerto.

The concert opened with Bernstein's Three Dance Episodes from *On the Town*, a suite excerpted from the titular Broadway musical. While a staple piece for the Boston Pops Orchestra, this was the BSO's premiere of the dance suite. Balancing jazz and popular music, Bernstein ordered each of the piece's three narrative-driven movements for greatest contrast, beginning with the spirited "Dance of the Great Lover," juxtaposed with the melancholic "Pas de Deux," and ending with the bubbly "Times Square Ballet." The ensemble played the lighthearted, jazz-like music well, though in a somewhat classical style — missing the articulatory, tonal, and rhythmic nuance characteristic of jazz music. Contrary to the ensemble's style, trumpet Thomas Sider's solo in the last movement was beautifully jazzy and inflected.

After the BSO's rendition of Bernstein was Yuja Wang's performance of Prokofiev's Second Piano Concerto, which Prokofiev had written while he was still a student at the St. Petersburg Conservatory. Yet the piece is far from a student piece; it is full of sophistication and a musical maturity that Wang brought to fruition.

The concerto opens with a relatively simple theme in the clarinets and pizzicato strings, but the solo piano quickly develops it in a dark, undulating manner. Wang's legato playing and generous use of the sustain pedal struck a careful balance of emphasizing the melody while developing a rich sonority of the complex tonality. In fact, Wang's interpretation was so clear that the overwhelming dissonance notable in some recordings was merely part of the emotional development of the piece. The extended cadenza was the highlight of the entire program: Wang used the entire dynamic range of the piano, and was able to execute the large jumps with ease. Her interpretation was filled with emotion, and the percussive martellato bass notes brought the cadenza to an exciting climax.

In the short but frenetic scherzo that is the second movement, the BSO failed to keep up with Wang's vigorous pace. While the orchestra remained at the same tempo as Wang, they fell behind by a small but perceptible amount, which meant that the melodic trade-offs between the woodwinds and solo piano were unsteady. Hindoyan was not able to bring the orchestra back into time with Wang, though there were some moments where they were on the precipice of equality. Unfortunately, Wang won the "who can finish the second movement first" race.

Despite the lack of coordination in the second movement, Wang and the BSO did a wonderful job in highlighting Prokofiev's colorful orchestration in the *marche funebre*-like quality of the third movement, such as the stopped horn and trills that almost sounded like sardonic laughter. The allegro tempestoso fourth movement was similar in energy to the second, but the orchestra was notably more in sync with Wang. Again, Wang played huge jumps and scintillating runs with such ease that one could easily miss the difficulty of the piano concerto. At the end of the concerto, the audience nearly leapt to their feet to give Wang a standing ovation.

Much to the delight of the audience, Wang played two encores, starting with the No. 2 in F-sharp minor from Mendelssohn's *Songs Without Words*, Op. 67, in which she yet again showcased her unparalleled ability to play multiple different expressive styles simultaneously, with the delicate and expressive legato melody in the right hand, and light staccato chords in the left. She ended the piece rather playfully, leaving the audience amused. Her second encore was the No. 3 Toccatina from the Eight Concert Etudes, Op. 40 by 20th-century composer Nikolai Kapustin. The piece featured a percussive ostinato that paired well with the Prokofiev concerto. Even then, Wang still managed to incorporate a sweeping phrase throughout the piece.

Following Wang's performance was Aaron Copland's grandiose Third Symphony, which has been described by critics as one of the great American symphonies. The Third Symphony is a more serious work than his ballets (such as *Billy the Kid*, *Rodeo*, or *Appalachian Spring*), but it still incorporates elements of American folk music in Copland's sparse yet iconic harmonies. Copland's orchestration calls for a relatively large orchestra with a sizable percussion section.

The BSO's performance was marred by the ensemble's literal interpretation of Copland's (overzealous) dynamic markings of *fortissimo* and *fortississimo*: it was just too loud. The first time *fortissimo* in the brass and percussion had a great effect; however, each subsequent *fortissimo* continued to wear down the audience's patience, and by the time the brass and percussion played the famous *Fanfare for a Common Man* that opens the fourth movement, it was no longer the stately fanfare that Copland intended. (To their credit, the brass section overall was spectacular during the fanfare, especially the horns, whose tone remained clear even through the extremely high passage.) In this way, the BSO's performance lacked sophistication and took on a too-loud-high-school-band quality as the brass and percussion overpowered the rest of the orchestra.

PHOTO COURTESY OF WINSLOW TOWNSON/BSO

Domingo Hindoyan conducts the Boston Symphony Orchestra and pianist Yuja Wang in Prokofiev's Second Piano Concerto on Thursday, Oct. 23.

The string section's somewhat weak articulation did not help with the excessive volume. In the fourth movement, the bowed *staccato* or *marcato* sections were far too "mushy," lacking a clear start to the note. This meant that in loud sections, the orchestral texture homogenized into a wall of sound in which the color of individual instruments could not be discerned. In the lighter sections, the rhythmic pulse was harder to find with the metaphorical "fuzz" at the start of notes. Perhaps the acoustics of our particular seats (in the first orchestra section on stage left) were part of the problem, and other seats in the house had a better concert. (In other BSO concerts one of the authors has been to, this has not been a problem.)

Given that it was a notoriously difficult symphony full of unexpected accents and mixed-meter passages, some of the tempo changes, such as accelerando in the third movement, could have used another rehearsal. Hindoyan's conducting was not always easy to follow, and there were points in which the orchestra lagged behind his dictated tempo by more than one beat.

That being said, the symphony had many excellent moments: Concertmaster Nathan Cole's solo with artificial harmonics was ethereal; piccolo Cynthia Meyers played with near-miraculous grace and clarity, especially impressive as the part is stratospheric, sometimes at *pianissimo*. Principal trumpet Thomas Rolfs's sound soared over the orchestra without being overbearing.

Overall, the first half of the concert was much better than the second half. Wang's playing was undoubtedly the highlight of the concert. Copland's Third Symphony was full of wonderful moments, but was so excessive in dynamics that listeners were left tired by the end.

The performance was an enriching experience

Kapilow, from Page 8

the height of his creative career and financial independence. These final completed quartets are frequently described as his greatest works in the genre, showcasing his innovation and active passion. The Op. 76 marked the start of string quartet as music for professional performance, with bold orchestral elements and drama that would influence Beethoven and later composers.

The first movement, "Allegro con spirito," opens with three bold tutti chords, mirroring an orchestral call to attention. The Balourdet Quartet delivered these opening gestures with commanding presence before shifting into the intricate counterpoint that followed. The cello stated the predominant theme first, joined by the viola and eventually, the first violin in reverse. A canonic imitation saturated the entire movement. The quartet navigated the complex textures with clarity, helping listeners trace the changing voices while maintaining the movement's momentum.

The second movement, "Adagio sostenuto," which many consider the emotional heart of the quartet, begins as a touching hymn in perfect chorale homophony. The Balourdet Quartet approached this movement with stunning sensitivity, transforming it into an operatic scene. As the texture shifted to an intimate duet between the cello and first violin, the ensemble demonstrated their ability to balance high tension with moments of repose.

The third movement, "Menuet," is a modern scherzo in all but name. The Balourdet Quartet launched into the surging presto with energy, the initial light staccato phrases exploding with louder contrasts. The ensemble handled the syncopated offbeat echoes and sudden dynamic shifts with precision. The greatest perturbation came when the first violin played a delightful Austrian ländler to the pizzicato accompaniment of the other three players. Here, the quartet's playfulness shone through, making the music genuinely enjoyable rather than only impressive.

The final movement, "Finale," recalls the intracies of the opening movement with a sonata form that flickers unsettlingly between major and minor, light and dark. Beginning ominously in G minor despite the quartet's overall G major key, this movement demonstrates Haydn's willingness to experiment and take risks. The Balourdet Quartet embraced this ambiguity, heightening the drama of the constant tonal shifts while never losing sight of Haydn's underlying wit.

The combination of Kapilow's discussion followed by the Balourdet Quartet's performance created a uniquely enriching experience. Rather than a traditional concert, the event felt more like a symposium — an opportunity to learn and explore music from another perspective. Kapilow's insights increased the audience's appreciation for Haydn's innovations and compositional choices, making details audible that might have gone unnoticed in a standard concert setting. While the "What Makes it Great" series may surprise those expecting a conventional concert, it offers a deeper understanding of how great music works and why it continues to matter.

CONCERT REVIEW

Daniil Trifonov and Matthias Goerne's Schubert was sometimes shaky, sometimes searing

The duo performed Schubert's G Major Piano Sonata and *Schwanengesang*

Schubert's Piano Sonata in G Major D.894, *Schwanengesang* D.957 ("Swan Songs")

Daniil Trifonov, piano, and Matthias Goerne, baritone

Celebrity Series of Boston

NEC's Jordan Hall

Oct. 24, 2025

By Caleb Zhao

On Friday, Oct. 24, world-renowned pianist Daniil Trifonov and baritone singer Matthias Goerne performed an all-Schubert concert in New England Conservatory's Jordan Hall.

Trifonov opened the evening with the G Major Piano Sonata.

Composed in 1826, this piece was the last piano sonata published before Schubert's untimely death two years later at the age of 31. Schubert straddled the boundary between the Classical and Romantic eras, working with his own expansive and innovative conception of classical form while exploring possibilities in harmony and melodic lyricism. The G Major sonata is often singled out as an exemplar of Schubert's output, the work of a composer with full control over the tools at his disposal and with a clear and powerful vision of what his music should be. It is also serene, peaceful, and full of charm, dramatic, but never turbulent. Above all, it is a tall order for any pianist who wishes to perform it, given that it has many risks and potential pitfalls of interpretation and technique.

From the beginning, Trifonov's structural pacing raised eyebrows. He played the opening chord with a healthy sound, ensuring the hall was filled with the sounds of G major. At first glance, it is an understandable method (after all, surely one would want to be heard?). As the movement progressed, however, this choice proved to have unfortunate consequences. The opening volume marked in the score is *pianissimo*; by setting the lower bound of his dynamics so high, Trifonov constrained his expressive range. Indeed, when the development section arrived with a fury, it barely registered that a significant event had occurred, despite the performer's visible agitation.

Furthermore, Trifonov's playing conveyed a level of activity unnatural to the character of the piece. Melodic fragments felt fussed over, each eighth note a different length than the next. The first time around was intriguing, lyrical, and indeed quite expressive. By the tenth, however, the novelty had worn off. On top of that was his treatment of the silence between phrases. He often launched headlong into the next phrase, finding a connection between them even when Schubert wrote none. The pacing felt as though it were composed of run-on sentences, at times leaving one gasping for air. Notably, Trifonov gave room to breathe in the last four bars of the exposition and the analogous section of the recapitulation. Upon his arrival at these points of stasis, the music miraculously opened up, resulting in a radiant, peaceful, and simple melody. Perhaps this was the point of his style, to elude any resolution until the periods at the end of Schubert's paragraphs. It's hard to say that such a conception was effective.

Trifonov's idiosyncrasies lingered in the subsequent movements of the sonata. He stopped to smell all the roses in the lyrical second movement, pushing and pulling at the tempo to give the melodic line the spontaneity of a singer. Such a stunt may have been much more effective in a looser work designed for those opportunities, but in this case it obscured the pulse and sense of structure. In the fiery B section, Trifonov's impassioned ferocity caused him to lose the balance between the left and right hands, the bass growling beneath the melodic line. This happened again at the bold declamatory entrance to the third movement. However, after the muddy opening gave way to a playful minuet, Trifonov's instinct to mess with the time signature revealed itself to actually bolster the music here. He exploited all the nuances possible within the strict 3/4 meter. On the piano bench, he himself was dancing, fully in his element.

The final movement began with a lurch, like a spritely fairy having a little too much fun with its powers of flight. Repeated notes permeated the movement. Trifonov pounced on them every time, perhaps playfully, but also nervously. A notoriously difficult section in which the right hand plays rapid ascending thirds was no problem for Trifonov with his formidable virtuosity. He dropped the off-kilter demeanor when the texture thickened in the B section of the rondo; with a constant stream of eighth notes interspersed by a steady pulse of quarters, the music truly took off for a fun ride passing through Schubert's crazy modulations and dramatic contrasts in volume.

Unfortunately, this momentum dissipated once the return of the rondo A section brought back Trifonov's queasy sway. Criticism has long been lobbied at Schubert's music for its repetitiveness. Part of the difficulty of performance lies in the challenge of maintaining the flow of ideas through the repeats. Sadly, the next section of Trifonov's performance seemed a little lost. The music forayed into distant keys and new themes were introduced, yet one could not shake off the feeling that he was just going through the motions to make it to the end. The A theme finally returned, seasick and giddy, for the third and final time. It concluded with glitter and sparkles falling back to a quiet reprise of the opening idea, a diminutive ending that was taken a little too seriously.

PHOTO COURTESY OF ROBERT TORRES

Pianist Daniil Trifonov and baritone singer Matthias Goerne play Schubert in Jordan Hall on Friday, Oct. 24, 2025.

Trifonov in his solo Schubert performance displayed his characteristic musical personality: his ear for delicacy and barbarity, his ability to hew diamonds from any moment in a piece, his risky and thrilling virtuosity. Despite all of these admirable qualities on display, something crucial was still missing from the evening – he lacked restraint. A more judicious application of his expressive instincts and a more rigid adherence to tempo would have served him well, helping him illuminate the music's interrelations and self-consistency.

Anticipation hung in the air before *Schwanengesang* ("Swan Songs") began. Schubert discovered unplumbed depths of expression in his songs and established the genre of the "song cycle", a collection of songs connected narratively and thematically, meant to be performed together. *Schwanengesang*, his last song cycle, does not have a clear narrative, but is held together by a thematic throughline of longing.

In partnership with Goerne, Trifonov changed his presentation. Gone was the compressed figure, the furrowed brow, the contortioning torso. Instead, seated at the piano bench was now a bespectacled upright figure with a clear view of both his music and his singer, arms relaxed and ready. His transformed posture seemed to reflect in his playing, producing a more focused and deliberate interpretation.

Goerne, for his part, assumed the physicality previously in his accompanist, his body following wherever the vocal line led him. Beneath the balcony, no angle of the audience was beyond his gaze, nor even the floor. He turned and paced next to the piano, right arm tethering him to the instrument at all times. Occasionally when he scanned across the room, the volume modulated between direct and indirect sound, but his projection ensured he could be heard. Except when he could not.

The violence in the second and eighth songs, *Kriegers Ahnung* and *Der Atlas*, clearly excited both players. They proved that when voice and piano compete for volume, piano always wins. In Der Atlas especially, Trifonov committed fully to a blistering tremolo and a thundering bass, a mass of noise through which Goerne could barely be perceived, let alone communicate through.

Many opportunities throughout the song cycle were seized upon and wrought to their maximum intensity. In four songs, they succeeded in creating a potion of subdued anguish of heart-wrending potency. For all of the slow burners, *In der Ferne*, *Ihr bild*, *Am Meer*, *Der Doppelganger* (6. In a distant place, 9. A picture of her, 12. By the sea, 13. The doppelganger), the duo paced themselves perfectly, saturating the air with the weight of their restraint, pushing the tension to its breaking point. With the closing emotional catastrophes of *Am Meer* and *Der Doppelganger*, Trifonov and Goerne showed that their combined artistic vision had the capacity to leave its emotional mark on the audience.

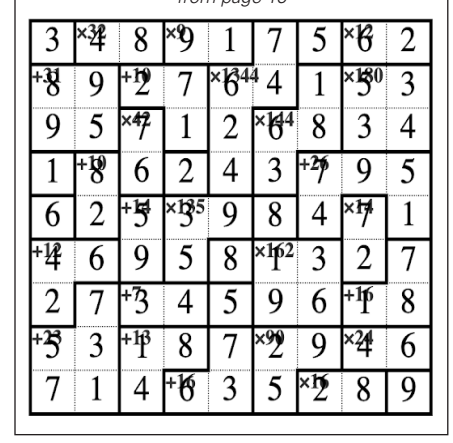
Solution to Creepy

from page 15

5	4	1	3	7	2	9	6	8
3	8	7	6	9	4	5	1	2
2	9	6	8	1	5	3	4	7
4	5	3	9	2	7	1	8	6
1	2	9	5	6	8	7	3	4
7	6	8	4	3	1	2	9	5
9	1	5	7	8	6	4	2	3
6	3	4	2	5	9	8	7	1
8	7	2	1	4	3	6	5	9

Solution to Crawly

from page 16



CONCERT REVIEW

Augustin Hadelich and the BSO deliver a convincing performance of Adams, but falter in Tchaikovsky's Fifth Symphony

Hadelich performs Adams in the first of three collaborations with the BSO this season

Adams's Violin Concerto, Tchaikovsky's Symphony No. 5

Boston Symphony Orchestra (BSO)

Conducted by Andris Nelsons

Feat. Violinist Augustin Hadelich

Oct. 16–Oct. 18, 2025

By Luke Kim
ARTS STAFF WRITER

On Friday, Oct. 17, the Boston Symphony Orchestra (BSO) performed John Adams's Violin Concerto and Tchaikovsky's Fifth Symphony with violinist Augustin Hadelich as the soloist for the concerto — the first of three upcoming collaborations between Hadelich and the orchestra.

The two works could hardly be more different — yet, intriguingly, both represent their composers grappling with classical form. For Adams, this is his attempt at finally putting melody in a prominent position (if not as prominently as one can, considering the melody appears in *moto perpetuo*). This Concerto is also his first mature work that can be described as absolute music.

For Tchaikovsky, the symphony had always been difficult, as he excelled in melody but struggled with large-scale forms and the Germanic tradition of motivic development associated with them. While the two composers come from opposite directions, these works both represent their best attempt on the established traditional form of the concerto and the symphony.

Hadelich tackled the concerto with great precision. The first movement is already a challenge in which the "hypermelody" is stated, and the soloist effectively gets no breaks throughout the movement. The movement is effectively a rhapsody, in free form overall but paying homage to the typical concerto's first movement by including a cadenza. In general, the orchestra was largely at an appropriate volume when accompanying the soloist, and the orchestra took control when they had the more prominent role. Hadelich's main melodic lines were clearly audible throughout the whole performance as well. "Exotic" instruments such as the synthesizers and extended percussion also gave a nice touch to the piece. Overall, the first movement was intellectually satisfying, but did not have a strong emotional effect. Despite this, Hadelich and the orchestra demonstrated their full potential.

The second and third movements were more straightforward to understand, with their more direct quotations to the Baroque Chaconne and Toccata. The melody of the second movement's *Chaconne* was beautiful, and Hadelich played this with grace. Conductor Andris Nelsons also put appropriate emphasis on the ground bass for the second movement, clearly showing that the movement indeed is a Chaconne, with its repeating bass notes and rhythm on the contrabass line. Musically, such repeating structures are Adams' greatest strengths, stemming from his deep roots in minimalism.

Similarly, the *Toccare* — while having bluesy elements evident in its rhythm and syncopation —is also a deeply minimalistic piece. Hadelich was still very precise for this difficult movement, but the orchestra was sometimes ever so slightly off on the coordination. In the end, however, the problems were negligible. It is noteworthy to mention that there was more orchestra presence in this movement compared to the first two, but this made sense considering the virtuosic and fast-moving nature of the movement.

The encore was a violin solo arrangement of Carlos Gardel's *Por Una Cabeza*; Hadelich conveyed its energetic tango spirit all in just a singular instrument.

After Hadelich performed Adams's Violin Concerto, he took on Tchaikovsky's Fifth Symphony, which was the composer's attempt at a Beethovenian idiom of struggle towards victory. For the first movement of Tchaikovsky, Nelsons conducted at a relaxed tempo. The dynamic changes were on the higher end, at times interrupting the score's smoother transitions, alongside a stronger brass than what is typical. However, for the energetic first movement, this approach was overall successful. The two themes of the first movement's sonata form were clearly heard and stated during the exposition, and the ending of the movement in *pianississimo* was convincing enough that the audience expected the "struggle" to return in the future.

The second movement contains the beautiful horn solo as its main theme, which was executed convincingly to feel the sonority and Tchaikovsky's mastery of melodic developments. Other solo entrances such as the oboe at the con moto section are almost equally important, and appropriate care was given to them. Nelsons took more liberty in the tempo during this movement, accelerating at the two climaxes of the movement. These drastic tempo changes served the music well, but the orchestra was not always on the same beat, as these accelerations were done quite often in a short period.

In the third movement's *Valse*, Nelsons once again puts great emphasis towards the strong triple-meter rhythm of the waltz. The three waltz sections of the scherzo were well-coordinated, and the orchestra sounded like one, often evoking the imagery of an actual waltz happening in a ballroom. The trio section, however, had more coordination issues in the orchestra, especially between the violins and the violas. While this is a flaw, one must note that this is extremely difficult to execute musically — the hemiola is still there, but since the theme is in sixteenth notes, even a slight imprecision carries the risk of accentuating the loss of balance.

The finale is already a problematic movement due to its awkward role in the overarching victory-through-strife story arc and its relative crudeness; Nelsons' interpretative choices did not succeed in delivering the movement. Interestingly, the section before the final presto was drastically slowed down, alongside other sections which featured extreme rubato going into other quick sections. This broke the momentum going toward the actual climax of the piece as the main theme returned. The orchestra also resorted back to its old habit of playing with a generally faster tempo and letting it run at more exciting moments. The brass was also imprecise and very loud throughout the movement, sometimes even obstructing the perfect cadences of the musical phrases from the strings and woodwinds.

Overall, the symphony was a mixed performance, with a relatively strong first three movements and a more controversial interpretation of the finale. While the structural problems of the symphony have long been a source of debate — especially the forcedness of the finale — the delivery of the finale could have been more consistent. However, the normal strengths of Tchaikovsky in his melodies and lyricism were represented well.

Rating: Adams: 4.5/5
Tchaikovsky: 3.5/5

PHOTO COURTESY OF ROBERT TORRES

BSO performs Adams and Tchaikovsky, with Augustin Hadelich as the soloist of Adams' Violin Concerto on Thursday, Oct. 16.

Beethoven's mass marks 125th anniversary of Symphony Hall

The difficult work shimmered in parts but struggled to find unity

Beethoven's *Missa Solemnis*

BSO and Tanglewood Festival Chorus

Conducted by Andris Nelsons

Boston Symphony Hall

Oct. 9 – Oct. 11, 2025

By Noah McAllister
ARTS STAFF WRITER

On Oct. 11, The Boston Symphony Orchestra (BSO) performed Ludwig van Beethoven's *Missa Solemnis* at Boston Symphony Hall under the direction of Andris Nelsons. The performance featured soloists Eleanor Lyons (soprano), Wiebke Lehmkuhl (mezzo-soprano), Klaus Florian Vogt (tenor), and Franz-Josef Selig (bass); it also included the Tanglewood Festival Chorus directed by Anthony Blake Clark. This performance of the *Missa Solemnis* celebrated the 125th anniversary of Symphony Hall; the BSO played Beethoven's grand mass for the Symphony Hall's opening on Oct. 7, 1900.

Beethoven composed the *Missa Solemnis* between 1819 and 1823, and the work is a setting of the Ordinary Latin mass. Composed around the same time as his Ninth symphony, the *Missa Solemnis* is reminiscent of the ever-changing styles and tempi of the Ninth's famous fourth movement. Beethoven crafts the work around the text of the Ordinary, with the music often expressing his interpretation of the mass with little subtlety: for example, the orchestra plays ascending scales on "and [He] ascended into heaven," while it plays descending scales on "and [He] came down from heaven."

With its disjunct mood shifts, the work is hard to neatly categorize as either a late Classical symphony or a romantic symphonic poem. The work revolves so completely around the Ordinary libretto that these sudden character jumps may come out of nowhere to a listener not acquainted with the text. When played well, the *Missa Solemnis* can feel like a spiritual journey to the listener, in which the disparate pieces of the mass no longer feel surprising. The BSO's performance, while excellent in individual moments, lacked a cohesion that tied the mass together.

While individual vocal soloists were excellent, they seemed disconnected when singing as a quartet. Soprano Eleanor Lyons's voice had a clarity and grace that soared over the texture of the orchestra without being overbearing; tenor Klaus Florian Vogt's voice was strong but well-phrased; and bass Franz-Josef Selig's solo in Agnus Dei was dark and somber, fitting the libretto ("have mercy upon us"). In the Kyrie and Gloria, however, the overall vocal balance of the quartet left something to be desired. Although Lyons could easily be heard, Vogt's almost-piercing heldentenor voice overshadowed both Selig and mezzo-soprano Wiebke Lehmkuhl. After Selig's solo in the Agnus Dei, the quartet found a balance with each other through the end of the piece, leaving the listener wistful of what could have been in earlier movements.

The woodwinds were a particular highlight of the performance, playing with transparency and expressivity, especially in the opening Kyrie. Concertmaster Nathan Cole's solo in the Sanctus, supported by the flutes, was otherworldly and beautifully phrased. The bassoon countermelody in the Agnus Dei brought a rich and dark sound that contrasted against the deep bass solo. The strings section also had a strong performance: their sound was precise and showcased individual voices in the (many) fugal passages.

Ignoring a rocky start in the Kyrie, the Tanglewood Festival Chorus sang remarkably well given Beethoven's challenging vocal writing. I would not be able to tell the sheer difficulty of the work without looking at the score because of the chorus's effortless execution. From the almost-whisper *pianissimo* of the Sanctus and Agnus Dei to the grand and characteristically-Beethoven *fortissimo* choral writing of the Gloria, the chorus nailed the dynamic contrast between these sections while supporting the soloists and maintaining balance between their individual voices.

The opening of the Credo was the best moment of the concert, with the "credo" ("I believe") sung and played with such conviction that even non-believers would be compelled to dwell upon their spirituality. Beethoven, who became a devout Catholic only in his later life, uses this movement to affirm his conviction in his faith, and the chorus and orchestra captured his devotion in their performance.

Overall, the BSO's performance of the *Missa Solemnis* had a somewhat lilting quality — stylistic jumps were met with unease and apprehension, but once the ensemble found their footing in the section, the performance was spectacular. Moments of unity within the ensemble made the concert enjoyable, even if it ultimately fell short of the spiritual journey that Beethoven envisioned.

PHOTO: WINSLOW TOWNSON, COURTESY OF THE BSO

The BSO, soloists, and the Tanglewood Festival Choir perform Beethoven's Missa Solemnis on Thursday, Oct. 9, 2025.

Sir Tim Berners-Lee speaks on the importance of designing human systems

The inventor of the World Wide Web remarks on its conception and future

By Jieruei Chang
SCIENCE STAFF WRITER

In 1989, a young engineer at CERN (European Organization for Nuclear Research) presented an idea for a universal system of linking information. First described as "a vague and interesting proposal," it proceeded to become one of the most influential inventions of the 20th century.

"I was drawing with a ski pole in the snow, the diagram of the World Wide Web," Sir Tim Berners-Lee recalled.

On Oct. 1, 2025, Berners-Lee gave a talk to discuss his life and new book, This is For Everyone. Author Juan Enriques served as moderator, and Harvard Book Store hosted the event at the Brattle Theater in Cambridge, just off to the side of Harvard Yard.

In the talk, Berners-Lee spoke with a stutter and made rapid gesticulating motions with his hands. He began by recounting his first dabblings in electronics; growing up in London as the son of two computer scientists in the 1960s, he witnessed the exponential growth of computing technology. In primary school, he connected wires to build simple electrical circuits like relays. In secondary school, he'd go to the store and buy bags full of the newly invented transistor, connecting them together to build logic gates on breadboards. As an Oxford student, he put together enough logic gates to build an entire computer. "The power of the electronics you could buy with your pocket money grew year by year," Berners-Lee said. By the time CERN hired him, he was envisioning a way to connect computers — and information itself — together.

"The dictionary only defines words in terms of other words," Berners-Lee said. "The world is nothing but connections." This simple idea would give rise to the architecture of the World Wide Web: an inter-computer network connected by hyperlinks. Although Berners-Lee did not invent the internet nor the idea of a link, he was the first to put them together. When he tried to explain his concept to colleagues, he recalled, "They didn't understand that when you clicked on one link, it could take you to any other place on the Internet."

From the start, the Web was designed to be open. One major milestone was when he "got CERN to agree to not charge royalties to use the World Wide Web." By making the Web's underlying protocols free and non-proprietary, they ensured that no single entity could claim ownership of the network's roots. And at first, it seemed to be working.

"The world that saw the birth of the Web was a much more optimistic one than today," Berners-Lee said. Democracy seemed to be on the rise. The Berlin Wall had fallen. Apartheid had ended in South Africa. And the Web was the headlining technology that would herald in a new era of peace and prosperity. In some cases, it has. Protest movements nowadays spread largely through social media. Online resources like MIT OpenCourseWare give free access to knowledge on unprecedented scale.

But in his talk, Berners-Lee warned that the Internet is becoming an increasingly divisive place that reflects an increasingly polarized society. And as commonplace as it is to blame the content of an Instagram feed on "The Algorithm," Berners-Lee noted that the design of these algorithms is neither nameless nor neutral. "When you make an addictive algorithm, you know what you are doing. There are university courses taught on how to make algorithms addictive," Berners-Lee said.

These algorithms take the path of least resistance, wielding controversy and emotion in order to capture attention. When hate speech or misinformation crawls through social media, "the person who typed the horrible thing is responsible, but if the algorithm sends it to a million people, the people who wrote the algorithm are also responsible," according to Berners-Lee. He posed a challenge for the audience: "Why not see if you can make your platform still work without being addictive? Why not make people interact constructively instead of being angry?"

JIERUEI CHANG – THE TECH
Tim Berners-Lee speaks in conversation with Juan Enriquez on October 1, 2025.

Of course, the elephant in the room is the rise of large language models (LLMs), shifting the way we interact with information and the Internet. "AI has aced the imitation game," Berners-Lee said. According to him, "The next version of the Web will not be rendered visually," but rather forcefed to AI models as training data. And this has implications for the people who created the trove of data that made LLMs possible in the first place. "When you have AI, you're not going to the original websites. You're not seeing the ads, so the original makers of those websites are not getting anything for their work," Berners-Lee explained.

This shift raises a new kind of question: not about what information is accessible, but rather who benefits from its use. When AI models consume the labor of countless creators without acknowledgment or compensation, the Web's original social contract — free exchange of ideas in return for visibility — breaks down. Like a classical algorithm, the AI models themselves embody the reward functions and alignments of their creators. "When you use an AI, you should ask it: 'Who do you work for?'" Berners-Lee said.

Despite these concerns, Berners-Lee is optimistic. He insisted that the Web's founding principles are not obsolete but rather just neglected, and he thinks there is still a way to restore the Internet. "There is still time to build machines that serve humans, rather than the other way around," he said.

Tang Tan discusses his path from MIT to Apple and OpenAI executive

Tan played an instrumental role in pioneering projects from the iPhone to OpenAI's unreleased hardware product

By Hongning Wang

If you use any Apple product, Tang Tan SM '99 most likely led the development of a critical component.

On Thursday, Oct. 16, Tan shared his reflections on his journey from MIT graduate to Apple executive to OpenAI Chief Hardware Officer as part of the Distinguished Speaker series hosted by the Riccio Graduate Engineering Leadership Program (GradEL). Tan, a MIT Course 2 (Mechanical Engineering) graduate, led the development of Apple products including the iPod, iPhone and the Apple Watch before founding the startup io, which was acquired by OpenAI in July. He was joined by facilitator Tony Hu '87, the Director of GradEL.

Originally from Malaysia, Tan took an indirect path to Apple. He completed his undergraduate studies at Imperial College London, where he initially considered working in a shipyard, and then came to MIT for his Master's degree, seeking to learn from some of the best engineering experts in the world. Although his MIT education mostly revolved around industry automation, he ultimately decided to pivot once more to pursue semiconductors, and joined Apple.

"Don't over plan your life. Be open to the wonders and opportunities that present themselves," Tan said.

Even during his initial interview, Tan expressed his ambition to become a project leader. Two years after joining Apple, he was appointed to direct a project by executive Dan Riccio. After achieving initial success, Tan was delegated to navigate high-impact crises across the company. Tan credited much of his early growth to the guidance of his mentors.

"I was brash enough when I interviewed with them to say, hey, I know I'm a fresh grad, but I can be a leader in your organization — give me a shot at it, right?" Tan said. "And so [Dan Riccio] took a chance on me, this weird sounding Malaysian kid who had no experience."

Although Tan sometimes felt like he was in a sink-or-swim situation, his experience allowed him to own challenging projects and build a wide network across Apple. He viewed these early experiences of mentorship, end-to-end-ownership, crisis navigation, and leadership without influence as formative to his technical leadership.

"I was this young kid who got thrown into all these projects during firefighting: you come in there and you don't own the project, but you have to go fix the issue." Tan said. "And you have to learn to communicate, learn to persuade and align with people who are probably like many layers above you — many pay grades above you."

As Tan progressed in his career, he took on more ambitious ventures. In the early 2000s, Tan and his colleagues discovered that a new Toshiba hard drive could store from 50 to 100 times more songs than other existing market products. Although nobody knew exactly what a next-generation music player would look like, Tan and a preliminary group of designers ideated and crafted the first iPod, contributing to Apple's entry into the consumer electronics industry. He attributed his team's success to mutual respect, bias for action, and risk-taking. These same qualities defined the effective teams he led in designing the iPhone and other Apple products.

"We [created] the iPod, then this same team worked together on the first iPhone, and a lot of these people joined me in this new enterprise that I'm working on right now," Tan said.

In 2022, Tan left Apple to found a startup called io. Originally managing hundreds of people in a large, structured company, Tan suddenly had no direct reports in a team of four. He grew in unfamiliar areas, including legal logistics and effective communication in a flat management structure. More importantly, Tan elevated his abilities by operating across many domains of expertise and under resource constraints.

"I think small companies are very good for people who are curious and have interdisciplinary skills." Tan said. "And for me, that's appealing because I want to continue to learn and grow."

Looking ahead, Tan believes that humanist skills such as critical thinking, user-centered design, networking, and communication will be paramount as AI tools scale. Some of the designers he worked with at Apple possessed a unique creativity in redefining hardware paradigms (such as the face ID feature) that AI cannot replicate. Furthermore, Tan believes that teamwork and mentorship, which are innately human, were incredibly valuable parts of his career and engineering success.

"As you continue to use AI in your workspace, be mindful that you are, first and foremost, a human," Tan said.

For the audience, Tan had four pieces of advice mirroring his own journey. He urged students to follow their heart, be open to exploration, take calculated risks, and leverage their networks.

Tan concluded his talk by expressing his desire to transform the way people interact with AI systems at OpenAI.

"The challenge that we have is, how do the models intersect with the hardware?" said Tan. "That keeps me up at night."

MIT hosts 11th Undergraduate Research Technology Conference

MIT students won 1st and 2nd place in URTC's best paper awards

By Malakhi Beyah and Jojo Placides

From Oct. 10 to Oct. 12, the Stata Center was abuzz with bright minds and fresh faces as the Institute geared up for its 11th annual Undergraduate Research Technology Conference (URTC), where high school and undergraduate students from across the country came to present their latest research to experts and industry leaders.

Founded in 2015, the URTC is a collaboration between MIT and the Institute of Electrical and Electronic Engineers (IEEE). MIT has long been a member of the IEEE's Boston chapter, which supports a variety of local universities in promoting engineering and research. However, for several years after its establishment, student engagement with MIT's IEEE branch was concerningly low, especially among undergraduates.

After weeks of brainstorming possible ways to get undergraduates more excited about the club, MIT and the IEEE found the root of the problem. "The IEEE is [a] society that organizes a lot of technical conferences around the world," explained Gim Soon Wan, Technical Program Chair of the IEEE Boston chapter. "Basically, they're open to professionals, industrial professionals, graduate students, [and] PhD students." However, as Wan and his team realized, it was nearly impossible for relatively inexperienced undergraduates to compete against such seasoned researchers.

Thus, the URTC was formed as a uniquely undergraduate-friendly conference, providing younger students with a pivotal opportunity to kickstart their careers in scientific research.

The conference has grown considerably since its conception, especially after allowing high schoolers to submit their own research papers. The URTC's most successful year was 2025, where they received 319 submissions and accepted 189. This was a 40% increase in submissions from 2024, which held the previous record of 228 submissions and 154 acceptances.

From smart face masks and non-Newtonian fluid models to a robotic ASL instructor and an analysis of Spanish in Large Language Models, there was no shortage of innovations to witness.

An opportunity for high school seniors

According to high school senior Raunak Verma, the biggest challenge was the difficulty of adjusting to higher-level college research; this meant managing timelines, learning how to use professional language, and formatting in LaTeX. "There [was] a lot of all-nighters being pulled, tons of work, but it came together, and I'm really proud of our team," Verma said.

Other high school seniors told The Tech that one of their major challenges was networking, especially when working with virtual resources. The act of contacting and coordinating with professors from different timezones was difficult, especially with many people working under them.

For these high school seniors, the most exciting part of the conference was the opportunity to engage with like-minded people — those oriented towards STEM — who might have similar interests. "Every other person you meet has been working on a really cool science project," Verma explained; according to him, this made it easier to start conversations.

The opportunity to explore MIT was another highlight of their URTC experience, mainly for one reason: MIT is their dream school. As someone interested in robotics, Verma has always found MIT's engineering culture fascinating, from interactive exhibits in the Media Lab to the rollercoaster built by East Campus during REX. During campus tours, Verma saw people in full hazmat suits working on nanotechnologies. "And I saw they made a chip smaller than rice, right? That's awesome," he said.

Award-winning innovations

At the URTC awards ceremony on Oct. 11, five research papers were selected for a Best Paper Award.

First place: Turning up the heat

Jeewoo Kang '27, Patrick Darmawi-Iskandar G, John Niroula '18, SM '24, PhD '25, and Prof. Tomás Palacios from MIT were presented the Best Paper Award for their research paper titled "Current Collapse Measurements of SiN Passivated AlGaN/GaN HEMTs at Elevated Temperatures up to 500°C."

The Tech interviewed Kang about her experience performing the research and presenting it at URTC.

Kang's involvement in the project started with her inherent curiosity as a first-year at MIT. "I kind of came in knowing I wanted to do electrical engineering, but I didn't really know what field I wanted to go [into]," Kang said.

She reasoned that gaining some experience through a UROP would help her decision. One day, she found a program that caught her attention — the Palacios group, which studies electronic and material innovations and works with transistors and metals. "This is stuff that a freshman wouldn't really be able to experience [otherwise]," Kang said.

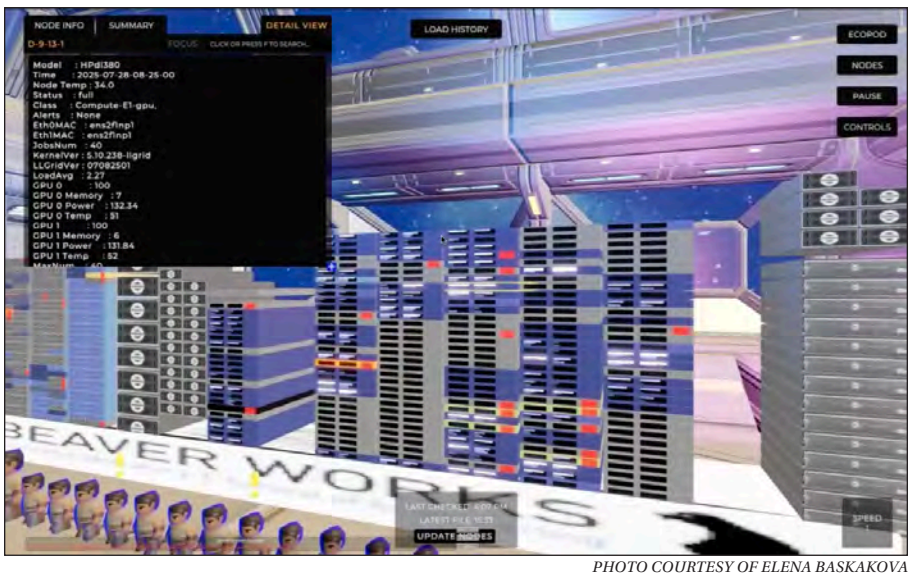


PHOTO COURTESY OF ELENA BASKAKOVA

Elena Baskakova '28 demonstrates her team's 3D "digital twin" simulation of one of the Institute's supercomputers.

After completing training as a first-year, she officially joined the Palacios group as a sophomore and began her research into transistors.

"[A transistor is] just an electrical component," Kang explained. "In a very, very simplified way, they act as a switch. So what we like to do is measure some current/voltage kind of characteristics of these transistors to see how well they fare."

However, as Kang's team discovered, most modern transistors have a critical limitation. "They're typically made of silicon," she said. "But silicon kind of deteriorates at certain temperatures. Anything above 200°C, it just doesn't work as well."

Kang's task, therefore, was to research gallium nitride (GaN) as a more heat-resistant alternative to silicon in transistors. Her team investigated how well GaN-based transistors worked under temperatures up to 500°C.

Kang expects her team's research to have various real-world applications in the near future, including in space exploration, the automotive industry, and other high-temperature applications. "I was hoping that we could see more gallium nitride or ultra-wide band gap semiconductors in these industries replacing the silicon and seeing how well they fare in actual application-based technology," Kang said.

Second place: Simplifying a supercomputer

Elena Baskakova '28, William Bergeron, Matthew Hubbell, Hayden Jananthan '16, and Jeremy Kepner from MIT were presented the 2nd Place Best Paper Award for their research paper titled "TX-Digital Twin: Visualizing Supercomputer GPU Performance Data Stream."

The Tech spoke with Baskakova about her research and experience at URTC. Baskakova also provided a visual presentation of her team's work.

Baskakova's involvement with this research project stemmed from her UROP with MIT SuperCloud and MIT Lincoln Laboratory Supercomputing Center, which form MIT's supercomputer network. Baskakova helped monitor this supercomputer as part of her UROP.

"It turns out that this is actually a very non-trivial task," she recounted. "A [super] computer is thousands of nodes, right? So it's thousands of little computers, and each one has its own hardware, and it's being shared amongst users, and they're running jobs on the computers and so on."

As Baskakova explained, keeping track of everything in this complex network of computers was crucial; a malfunction in an integrated system like that would be catastrophic.

Her team's solution to this daunting task was to make it easier to visualize all the data they needed to monitor. The simulation they developed is a "digital twin" of the real supercomputer, taking in live data and using Unity to create a three-dimensional representation of it. Baskakova specifically handled designing the 3D graphics of the simulation and optimizing the simulation to make it run faster.

Baskakova later reflected on the joy this project brought her over the past several months. "As someone who is a designer at heart, I just really love making things for people," she said. "So the research for me was more of, like, documentation, essentially, for what I did."

Baskakova hopes that her team's work helps inspire others in high-performance computing, from digital tone simulators to video game developers, to implement similar 3D visualization strategies.

Third place: How GenAI impacts misinformation

Saumya Chauhan, Mila Hong, and Maria Vazhaeparambil from Caltech received the 3rd Place Best Paper Award for their research paper titled "When GenAI Meets Fake News: Understanding Image Cascade Dynamics on Reddit."

Their research focused on how generative AI and text leads to misinformation and how they both "contribute to virality of those posts within different communities, both at a post-level and then also cascade-level."

According to Hong, what inspired the three to pursue this research project was the November 2024 presidential election. Seeing AI generated posts about then-presidential candidate Donald Trump on Reddit and X (formerly Twitter) made them concerned about how the Internet was prone to misinformation, especially via generative AI.

The trio said that after having completed their project, they would like to see regulations enacted, especially on Reddit, which is anonymous and lacks moderation compared to other social media platforms. However, according to them, it is difficult to enact policies at a federal level since that would "take away freedom of speech." Instead, moderation can be done locally in online communities.

Hong found that the hardest part in executing their research was "getting more data." Looking into Reddit posts, finding databases that "have image information itself" and creating "pseudo-labels for generative AI images" that may or may not be accurate were crucial, but hard to come by. Though there are annotated databases with AI images, they often lack the randomness of real AI-generated Reddit posts.

Nevertheless, Vazhaeparambil shared that "hearing very different perspectives" was one of the most exciting aspects of the conference and what made coming across the country from Pasadena all the way to Cambridge all the more worth it.

Fourth place: Giving a voice to those in need

Yujun Ge from Cerritos High School in California was presented the 4th Place Best Paper Award for her research paper titled "Transforming Assistive Communication: An AI and NLP-Powered Machine Learning Framework for Contextual AAC."

The Tech had the opportunity to interview Ge after the awards ceremony.

When asked how it felt to be at URTC that day, Ge spoke about how amazed she was by the passion and talent around her. "I feel really honored to be able to be surrounded by so many people that are interested in the things that they're discovering," she said.

Ge's research paper topic was rooted in her experience as a tennis coach for players with autism. According to Ge, non-verbal people with autism have difficulty communicating, even through the current Augmentative and Alternative Communication (AAC) system most use. Many find it burdensome, as the system is too robotic and lacks customization.

"My research [creates] an adaptive and really personalized system to help these people speak honestly, giving a voice to them again by [providing] them [with] adaptive phrase suggestions in real time," Ge said.

Ge's communication system analyzes environmental cues, such as the time of day, day of the week, location, and what is being said nearby, to generate phrases for the user to respond instantly with during conversations. This process cuts down the time it takes to form a sentence from minutes to a couple seconds.

Ge is adamant about making her innovation a real product. One of her core values is not just doing research on paper, but "bringing it out to the market, to the people who can actually benefit [from] it."

This principle is part of the reason Ge pursues research in general. She emphasized that she never does research for personal gain or a boost on her college applications; rather, she has always been focused on helping people that are often overlooked.

"I want to choose technology for humanity," Ge said.

Fifth Place: Automating Scientific Breakthroughs with AI

The 5th Place Best Paper Award went to high school senior and Research Science Institute alumnus Aditya Sengupta from the Kellis Lab at MIT for his research paper titled "SPHINX: An Agentic AI System for Automated Scientific Discovery in Computational Biology."

Research Science Institute (RSI) is a six-week long summer program held at MIT where 100 students from different states and countries are paired with Institute researchers to work on a STEM project. During RSI, Sengupta collaborated with Professor Manolis Kellis of the Computational Biology Group at the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL).

For Sengupta, what struck him the most about MIT URTC was "the energy of seeing peers tackle challenges" in various fields, from robotics to biomedical engineering. Being around hundreds of people also passionate about science – "a community using science to solve some of the world's most pressing problems," in Sengupta's words – reminded him about why he entered research in the first place.

SPHINX is an agentic AI system designed to automate scientific discovery in computational biology. Often, in computational biology studies, large amounts of data are collected and published, from RNA sequencing to protein structures. However, according to Sengupta,"Extracting actionable insights remains bottlenecked by manual workflows."

Sengupta's solution to this pressing problem is SPHINX. Given a high-level scientific question, SPHINX delegates tasks to six sub-agents, which, according to Sengupta, specialize in tasks such as "literature synthesis and hypothesis generation, medical knowledge validation, intelligent dataset curation, data analysis and visualization, in-silico experimentation using ML models, and synthesizing conclusions and wet-lab experiments."

With access to approximately 200 tools, including databases and virtual cell models, SPHINX was able to generate, as Sengupta demonstrated, "Nature journal-qual-

URTC, Page 14

11th URTC connects next-gen scientists

URTC, from Page 13

ity published findings from Alzheimer's disease research." Moreover, using computational models, SPHINX was also able to predict how immune cells would react with drugs. Essentially, as Sengupta explained, the system does the repetitive tasks, "freeing human scientists to focus on high-level design and interpretation."

The project was inspired by the 2024 Nobel Prize in Chemistry, which was given to David Baker, Demis Hassabis, and John Jumper for "computational protein design" and "protein structure prediction," according to a press release from The Royal Swedish Academy of Sciences. This award showed Sengupta that AI was "a technology that has the power to transform how we do science itself."

When asked about his project's applications to the real world, Sengupta outlined that, first, SPHINX can be used to accelerate discovery timelines – such as those for drug discovery and disease modeling – and reduce costs. "SPHINX can reduce the time from data collection to validated hypotheses and results by months or years and allow faster treatments and cures for patients," he said.

Seungupta also talked about how SPHINX can be leveraged by "smaller labs, institutions in underserved regions, and domain researchers" to engage in research without having to go through extensive training in AI workflows.

Besides increasing accessibility in research, SPHINX may be able to open new scientific frontiers. Sengupta explained that not only would "researchers gain bandwidth to tackle deeper questions at a higher level of creativity," but they could also "uncover new patterns" in biological data that human intuition might miss, leading to new breakthroughs.

The future of URTC

Conference advisor Jie Wang, a postdoctoral research associate at MIT, said that meeting high school seniors and undergraduate students from different corners of the world and learning about their projects is what makes URTC exciting. According to him, the younger generation has a lot of potential to positively impact the world by learning and applying "advanced technologies and sciences to different problems."

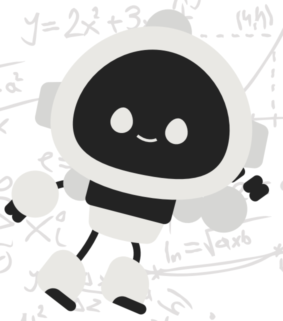
The biggest challenge of organizing URTC this year was the number of people attending the event; on top of that, the conference had people from different states and countries from New Zealand to South Korea. URTC has been running for more than a decade, but it has never seen turnout like this. For Wang, when it came to dealing with such a large and diverse amount of people, the main questions were "How to [help attendees] learn in the conference?" and "How [to make attendees] enjoy the conference?" Wang hopes that URTC has contributed to increasing the exchange of ideas and cultures across national boundaries.

Though the increased attendance was perhaps the biggest challenge that organizers faced this year, Wang expressed a desire to expand URTC nationwide. His vision for the conference is one in which there is a flagship event to provide high school students and undergraduates with "more access and learning opportunities."

Wan said that word of mouth triumphs over every other form of marketing out there. "We did not spend any single cent on [advertising] or publishing," he said. Instead, he distributes merchandise, allowing attendees to talk about the event with friends and family. By doing so, people would become intrigued by the conference, leading them to begin "thinking about doing research [and] writing [a] paper to submit to this conference."

Wan said that the satisfaction from helping run URTC not only comes from giving high schoolers the opportunity to present their work and engage in STEM activities to "nurture future researchers," but also allowing them to explore MIT and "see what it's all about."

With the number of attendees increasing and plans to expand the conference further, URTC organizers expect that it will become a leading STEM conference for high school students and undergraduates, allowing more student researchers to celebrate their efforts and engage in a community of like-minded peers.



Creepy

Solution, page 10

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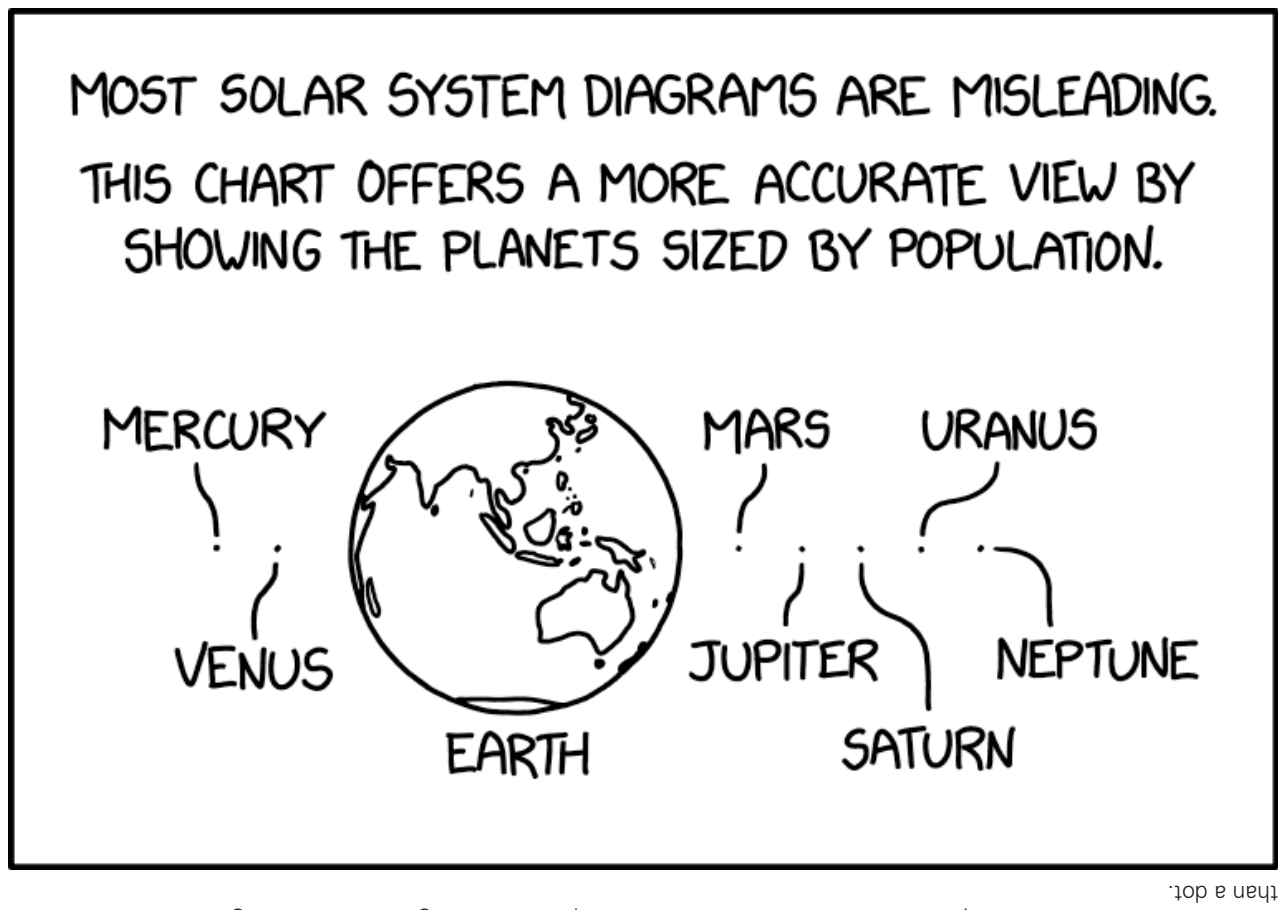
[2439] Solar System Cartogram



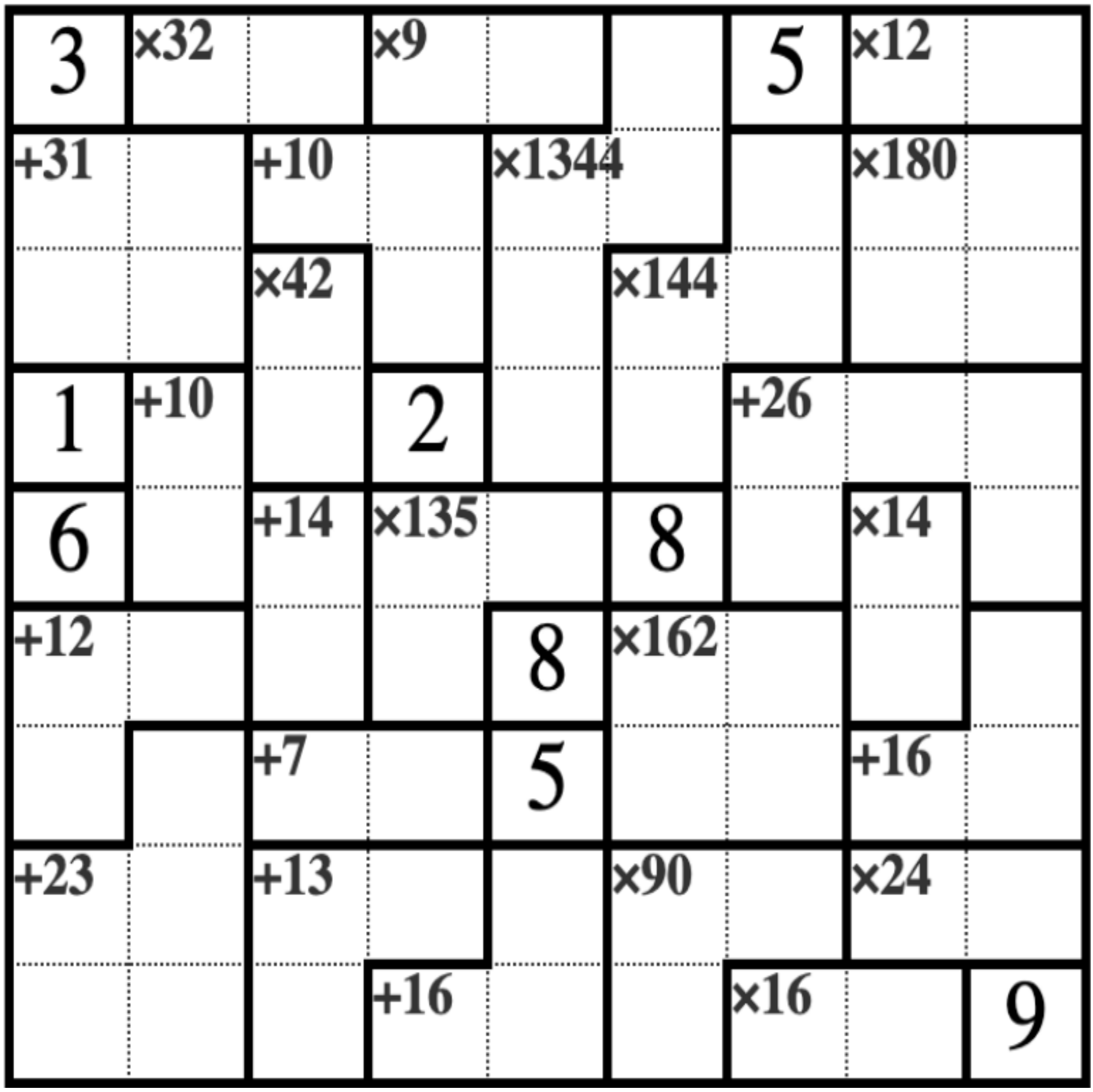
xkcd
A WEBCOMIC OF ROMANCE, SARCASM, MATH, AND LANGUAGE

by Randall Munroe

For sentimental reasons, every active Mars rover is counted as one person, although that's not enough to make Mars more than a dot.

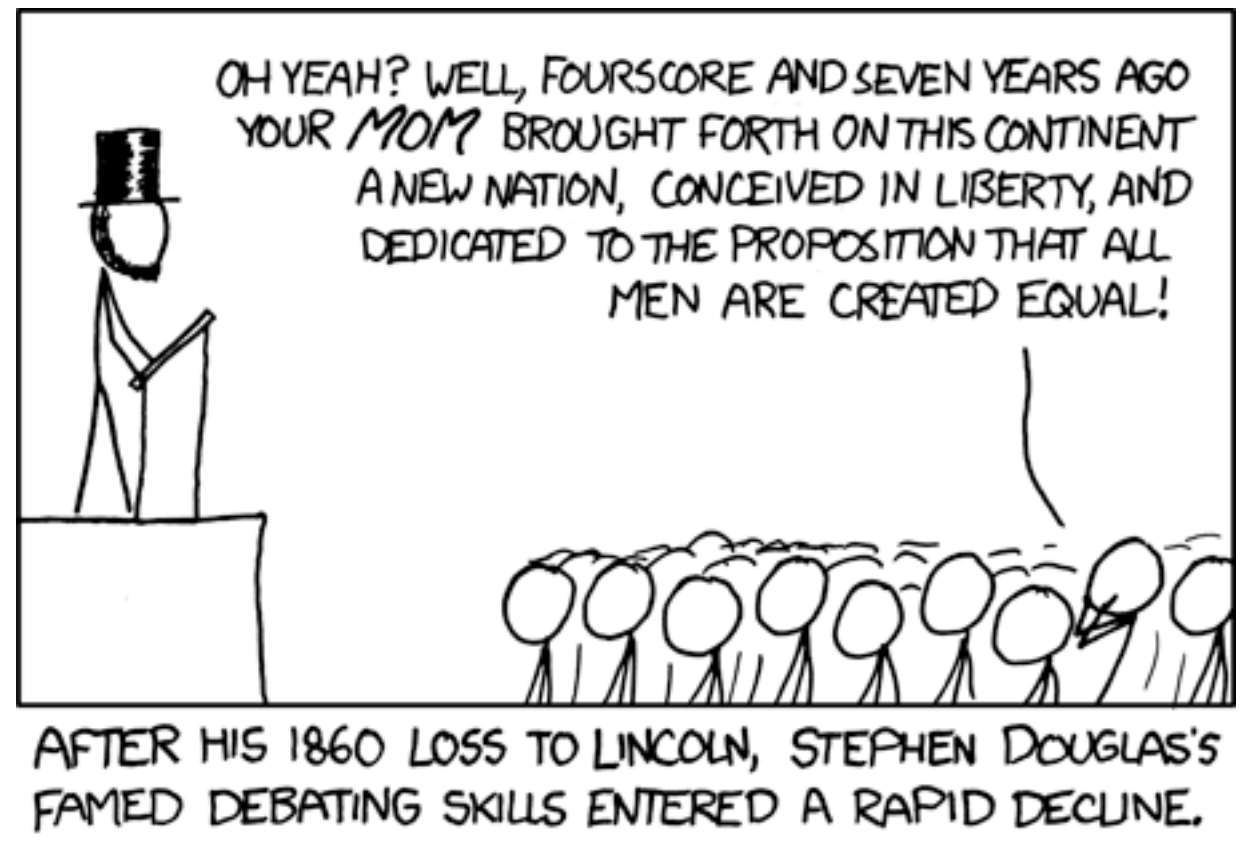
Crawly

Solution, page 10



Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.

[639] Lincoln-Douglas



by Randall Munroe

Stephen Douglas actually died soon after the debates and election, but if you demand historical accuracy in your webcomics you should be reading Hark! A Vagrant.

Passing

Signing a compact with the US government to decide who defines MIT would be passing

By Carole (Swetky) Bookless

I graduated from MIT in 1979. I haven't been back much, but I still care about the 'Tute. Despite it having been difficult and stressful at times, I have many good memories. Most, if not all, of the good memories relate to the people I met there – people of diverse backgrounds, people with different cultures and people with diverse ideas.

When I left home for university, it was a big change. To be honest, I hardly thought about who I was and who I wanted to be. I was more in survival mode. I kind of defined myself as I went along but used my upbringing and experiences as my touchstones.

I enrolled at MIT initially because there were only 3 universities teaching Naval Architecture at the time and one would not accept women. The other was University of Michigan, but I applied to Michigan State because who would ever think there were 2 public universities in Michigan that sounded the same? So I ended up at MIT not really having a clue.

The drive to design boats dwindled after my first try at Differential Equations (DiffEQ as we called it back then). But I learned to sail and that became one of my defining activities at MIT.

Many people define or redefine themselves in university. For some that process leads to deciding to "pass".

Passing is when you present yourself as something that you are not. One might pass to fit in, to feel safe, or for some other reason. People have been known to pass as a different race, different gender, different nationality, different orientation, or different economic class.

When the world is scary or confusing, it makes sense sometimes to pass. To fit into our present politic, many people are weighing their options. To pass, or not to pass? In order to retain funding, MIT even considered whether to pass or not to pass. I strongly support MIT's decision not to pass.

In current events, signing a compact with the US government to decide who defines MIT would have been passing. MIT students (and alumni) spoke out to say that the MIT community decides what the ideals are for the MIT community.

"This is a world that we will be entering with an immeasurable responsibility." Megha Vemuri, 2025.

When I was at MIT, free speech was encouraged – almost too much. I remember one semester when our design projects were due in days (I ended up in Course 4 due to my construction background), and our professor cancelled all classes so we could go to protest a military art exhibit in Lobby 7. I was "upset" because I needed the professor to give me guidance on my project. I also was against glorifying war, but my plate was too full to fight my professor's battles. But there was not a peep from MIT administration, nor any censure. I didn't expect there to be.

That was how things were in the '70s. In 2025, things are different. Protests are discouraged. Free speech is being muzzled. No matter how annoying protests may be, stifling protest is not the MIT I know.

The thought that MIT was being targeted to lose funding unless they sign on to a gag order and culture rules set by the government is outlandish.

I have been following events at MIT, not from *The Tech* Review, but in the world news. To avoid bias, I follow many sources of news including "liberal," "conservative," and foreign news outlets. I was disturbed by the way MIT dealt with the free speech of Megha Vemuri.

I wrote a letter to express my views to the MIT Alumni association. Their response was that some Alumni were so upset about the commencement speech that they got up and walked out from the ceremony. Really?

If I was there, I would have walked out of any ceremony that excluded Ms. Vemuri. Maybe I am not your "typical" MIT alumnus.

I came to MIT probably through DEI initiatives. I struggled when I first came to MIT because it was so different from where I came from. For one thing, many students were rich and did not have to worry about day-to-day survival like I did. The way I paid for my freshman year was by scholarship and ADC (child welfare) checks that I was due. Another difference was that my urban public school was predominantly multi-racial, while MIT was mostly white. My high school was not as high performing as those of many of my peers who attended private prep schools, so topics where they advance-placed were all brand new to me.

My first year I had an ill-informed freshman advisor who gave me very bad advice, and I almost quit. Luckily, I asked for help and got under the wing of people like Bonnie Kellerman and Margaret MacVicar, my heroes. I know that there are still good people like these two women at MIT. They are known for standing up for their values. I understand that recently a professor (Prof. DeGraff) stood up for his values and lost his standing for doing so. That is scary and not the MIT that I know.

I know that there are good people amongst the students at MIT. I can't really remember overt racist students at MIT. Maybe it was because I was white. Most of my friends were involved in Sailing. At the time, I questioned why the sailing population was mostly (all, really) white, and I still do.

But was I really white? Culturally I would say I am white, but according to DNA, maybe not as much as I thought. I know that my father was very anti-racist, but my mother, not so much until later in life. It wasn't until the current craze for ancestry exploration and DNA that I think I figured out why that was. I always assumed my background was White Christian. I found out that I am probably ¼ Puerto Rican Christian, ¼ Ashkenazi Jew, ¼ Polish/Siberian (mixed with Asian?), and ¼ White Christian (maybe).

Back in the day of my grandparents, a lot of people "passed" for whatever was most likely to be accepted and not persecuted. My grandmother and her brother (Rose and Juan Colon) passed as Polish because that was a majority group in their community. For war time, many people of Hispanic/Latino background were encouraged to immigrate to the US for work, but as soon as the troops returned, they were all (men, women and children) literally put on buses and trains and sent to Mexico, regardless of where they came from. Sound familiar?

My grandfather passed as Catholic, because being Jewish and persecuted was probably why he left his home country. My other grandfather left Siberia because of political persecution because that is why families were sent to Siberia. I can't find out a lot about my other grandmother, maybe because she could have been considered a non-citizen and was also passing under the radar. One of her few records show she was born in Kentucky, but even if she was, she lost her citizenship, and her rights, when she married her first husband at the age of 14, because he had foreign citizenship. Women had to take on their husband's citizenship back then. That was the law of the time.

I would say that my brother most likely passed as a straight man for most of his life. We never talked about his sexual preference, because, why would we? I left home when he was only 15 and I never returned, so we didn't have a lot of contact. But when my brother died, it was apparent that his 20-year "roommate" was his partner. In his world of building construction, it probably was easier to pass. Ironically, he died just days before gay marriage was legalized in his state.

MIT is a lot of things – a leader in AI, war technology, medical technology, and architecture – but I never considered MIT racist. Maybe my younger self was naïve. The MIT I knew was open to new ideas from whatever source. MIT was full of good people – staff and students. I hope that is still the MIT that exists.

As we experience chaotic times, a lot of students at MIT will "pass" and feel that they must hide who they are. I hope not, but I won't blame them if they do. That would be like blaming my ancestors for doing what they had to do – and I don't blame them.

Your time at MIT is a time to think about who you are and who you want to be. Besides graduating from MIT, defining who you are is your job. Go into it with open hearts and inquisitive minds. When you look at your classmates, staff, or dormmates (who may be passing due to fear) – define yourself by kindness and try to be your best person. Be kind. Push for a world where we can all be who we are, without fear.

Carole (Swetky) Bookless received a Bachelor of Science in Art and Design - Architecture from MIT in 1979.


ch's MLB Ch

By *The Tech* Sports staff

e MLB Postseason. In the American League, th
Series against Minnesota with ease to advar
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HOPE TO SEE YOU THERE

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OPINION POLICY

Management

The Opinion department is collectively managed by the Editorial Board of *The Tech*, which consists of the Publisher, Editor-in-Chief, Managing Editor, Executive Editor, and Opinion Editor.

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Editorials are the official opinion of *The Tech*. They are written by the Editorial Board.

Guest Submissions

A Guest Submission, which may be designated as either a Guest Column or a Letter to the Editor, may be written and submitted by any member of the MIT community.

Guest Columns express a particular opinion on campus-relevant matters; and a Letter to the Editor is an open letter addressed directly to the "Editor," in reference to a Guest Columns express a particular opinion on campus-relevant matters; and a Letter to the Editor is an open letter addressed directly to the "Editor," in reference to a particular piece or set of pieces published.

Electronic submissions are encouraged and should be sent to tt-opinions@mit.edu. Hard copy submissions should be addressed to *The Tech*, P.O. Box 391529, Cambridge, Mass. 02139-7029, or sent by interdepartmental mail to Room W20-483. Electronic submissions will be prioritized over hard copy submissions. All submissions are due on Thursday two weeks before the date of publication (i.e. by the publication prior to the target publication).

LEE CHEN—THE TECH

Repurposing waste, participants fill pipette boxes with soil and seed provided by MIT Farm.

LEE CHEN—THE TECH

Members of the Asian American Association share cultural food with festival goers.

ERICSSON ANSAH-ANTWI—THE TECH

Students gather on the Kresge Lawn for SEB's Fall Fest.

LEE CHEN—THE TECH

MIT Latte Lab shares drinks during Fall Fest.

ERICSSON ANSAH-ANTWI—THE TECH

Students play spikeball on the Kresge Lawn at SEB's Fall Fest.

LEE CHEN—THE TECH

Festival goers partake in MIT Farm's activity, learning how to repurpose waste.

LEE CHEN—THE TECH

Festival goer adds sprinkles to their dessert.

PHOTO COURTESY OF JOJO PLACIDES

East Campus-based band Putz Up! performing at Fred Fest.

ERICSSON ANSAH-ANTWI—THE TECH

A band plays in front of the Stratton Student Center at SEB's Fall Fest.

ERICSSON ANSAH-ANTWI—THE TECH

More performers play at SEB's Fall Fest.

Hundreds of MIT students attend FallFest 2025

Activities on Oct. 17 included live music, free food, student booths, and more

By Jada Ogueh
NEWS STAFF WRITER

On Oct. 17, 2025, hundreds of MIT students descended upon Kresge Lawn from 4–7 p.m. for FallFest 2025, hosted by MIT Student Events Board (SEB).

The evening featured live music from bands Barely Educated, Tony Just Tony, and One Red Cent, as well as MIT LIVE, an organization that allows MIT student musicians to arrange music and perform live. Present at the event were food trucks that provided free waffles from Zinneken's Belgian Waffles and fried chicken from Augusta's.

Asian American Association (AAA), Latte Lab, Chocolate City, MIT Borderline, Chinese Students Club (CSC), G@MIT, the Wellbeing Lab, and MIT Farm organized booths with a variety of activities and free snacks. FallFest also featured caricatures from "Alex Draws You."

Janae Frimpong '29 attended FallFest from 4–6 p.m. and found the event very enjoyable, visiting the SEB pumpkin painting booth and snacking on a rice ball at the AAA booth. She wanted to plant her own succulent at the Wellbeing Lab's booth, but they had already run out of plants by the time she got there.

Oluwagbemiga "Gbemi" Odebode '29 loved seeing support for student artists at FallFest. She went because SEB's dormspam email "made [FallFest] seem like it would be a fun time." David Kwabi-Addo '25 also liked FallFest's atmosphere, enjoying the bands and appreciating the variety of booths and activities.

A common trend throughout *The Tech*'s conversations with FallFest attendees was the prolonged wait for free food. Even at 4 p.m., the line for free waffles and fried chicken extended from the stairs outside the Student Center all the way to Kresge Auditorium. After visiting student group booths, Frimpong spent the rest of her time waiting to get tickets for food. "[SEB] decided to stagger the times that people were able to get food, so I was waiting in line for about two hours just to get a piece of chicken," she said.

Odebode also commented on the long free food lines. While she understood the need for attendees to fully participate, she remarked that, "the bureaucracy involved with getting a meal ticket bordered on Kafka-esque," referencing the German writer's disorienting and menacing narratives. Like Obdebode, Kwabi-Addo wished SEB "advertised the ticket system a bit more to get Zinnekin's [waffles]." In his opinion, it felt more like a "linefest than a FallFest."

Despite these challenges, Isaac Kiniti '27 believed FallFest went well, organizing the Chocolate City booth and handing out chocolate chip cookies to guests. According to Kiniti, Chocolate City participated in FallFest to "interface in a positive way with the greater MIT community" as one of the "core goals" of the organization. Since Chocolate City hosts many events with student groups from other universities, the group tries to "take opportunities to develop [their] presence on campus when they arise."

FredFest 2025 showcases EC's eclectic community

People from across campus rocked to students' music performances on Oct. 17

By Jojo Placides

On Friday, Oct. 17, East Campus (EC) held FredFest, its annual music festival, from 5 p.m. until midnight. FredFest 2025 is the first to be held in the newly-reopened EC courtyard since the dorm's closure for renovations between 2023 and 2025, which many residents referred to as "The Great Shuttering."

Since its establishment by MIT students at the Walker Memorial Basement Radio (WMBR) station in 2008, FredFest has committed itself to showcasing Boston's local music scene. At its 17th anniversary last Friday, the music festival hosted four bands performing diverse music genres, from alternative and punk rock to jazz and folk.

At the start of the music festival, merchandise booths at the EC courtyard opened to the public, managed by undergraduate volunteers. Attendees made stickers, buttons, murals, shirts, and popsicle stick fortresses. The shirt-making booth — where participants used presses to create shirts — was performer Gabriel Ramirez-Rios '29's favorite; he described it as "really cool."

Four groups of performers played for FredFest: MIT Live, Nina Cranor, Concepts of a Band, and Putz Up!. The latter three hailed from EC. Their set lists and genres reflected EC's alternative culture, with songs from My Chemical Romance, Radiohead, and Nirvana.

MIT Live opened the music festival, playing lively classic jazz songs like Take Five by Dave Brubeck. Next, EC resident Nina Cranor '28 performed country songs like "Stick Season" by Noah Kahan, as well as folk-style renditions of several songs like "Pink Pony Club" by Chappell Roan and "Free" from the movie *KPop Demon Hunters*. Cranor said that it was "fun to perform for a bunch of [her] friends and community." The energy in the crowd was "infectious" and "all of [her] friends were there cheering and supporting [her]" when she stepped off stage.

After Cranor's solo performance, Concepts of a Band came up to the stage, consisting of residents from 41West, or the fourth floor of EC's west parallel. Alien-themed hats, green alien balloons on stage, and alien-themed jokes were all clear indications that the band was extraterrestrial, but what made the performance special was the use of the theremin — an instrument that complemented the heavy metal setlist with an eerie, otherworldly tune. In addition, the band brought out a cat-themed "Meowsic" keyboard.

Concepts of a Band performed songs from alternative rock artists like My Chemical Romance, The Cardigans, and Def Leppard. Though the songs featured dark themes at times, the audience still swayed and jammed on as extraterrestrial tunes and meow-sic melodies filled the EC courtyard's air.

Concepts of a Band lead singer Malcolm Bolton '29 recalled that preparing for the concert was fun, but the hardest part was juggling the event with problem sets and band members' misaligned schedules. Still, Malcolm said that rehearsing and playing for fellow East Campus residents was what made performing at FredFest exciting.

The last band to perform for the night was Putz Up!, a band named after the second floor of EC's west parallel. The band encouraged the audience to come forward and approach the stage at the start of their performance. As the distance between the audience and the band evaporated, the atmosphere shifted: members of the audience began to form mosh pits under the direction of lead singer Yunseo Ha '29. That night, the band performed classic punk rock songs like "Teenage Dirtbag," "Scotty Doesn't Know," and "Smells Like Teen Spirit," once again showcasing EC's lively alternative culture.

Gabriel Ramirez-Rios '29, one of Putz Up!'s lead guitarists, said that performing was intimidating at first due to a fear of making mistakes. After playing more songs, however, he gradually realized that his performance was not about being perfect, but rather about "putting out a vibe that the crowd can enjoy."

The energy during Putz Up!'s performance was especially exciting for Jayleen Perez '29. She appreciated the crowd control during lead singer Ha's performance, as it energized the audience and made their performance stand out. Aside from the performances, Perez also praised the event's organization, citing the ice cream truck and screen printing as examples of how FredFest was "super well organized."

Looking forward, the bands not only want to perform for FredFest again next year, but also expressed hope for the future of their musical careers. Nico Rios Aricapa '29, a lead guitarist for Putz Up!, said that the band would definitely be interested given the opportunity to perform in another show.

As for Concepts of a Band, Bolton said the group has been "discussing if there's interest [in] staying together for future semesters," and that they've been "thinking of other events" they could perform in.

According to ConcertComm member Hannah Tejada '27, around 400 to 500 people attended the event. ConcertComm is the EC committee that organized FredFest; they're also considering organizing smaller concerts with these student bands during the year.

Tejada hopes that ConcertComm incorporates more EC talent and increases EC alumni participation. Since this year's FredFest was combined with EC's reopening ceremony, it ran longer and had more activities than usual. Most importantly, this was the first time in a while that all the bands were native to MIT — in fact, most were from EC.

People enjoyed the camaraderie they experienced with friends while making shirts and listening to music played by EC-native bands, which they called the crux of the event. Xinlan Tanner '29 enjoyed "bundling up for music and stories with friends" while listening to the stories of many "older cruft who knew a lot of older lore behind traditions and items in various halls."

Visitors to EC events often note the intensity of EC culture, from homemade rollercoasters during REX to murals and firespinning year-round. Beneath the intensity, however, lies a tight-knit community reflected in FredFest. "All of these changes made FredFest an event that truly celebrated the East Campus community," Tejada said.

LATYR NIANG—THE TECH

Trump is ready to tear down the White House's wing—by any means necessary.