thetech.com

Volume 144, Number 1

Thursday, February 8, 2024



Adithya Balachandran '25 works on a problem at the 2024 Integration Bee, Wednesday, January 24. Brian Liu '24 was the overall champion

2023 YEAR IN REVIEW

see insert, page R1 (OPPOSITE PAGE 8)

WEATHER, p. 2

Mostly sunny.

SAT: 57°F 41°F Partly sunny.

MIT community assesses strategies for reducing campus carbon footprint

Page 2

MITHenge happens from Jan. 28 to Jan. 31

MITHenge occurred from Jan. 28 to Jan. 31 at 4:48:50 p.m.. During MITHenge, the setting sun aligns with the Infinite Corridor's entire length, a hallway approximately 823 feet long. This phenomenon occurs at two different times each year - around November 11 and January 31.

MITHenge etiquette includes arriving early and not obstructing the corridor, using the third floor, or standing in the stairwell for a better view to ensure space for all to clearly view the phenomenon.

Tina Zhang

WELCOME BACK TO CAMPUS!

Moderna co-founder Noubar Afeyan PhD '87 to deliver **Commencement address**

Afeyan, a member of the MIT Corporation, will speak at the OneMIT Ceremony on the second of three days of Commencement proceedings

By Alex Tang, Tina Zhang, Shabari Shankar, Jessica He, & Russel Ismael

NEWS STAFF

Noubar Afeyan PhD '87, an American-Canadian entrepreneur and philanthropist best known for co-founding the biotechnology company Moderna, will speak at the 2024 OneMIT Commencement Ceremony May 30.

Dr. Afeyan is the Chief Executive Officer of Flagship Pioneering, a biotechnology venture capital company that has founded over 100 new biotechnology companies, including Moderna and Editas Medicine. He is currently a member of the MIT Corporation.

Afeyan was born in Lebanon to Armenian parents and immigrated to Montreal following the Lebanese Civil War. Afeyan studied Chemical Engineering at McGill University (BS) and biochemical engineering at MIT (Ph.D).

Among his numerous accolades, Afeyan has built over 70 life science and technology startups, received the National Order of Merit from Lebanon, and was elected to the National Academy of Engineering.

The Tech sat down with Afeyan to discuss his background, philanthropic work, and journey to his current position at the intersection of basic research and venture capital.

On the Institute's special qualities

Afeyan involvement with the MIT community traces back decades to when he was a graduate student. From 2000 to 2016, Afeyan was a Senior Lecturer at the MIT Sloan School of Management, teaching classes in innovation, entrepreneurship, and leadership.

Afeyan believes that MIT is unique in the way that it positions itself as an institution geared toward shaping the future. He stated that MIT teaches its students how to "prosecute the future," which ns from recognizing that "no problems can't be solved." Afeyan said that anybody who comes to the Institute departs with both the "burden and opportunity" to tackle challenging problems.

Afeyan's journey in the biotechnology sector

In his words, Afeyan went down an "unusual path" when the biotechnology industry was in its nascent stages.

Afeyan started his first company in 1987, the year during which he completed his Ph.D. One of Afeyan's early companies, PerSeptive Biosystems, which was founded in 1989, was acquired in 1998 by PerkinElmer for 360 million dollars.

During the 1990s, Afeyan's work in the realm of startups led him to consider the formation of a centralized institution to catalyze the formation of multiple new companies at once, a concept that he termed "parallel entrepreneurship." In 1999, Afeyan founded Flagship Pioneering, previously known as Flagship Ventures, with this vision.

When asked about any particular individuals at MIT who strongly influenced his career trajectory, Afeyan highlighted his thesis advisor, the late Institute Professor Daniel Wang SB '59 SM '61. Wang was regarded as one of the "founding fathers" in the field of biochem cal engineering. Afeyan stated that Wang's academic family tree of students was "quite remarkable."

With regards to the individuals that he works with today, Afeyan stated that Professors Andrew Lo and Daron Acemoglu have "pioneered new thoughts"- Lo in finance and Acemoglu in economics.

Humanitarian efforts

Afeyan has also led various philanthropic initiatives, which include the construction of the United World College Dilijan School in Armenia and the Aurora

Commencement, Page 2

IN SHORT

The spring registration deadline is Friday, February 9.

Q3 Physical Education & Wellness classes begin on Monday, February 12.

The last day to add half-term sub**jects** offered in the first half of term is Friday, February 16.

There are no classes in observance of Presidents' Day on Monday, February 19.

The Tech's has new mailing lists. Review our website for the updated lists to contact our staff.

Interested in joining The Tech? Email ttjoin@mit.edu

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



Landon Dolvin laying it all on the court on Saturday's game against Coast Guard.

SPORTS BLITZ & UPCOMING **SPORTS EVENTS** SPORTS, p. 3

WORLD & NATION:

HARVARD DOCUMENTS, NEVADA ECONOMY, FAILED IMPEACHMENT CEASEFIRE REJECTION, TRANS RECOGNITION, CHILE FIRES

WORLD & NATION, p. 4

RE-RE-REFLECTION ODE TO POD SEMESTER PUTTING THE PIECES FACE BEHIND THE CARDS CAMPUS LIFE, p. 6

MU LAN REVIEW HART AND MERCY CHICAGO MUSICAL

ARTS, p. 12

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Precipitation Symbols Weather Systems Weather Fronts Other Symbols Fog $\overset{*}{\vee}$ $\dot{\bigtriangledown}$ ス Thunderstorn OO Haze **

Sunny Skies to Start the Year of the Dragon

By Adrienne Lai

With celebrations for the Lunar New Year upcoming, the clouds are parting giving way to a weekend full of sunny skies and warmer weather. Let the good luck breeze through with wind speeds approximately 10 mph for the

festivities!

The Year of the Dragon is known to bring good fortune, which might explain this nice weather after a dreary January! 2024 corresponds with the Wood Dragon element, which is known for new beginnings, so use the warm days and sunlight to set yourself up for success this semester!

THU (NIGHT) FRI THU (DAY) 30°F (-01°c) 41°F (05°c) **39°**F (04°c)

Mostly

Partly

31°F (-01°c) Mostly

SAT SUN 50°F (10°c) **57°**F (14°c) 41°F (05°c) Partly

Mostly

FEBRUARY 8 SITUATION FOR NOON (ET)

Extended Forecast

Today: Mostly sunny with a high of 39°F (3.89°C) and ~10 mph winds Northeast. Tonight:There will be a low of

30°F (-1.11 °C) with mostly cloudy skies. Northeast winds around 5-8 mph.

Friday: Mostly sunny with a high of 41°F (5 °C) and a low of 31°F (-0.56 °C). 5-7 mph North winds.

Saturday: Partly sunny with Southwest winds around 10-14 mph. The high is 57°F (13.89°C) with a low of 41°F (5°C).

Sunday: Mostly sunny with a high of 50°F (10°C).

Noubar Afeyan talks upcoming role as Commencement speaker

Commencement, from Page 1

Prize for Awakening Humanity, an award recognizing individuals involved in humanitarian work across the globe.

With the success from his entrepreneurial endeavors, Afeyan saw an obligation to become involved in philanthropy. Afeyan cited his background as an impetus for such work, alluding to his familial ties to the Armenian Genocide during World War I. He stated that he feels a responsibility to help people "cope with the aftermath" of such events and avert such situations in the first place.

Attitudes for success

With decades of experience, Afeyan described innovation and entrepreneurship as a "Darwinian" evolutionary process that involves "variation, selection, and iteration." Afeyan stated that evolution could not take place without failure, and akin to the industry that he works in, "failure is a necessity for success."

Afeyan noted, however, that a pitfall that comes with learning from failures is that people try to take "too much from" a singular event of failure. He believes that the best learning comes from simultaneously advancing multiple different approaches and letting the circumstances "inform at the ensemble level."

He said, "You have to recognize that if you're not achieving failure, you're probably not going to be successful."

As an immigrant himself, Afeyan emphasized an "immigrant" mindset that he took when he was exploring new fields. "I immigrated to new technologies, new fields, new science, new activities," he said.

Additionally, Afeyan believes that one should strive towards change and improvement in new realms rather than be an expert in a singular discipline. He highlighted the importance of leaving one's comfort zone: Afeyan stated that being relatively new to an area enabled him to work "much

Commencement Exercises

Recent Commencement speakers include popular Youtuber Mark Rober (2023), director-general of the World Trade Organization Ngozi Okonjo-Iweala MCP '78 PhD '81 (2022), and civil rights lawyer and activist Bryan Stevenson (2021).

MIT's Commencement celebrations will take place over three days from May 29 to May 31. The undergraduate Class of 2024 will receive diplomas on Killian Court May 31. Recognition ceremonies for advanced degree recipients will be held on all three days of Commencement exercises.

All Degree candidates are invited to attend the OneMIT Commencement Ceremony on May 30. Events will include speeches, the turning of the Brass Rat, and a rendition of the School Song.



Do you think YOU can fit the page better than we did?

Join Production, Get Paid, Eat Dinner!

MIT community assesses strategies for reducing campus carbon footprint

Newman: "Our findings have implications far beyond our campus boundaries."

By Tina Zhang & Russel Ismael

In MIT's climate action plan "Fast Forward: MIT's Climate Action Plan for the Decade", the Institute demonstrated its aim to decarbonize the campus by 2050. To achieve this aim, MIT launched a new Decarbonization Working Group — a new subset of the Climate Nucleus, a faculty committee responsible for directing and implementing the current climate action

The Decarbonization Working Group is composed of MIT faculty, staff, and students whose roles are to inform MIT's efforts on decarbonization of the campus's centralized energy system.

The group is led by co-chairs Julie Newman, the Institute's Director of Sustainability and Christoph Reinhart, Professor in the Architecture Department. The rest of the group includes members who have extensive knowledge of sustainability technologies, grid-level strategies, and

The Decarbonization Working Group aims to utilize the MIT campus as a testing ground to develop energy solutions before implementing them on a global scale. Ippolyti Dellatolas, PhD student in Mechanical Engineering and group member, said, "It's clear how new energy-efficiency strategies and technologies could use campus as a living lab and then broadly deploy these solutions across campus for scalable emissions reductions." Newman added, "We seek to study and analyze solutions for our campus, with the understanding that our findings have implications far bevond our campus boundaries."

Starting Feb. 2024, members of the working group will use their expertise to assess current technologies for reducing carbon emissions. Newman said, "We are fortunate that there are constantly new ideas and technologies being tested in this space and that we have a committed group of faculty working together to evaluate them."

The working group will also visit sites where decarbonization technologies are currently used or tested in order to evaluate their efficacy. It will explore university campuses that implement district geothermal and heat pumps as well as test sites of deep geothermal or microgrid infrastructure manufacturers.

Reinhart said, "This is a unique moment for MIT to demonstrate leadership by combining best decarbonization practices," which include "nearly there" technologies such as deep geothermal, micronuclear, energy storage, and ubiquitous occupancy driven temperature control. He added that "as first adopters, we can find out what works, allowing other campuses to follow us at reduced risks."

The working group's findings and suggestions will be presented in a report to the MIT community by the end of this year. Opportunities to learn more about the Institute's efforts to decarbonize will he available during community event Mar. 14 and MIT's Sustainability Connect forum on Feb. 8.





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Thursday, February 8, 2024 THE TECH 3

SPORTS BLITZ

Friday, January 26th:

- Women's Swimming and Diving defeated NYU 166-134
- Women's Swimming and Diving lost to Williams College 127.5-172.5
- Men's Swimming and Diving lost to NYU 118-180
- Men's Swimming and Diving lost to Williams College 138.5-155.5
- Men's Volleyball lost to Marymount University 0-3

Saturday, January 27th:

- Men's Fencing defeated Hunter College 27-0
- Women's Fencing defeated Hunter College 25-2
- Men's Fencing lost to NYU 13-14
- Women's Fencing defeated NYU 14-13
- Men's Volleyball defeated Stevenson University 3-0
- Women's Fencing defeated Haverford College 22-5
- Men's Fencing defeated Haverford College 19-8
- **Men's Fencing** lost to New Jersey Institute of Technology 12-15
- Women's Fencing defeated New Jersey Institute of Technology 21-6
- Men's Swimming and Diving lost to Williams College 136-157
- Women's Swimming and Diving defeated Tufts University 208-92
- Men's Squash defeated Middlebury College 5-4
- Women's Basketball defeated Mount Holyoke College 94-23
- Women's Fencing defeated Stevens Institute of Technology 20-7
- Men's Fencing defeated Stevens Institute of Technology 14-13
- Men's Basketball defeated Salve Regina 86-81

Sunday, January 28th:

Men's Squash lost to Williams College 1-8

Tuesday, January 30th:

• Women's Basketball lost to Middlebury College 51-65

Wednesday, January 31st:

- Women's Basketball defeated Emerson College 70-62
- Men's Basketball lost to Babson College 68-84
- Men's Volleyball lost to Lasell University 0-3

Thursday, February 1st:

Men's Volleyball defeated Rivier University 3-1

Friday, February 2nd:

- Women's Track and Field participated in Crimson Elite (No Team Score)
- Men's Track and Field participated in Crimson Elite (No Team Score)
- Men's Squash defeated Bates College 8-1

Saturday, February 3rd:

- Women's Track and Field participated in Tufts Cupid Challenge (No Team Score)
- Men's Track and Field participated in Tufts Cupid Challenge (No Team Score)
- Women's Basketball defeated United States Coast Guard Academy 72-59
- Men's Swimming and Diving defeated Amherst College 202.5-74.5
- Women's Swimming and Diving defeated Amherst College 213-77 Men's Basketball defeated United States Coast Guard Academy 97-81

Sunday, February 4th:

- Rifle lost to the University of Akron 4322-4700
- Rife defeated Norwich University 4322-4304

Wednesday, February 7th:

- Women's Basketball defeated Babson College 69-63
- Men's Basketball defeated Emerson College 94-93

Upcoming Sports Events

FRIDAY 9

Women's Track and Field at David Hemery Valentine Invitational

Women's Swimming and **Diving** at BU Winter Open

Men's Swimming Diving at BU Winter Open

Men's Squash

at MASC Championships

SATURDAY 10

Men's Track and Field at David Hemery Valentine Invitational

Men's Track and Field Gordon Kelley Invitational $10 \, a.m.$

Women's Track and Field

Gordon Kelley Invitational at MIT $10 \ a.m.$

Rifle

at Norwich University 12 p.m.

Men's Tennis at Boston University 1 p.m.

Women's Basketball vs Smith College 1 p.m.

Men's Basketball

3 p.m.

Women's Tennis

at Brandeis University 3 p.m.

SUNDAY 11

vs Ohio State University 10 a.m.

WEDNESDAY 14

Men's Tennis

vs Merrimack College 3 p.m.

Women's Basketball at Wheaton College 6 p.m.

Men's Volleyball vs Elms College 7 p.m.

Men's Basketball at Clark University 7 p.m.

SATURDAY 17

Women's Track and Field at Springfield College Triangle Classic

Men's Track and Field at Springfield College Tri-

angle Classic

at Army 8 a.m.

Women's Tennis

at Southern New Hampshire University $10 \ a.m.$

Women's Basketball

at Salve Regina University 1 p.m.

at Salve Regina University 1 p.m.

vs Vassar College 1 p.m.

Men's Basketball vs Vassar College

3 p.m.

Men's Volleyball vs Endicott College

SUNDAY 18

Men's Tennis at RPI 2 p.m.

MONDAY 19

Softball at Brown University 10 a.m.

WEDNESDAY 21

Women's Basketball NEWMAC Quarterfinal



U.S. kills senior leader of Iranbacked Kataib Hezbollah in strike in Iraq, says senior U.S. official

The U.S. killed a senior leader of the Iran-backed group Kataib Hezbollah in a strike in Iraq Wednesday, a senior official confirmed to CBS News. The individual targeted was a commander who was in charge of operations in Syria.

Kataib Hezbollah is one of the Iran-backed groups the U.S. holds responsible for a series of attacks on U.S. forces in Iraq and Syria, as well as for the deadly drone strike in Jordan that killed three U.S. soldiers and wounded dozens more.

Officials told CBS News the strike in Iraq was part of the response President Biden had promised in the aftermath of the drone strike in Jordan.

The retaliation for that attack began last Friday when the U.S. hit more than 85 targets in Iraq and Syria that included command and control operation centers, missiles, and rockets used by the militia groups and their Iran Islamic Revolutionary Guard Corps sponsors, U.S. Central Command said in a statement.

Iranian-backed militia groups have launched at least 168 attacks on U.S. forces in Iraq, Syria, and Jordan since Oct. 17. Those attacks, according to data provided by the Pentagon, have killed 3 U.S. service members, very seriously injured two, seriously injured nine, and 132 others have suffered non-serious injuries.

-Eleanor Watson, CBS News

Appeals court rejects Trump's immunity claim in federal election interference case

A three-judge panel in the U.S. Court of Appeals has rejected former President Donald Trump's claim of presidential immunity as it pertains to his federal election interference case.

"For the purpose of this criminal case, former President Trump has become citizen Trump, with all of the defenses of any other criminal defendant," the judges wrote in their 57-page decision, saying that "Former President Trump lacked any lawful discretionary authority to defy federal criminal law and he is answerable in court for his conduct."

"We reject all three potential bases for immunity both as a categorical defense to federal criminal prosecutions of former Presidents and as applied to this case in particular," the decision said.

"We cannot accept former President Trump's claim that a President has unbounded authority to commit crimes that would neutralize the most fundamental check on executive power -- the recognition and implementation of election results," wrote the judges. "Nor can we sanction his apparent contention that the Executive has carte blanche to violate the rights of individual citizens to vote and to have their votes count."

"At bottom, former President Trump's stance would collapse our system of separated powers by placing the President beyond the reach of all three Branches," they wrote.

Trump, responding on his social media platform, wrote, "A President of the United States must have Full Immunity in order to properly function and do what has to be done for the good of our Country. ... If not overturned, as it should be, this decision would terribly injure not only the Presidency, but the Life, Breath, and Success of our Country."

Trump spokesperson Steven Cheung said in a statement that "President Trump respectfully disagrees with the DC Circuit's decision and will appeal it in order to safeguard the Presidency and the Constitution."

—Katherine Faulders, Alexander Mallin, & Peter Charalambous, ABC News

Engineer accused of stealing secret U.S. government tech used to detect nuclear missile launches

A former engineer was arrested on federal charges alleging he stole trade secret technology that was developed by the U.S. government to detect nuclear missile launches and to track ballistic and hypersonic missiles, the Department of Justice announced Wednesday.

Chenguang Gong, 57, of San Jose, California, was arrested Tuesday morning and charged with theft of trade secrets, the DOJ said in a press release. Gong is a native of China and became a U.S. citizen in 2011, the DOJ said.

Gong appeared in court Wednesday and was released on \$2.5 million bond with location monitoring and curfew, a spokesperson for the U.S. Attorney's Office in Los Angeles said.

During that hearing, which took place in San Jose, he was represented by a deputy federal public defender. He was ordered to make a court appeared in Los Angeles by Feb. 20 and it remains unclear who will represent him in that hearing, the spokesperson said.

While briefly working at a Los Angeles-area research and development company — from March 30, 2023 to April 26, 2023— Gong allegedly transferred 3,600 files from his work laptop to personal storage devices, according to court documents. Some of these files were later discovered on devices taken from Gong's temporary residence in Thousand Oaks, California, the DOJ said, citing an affidavit filed in support of the criminal complaint against Gong.

Gong transferred more than 1,800 files after he had already accepted a new job at a main competitor of the company on April 5, 2023, the DOJ said.

-Rebecca Cohen & Andrew Blankstein, NBC News

House gives Harvard one-week deadline to turn over antisemitism documents

Matt Egan

CNN

Turn over a trove of documents about antisemitism on campus or face a subpoena. That's the final warning Rep. Virginia Foxx, the Republican chairwoman of the House Education and Workforce Committee, delivered to Harvard University on Wednesday as the panel seeks to advance its investigation into antisemitism on college campuses.

In a letter sent to Harvard leaders, Foxx accused the Ivy League school of "obstructing" the committee's investigation by withholding many of the documents lawmakers are seeking and submitting others that were publicly available and yet contained "bewildering redactions."

"Harvard's failure to produce documents requested by the Committee in a timely manner is unacceptable and will not be tolerated," Foxx wrote in the letter to Harvard interim president Alan Garber and Penny Pritzker, who leads the Harvard Corporation, the school's top governing board.

Foxx detailed a series of high-priority documents that she wants Harvard to turn over by 5 pm ET on February 14, including meeting minutes since Hamas' October 7 terror attacks on Israel and communications by university officials related to antisemitism. This narrower list excludes some of the committee's prior requests for information on Harvard's diversity office as well as on foreign donations. "If the above priority requests are unfulfilled by the deadline set above, the Committee is prepared to issue a subpoena," Foxx wrote.

In a statment, Harvard spokesperson Jason Newton said the school was cooperating with the committee and "has provided extensive information with initial submissions made last month and several further responses. We have made eight submissions, including one on Monday, in connection with their inquiries, and plan

another submission for Friday."

"The safety and well-being of our students remains our top priority," he said

Garber, who replaced Claudine Gay after she stepped down last month, has signaled Harvard will cooperate with the House investigation.

In an interview with The Crimson last week, Garber said Harvard would "comply fully with the process" of the investigation.

Yet Foxx has repeatedly criticized Harvard for its response, previously describing it as "woefully inadequate" and telling CNN that lawmakers "thought Harvard would take this more seriously."

In the new letter sent on Wednesday, Foxx said that so far Harvard has produced just one "document of significance" since the request for documents was made on January 9. That document is a set of recommended goals and steps to address antisemitism by Harvard's antisemitism advisory group. It was provided last week.

Nevada's struggling economy could hold a key to 2024

Kellen Browning

THE NEW YORK TIMES

Nevada has the worst unemployment rate in the country, gas and grocery prices are still among the nation's highest, and the cost of housing here has soared. President Biden's policies are squarely to blame, Republicans argue, and former President Donald J. Trump will fix it if voters return him to the White House.

Nevada's unemployment rate has been cut in half since Mr. Biden took office, gas prices have dropped by nearly \$2 a gallon since mid-2022, and more than 200,000 jobs have already been created as the state is receiving \$3.3 billion in infrastructure investments. Democrats here say that the economy is finally on the upswing after Mr. Trump and the coronavirus pandemic drove it into the ground, and that re-electing Mr. Biden is critical to keeping it that way.

Even though Nevada's presidential nominating contests this week are largely anti-climactic — in part

because Mr. Trump and his remaining Republican primary rival, Nikki Haley, are on separate ballots — Mr. Biden, Vice President Kamala Harris and Mr. Trump all recently made stops in Las Vegas, setting the stakes for the likely general election matchup.

The messaging war heating up mirrors a larger political fight playing out nationwide over which perception of the economy hits home for voters. Traditional metrics indicate that the economy is, indeed, strong, and Americans are spending like it is, according to a New York Times analysis, but consumer confidence remains low.

Republicans believe they have a particularly potent economic argument to make in Nevada, which relies heavily on tourism and hospitality, and was hit harder during the pandemic than most of the country and recovered more sluggishly.

"Certainly, Republicans will make hay about that: the cost of living, groceries, some of those issues," said David Damore, a professor of political science at the University of Nevada, Las Vegas.

Democrats, he said, could make the case that they were improving the local economy through job growth and climate investments. But that argument is "a little more abstract than going to the grocery store and seeing your prices," he added.

Republicans have not won Nevada in a presidential election since 2004. The state's Democrats are famously well prepared, with the political operation of former Senator Harry Reid combining with the organizational heft of the Culinary Workers Union, in particular, to turn out Democratic voters and independents reliably. Still, recent statewide elections have been won by razor-thin margins, and Republicans flipped the governor's mansion in 2022. Last fall, a poll conducted by The New York Times and Siena College found Mr. Biden trailing Mr. Trump by 10 percentage points in

House Reps fail to impeach DHS Secretary Mayorkas over border

Alexandra Hutzler, Lauren Peller, & John Parkinson

 $ABC\ NEWS$

In a stunning defeat, a Republican-led push to impeach Homeland Security Secretary Alejandro Mayorkas failed on Tuesday.

The final vote was 214-216. Three Republicans joined all Democrats present in opposing the measure. A fourth Republican voted against for procedural reasons.

For a moment, the vote was tied at 215-215 before another Republican switched to vote against.

Speaker Mike Johnson announced the resolution had failed, to cheers from Democrats in the chamber.

Moments before, when House Republicans thought they had eked out the impeachment vote -- despite the defiance of three of their members -- Democratic Rep. Al Green, of Texas rolled in to the chamber in a wheelchair in hospital scrubs.

Democratic leaders had brought Green back to the Capitol from the hospital where he was recovering from surgery. Green voted no, deadlocking the chamber and preventing Republicans from impeaching Mayorkas.

A Democratic leadership source said Green was feeling well enough to travel back to Capitol Hill, and that he was expected to return before the vote.

Minutes after the Mayorkas vote failed, Johnson suffered another stinging defeat when the House fell short of the votes needed to pass a stand-alone bill he had backed to provide aid to Israel.

During the Mayorkas drama, Rep. Blake Moore, R-Utah, filed a motion to reconsider immediately after the vote failed, allowing it to be taken up again. It is likely to be scheduled when Majority Leader Steve Scalise, who is receiving cancer treatment, is able to attend.

The articles of impeachment ac-

cuse Mayorkas, long the target of GOP attacks when it comes to immigration policy, of "willful and systemic refusal to comply with the law" and "breach of public trust" amid a surge in unauthorized migrant crossings.

A spokesperson for the DHS called the impeachment baseless and said that it should not have moved forward.

The White House also spoke out against the efforts to impeach Mayorkas.

"Clearly there is bipartisan agreement that this baseless, unconstitutional impeachment stunt should fail. House Republicans ought to realize that extreme political stunts like this are a waste of time, and instead join the President, Secretary Mayorkas, and Republicans and Democrats who want to work together to deliver real solutions that actually strengthen border security," Ian Sams, White House spokesperson for oversight and investigations,

Netanyahu rejects Hamas ceasefire proposal; Blinken visits Israel

John Hudson, Claire Parker, Susannah George, & Lior Soroka

THE WASHINGTON POST

Israeli Prime Minister Benjamin Netanyahu on Wednesday forcefully rejected a cease-fire proposal by Hamas, vowing to fight until a "complete victory" had been achieved over the militant group in Gaza — a setback for Secretary of State Antony Blinken, who was in Israel hoping to build support for a humanitarian

Hamas had called for a threestage cease-fire deal that would release Israeli hostages, alive and dead, over a more than four-month period in exchange for the complete withdrawal of Israeli forces from the Gaza Strip, according to the leaked text of its response to a truce proposal verified by The Washington

Netanyahu called Hamas's terms "delusional" in a news conference Wednesday evening: "By giving in to Hamas demands, we will only invite another massacre," he said, adding that Israel would continue its military campaign in southern Gaza.

"Continued military pressure is essential for the hostages' release," he said.

U.S. officials expected both Hamas and Israel to continue to posture publicly against the truce as a negotiating tactic, but an Israeli initiative to continue military operations for months on end would directly contradict Blinken's goals of reducing hostilities and allowing humanitarian aid into the strip.

Under the broad framework for a deal, hashed out by negotiators from the United States, Qatar, Israel and Egypt in Paris last month, an initial pause in fighting would last for six weeks and bring about the release of all civilian hostages held by the militant group in Gaza. Israel would release three Palestinian prisoners for every hostage Hamas

Qatari Prime Minister Mohammed bin Abdulrahman Al Thani said Tuesday evening that Hamas had delivered a "positive" reply after a week of deliberation, and Qatar had passed it along to Israel. President Biden characterized it on Tuesday as "a little bit over the top."

Between his meetings Wednesday with top Israeli officials, including Prime Minister Benjamin Netanyahu, Blinken said U.S. officials were "intensely" looking at Hamas's counterproposal.

"There's a lot of work to be done but we are very much focused on doing that work, and hopefully being able to resume the release of hostages that was interrupted," he

It was unclear Wednesday evening what Netanyahu's pledge to move forward with Israel's military campaign - including in Rafah, the last sliver of land its troops have not yet invaded - would mean for international diplomatic efforts to secure a cease-fire.

Osama Hamdan, a senior Hamas official, said in a news conference in Beirut Wednesday that a Hamas delegation would head to Cairo Thursday for fresh talks convened by Egypt and Qatar. He accused Netanyahu of misleading the Israeli public and seeking to prolong the war.

Japan court approves a trans for request

ASSOCIATED PRESS

A court in western Japan on Wednesday approved a transgender man's request to have his gender changed in official records without undergoing sterilization surgery, the first known ruling of its kind since the top court struck down a surgery requirement for such record changes.

The Okayama Family Court's Tsuyama Branch said Tacaquito Usui, 50, could get the gender listed for him in his family registry updated to male. Usui original application for the revision was rejected five years ago.

"It's like I'm standing at the start line of my new life," he said during a televised news conference after Wednesday's ruling came out. "I'm

Japan's Supreme Court ruled in October that a provision of a 20-yearold law that made the removal of reproductive organs a precondition for the legal recognition of gender changes was unconstitutional. The ruling, however, only applied to the sterilization provision and did not address the constitutionality of requiring other procedures.

recognition without surgery

The Okayama court found that the hormone therapy Usui received made him eligible for gender affirmation. Usui welcomed the recognition, saying he thinks the law in Japan might be evolving faster than the public awareness. Many LGBTQ people in Japan still hide their sexual orientations and gender identities due to fear of discrimination at work and schools. The country remains the only Group of Seven member that does not allow same-sex marriages.

Activists have pressed for greater rights and protections. But change has come slowly in a country of conformity with a conservative government that sticks to traditional paternalistic values and is reluctant to accept gender, sexual and family diversity.

The law that the Supreme Court addressed in its ruling took effect in 2004. It stated that individuals who wanted to register a gender change needed to have reproductive organs, including testes or ovaries, removed. They also were required to have a body that "appears to have parts that resemble the genital organs" of their expressed gender.

More than 10,000 Japanese have since had their genders officially changed, according to court documents from another court case. A court in central Japan noted in last year's case that sterilization surgery was not required in most of the approximately 50 European and central Asian countries that have laws that allow gender changes on official

112 dead as authorities struggle contain forest fires in Chile

Betsy Reed

THE GUARDIAN

Firefighters are wrestling with huge forest fires that broke out in central Chile on Friday. Officials have extended curfews in cities most heavily affected by the blazes and said the death toll has increased to 112 killed

The fires have been burning with the highest intensity around the city of Viña del Mar, where a botanical garden founded in 1931 was destroyed by the flames. At least 1,600 people have been left without homes.

A person holds a flag that reads 'against' as voters take part in a referendum on a new Chilean constitution, in Santiago, Chile

Flames and smoke on the eastern edge of the city have trapped some people in their homes. Officials said 200 people have been reported missing in Viña del Mar and the surrounding area. The city of 300,000 people is a popular beach resort.

Late on Sunday, Chile's forensic medicine service updated the confirmed death toll to 112 people.

Drone footage filmed by Reuters in Vina del Mar area showed entire neighbourhoods scorched, with residents rummaging through husks of burnt-out houses where corrugated iron roofs have collapsed. On the streets, singed cars littered the roads.

Rodrigo Mundaca, the governor of the Valparaíso region, said on Sunday he believed that some of the fires could have been intentionally caused, replicating a theory that had also been mentioned on Saturday by the president, Gabriel Boric.

These fires began in four points that lit up simultaneously," Mundaca said. "As authorities, we will have to work rigorously to find who is responsible."

The fires around Viña del Mar began in mountainous forested areas that are hard to reach. But they have moved into densely populated neighbourhoods on the city's periphery despite efforts by Chilean authorities to slow down the flames.

On Saturday, Boric said unusually high temperatures, low humidity and high wind speeds were making it difficult to control the wildfires in central Chile, which have already burned through 8,000 hectares of forest and urban areas.

Officials are asking people in affected areas to evacuate their homes as quickly as possible, while those further from the fires are being told to stay indoors in order to facilitate the transit of fire engines and ambulances.

Curfews have been declared in Viña del Mar and the neighbouring cities of Quilpué and Villa Alemana, as part of efforts to prevent looting.

The fires broke out during a week of record high temperatures in central Chile. Over the past two months, the El Niño weather pattern has caused droughts and high temperatures in western South America that have also increased the risk of forest fires.

World Food Program ramping up aid to reach 3M Ethiopians. Millions more in need

The U.N.'s World Food Program says it aims to reach up to 3 million Ethiopians affected by climate change and conflict in the coming weeks, half the number it supported in the East African country before the agency introduced a lengthy aid suspension last year.

WFP said it "is now working at pace to deliver food assistance to up to 3 million" in Ethiopia's Tigray, Afar, Amhara and Somali regions. The agency "is extremely concerned about the deteriorating food security in Northern Ethiopia - where many are already facing severe hunger," Chris Nikoi, its Ethiopia head, said in a statement issued Tuesday.

The United Nations and the United States halted food aid for the Tigray region in March 2023 because of a massive scheme by Ethiopian officials to steal humanitarian grain. The pause was extended to the rest of the country in June after the diversions were found to have occurred nationwide.

The U.S. and the U.N. later resumed food deliveries but on a small scale.

Before the suspension, the WFP helped feed 6 million Ethiopians. It now plans to reach 40% of the 7.2 million people who face acute food insecurity and only "if resources are available." The rest will be reached by the government and other aid agencies, the

The WFP is grappling with a worldwide funding shortage at a time when needs are soaring. The agency said it has "limited food stocks" in Ethiopia and urgently needs \$142 million for its operations. Without those funds the agency will be forced to stop food distributions for nearly 1 million foreign refugees in April, it said.

Ethiopia is gripped by drought and multiple internal conflicts that have resulted in millions going hungry.

-Associated Press

AustraliansvoteNoinreferendum that promised change for First Nations people but couldn't deliver

With a two-letter word, Australians struck down the first attempt at constitutional change in 24 years, a move experts say will inflict lasting damage on First Nations people and suspend any hopes of modernizing the nation's founding document.

Preliminary results from the Australian Electoral Commission (AEC) suggested that most of the country's 17.6 million registered voters wrote No on their ballots, and CNN affiliates 9 News, Sky News and SBS all projected no path forward for the Yes campaign.

The proposal, to recognize Indigenous people in the constitution and create an Indigenous body to advise government on policies that affect them, needed a majority nationally and in four of six states to pass.

Prime Minister Anthony Albanese had championed the referendum and in a national address on Saturday night said his government remained committed to improving the lives of Aboriginal people and Torres Strait Islanders.

'This moment of disagreement does not define us. And it will not divide us. We are not yes voters or no voters. We are all Australians," he said.

"It is as Australians together that we must take our country beyond this debate without forgetting why we had it in the first place. Because too often in the life of our nation, and in the political conversation, the disadvantage confronting Aboriginal and Torres Strait Islander people has been relegated to the margins."

"This referendum and my government has put it right at the

—Hilary Whiteman, CNN

Charles King breaks with tradition to open up about cancer

Buckingham Palace's decision to announce King Charles's cancer diagnosis breaks with a longstanding tradition of near total discretion about the British monarch's health, as the relatively new king looks to present the 1,000-year-old regal franchise as more

King Charles is Britain's largely ceremonial head of state and power to sign off on laws and appoint prime ministers unlike U.S. presidents who are expected to give granular breakdowns of the physical ailments, the unelected British monarchs face no such requirement and have for years been vague about

On Monday, the palace said that during a recent hospital procedure for benign prostate enlargement "a separate issue of concern was noted" and that subsequent tests revealed this was cancer. Palace officials won't comment on what cancer or what stage it is at, except to say it isn't prostate cancer. It is unclear how long the king, 75, will take off from public appearances, but palace officials say he is able to undertake constitutional duties, including his weekly discussion with the British prime minister.

The statement triggered a British national parlor game, with royal watchers spending days carefully dissecting the statement for clues about the king's actual condition. Meanwhile medical experts are being rolled out in the media to opine about how serious his prognosis might be.

When Queen Elizabeth II had to cancel a visit to Northern Ireland three years ago after she was suddenly hospitalized, palace officials initially claimed that she was simply resting at Buckingham Palace. Days before her husband Prince Philip died in 2021, the press was told he was "in good spirits." King Charles' grandfather George VI had a lung removed due to cancer, a diagnosis which was hidden from the public and the monarch himself.

Charles was under no constitutional obligation to disclose his cancer. British law only states that he can be replaced with a regent if doctors conclude he suffers infirmity of mind or body and can't undertake his royal functions.

—Max Colchester, The Wall Street Journal

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A re-re-reflection on HackMIT

A reply from a writer of the past to an unexpected letter

By Vivian Zhong

Dear Susan,

I scarcely know how to write this...rere-re-reflection, as it were. Thank you, for starters, for coming up with this inspired idea of writing a letter to an unknown alum from the annals of Campus Life.

There is a lot I want to reflect back to you, so your editor is going to have to forgive me for a long-winded piece. I myself did my fair share of ruthless word-cutting during my tenures as news editor and editor-in-chief; at least this is Campus Life and AP Styleguide need not apply as strictly!) But I think age allows me some leeway for rambling — and I am veritably ancient, for I wrote that HackMIT piece when I was not yet 18; I am now 26.

You wrote, "i know you can't give me answers" — but, as chance would have it, a friend and fellow alum from French House conveyed news of your piece to me via the French House Slack, where your Executive Editor, a fellow Vivian, tried to @ me about it. Welcome to "what a small world," which you will say and hear ad nauseam for years to come!

You probably didn't really want, and certainly don't need, any of the answers and unsolicited advice I'm about to spew forth. But since the powers of randomness have brought us together, I will offer my thoughts nonetheless, in the hopes that you will find at least a morsel of use — and, admittedly, for my own catharsis.

"did you end up majoring in computer science? did it fit seamlessly into your career? did you ever think back to your initial doubt, and if you did, did you confirm it? or did you laugh and shake your head a little at your silly past self?"

I did not, in fact, become a course 6! I went into MIT contemplating 3, 6-7, 5-7, 7, and/or 20, and eventually committed to course 20 (with some "do it with me!" urging from a friend). I am now a Ph.D. student in Bioengineering at Stanford doing research in plant synthetic biology. But it has indeed fit into my research career, as it does in most research nowadays. My sophomore year UROP mentor in a bioengineering lab was adamant that I learn Python for data analysis, for which I am forever grateful to him. I don't know that CS majors would consider it as true CS, but I can code enough to run an ODE model, process big omics data, and sundry other tasks that come up in biology. CS takes on many forms — stress-coding an app in Johnson is far from the be-all and end-all!

(And bold of you to assume that it's my silly *past* self — I daresay I'll go on being silly in some way or the other till the day I die)

"after hackMIT, did you still cringe whenever you heard someone discussing all the complicated edges and facets of computer science?"

I did take a few CS classes that I thought would be useful, as part of my major's technical electives requirement. I

can certainly imagine my past self cringing at such conversations if I was stressed about an upcoming machine learning midterm! Other than that, I think I generally took it as an opportunity to pick up a few interesting factoids or terms — or maybe I just tuned it out as background noise.

"were you still reminded of how little you knew every time you heard a classmate talk about the new app they were developing or their latest solved leetcode problem?"

One of the exhausting but splendid things about being in an environment like MIT is constantly being reminded how little I know of just about everything. I think my mind would wither if I couldn't feed it new and interesting information! I long ago accepted that I'll never know everything I want to know, but I'm still learning how to prioritize what to learn with the limited time, energy, and concentration I have at my disposal.

"this "euphoria" that you describe — how can you tell if it stems from a love of problem-solving and logic, or if it's the product of a passion for computer science? do you think you even needed to answer this question?"

Definitely the former— I don't think I ever had a passion for computer science in itself, only as a means to an end, be it bioinformatics or writing a script to scrape social media data about a Chinese actor (one has to keep one's coding skills honed somehow). I did HackMIT out of curiosity and the desire to know how to do everything at least a little — and probably a hefty dose of FOMO.

"do i simply not have the work ethic? is my brain not wired for computational logic? does it just work too slowly to keep up with the two-week bootcamp?"

Susan, did you take and drop the same class I did?! I took a web app development class during IAP of (I think) my freshman year. I could not make heads nor tails out of it, and wondered exactly as you did — does my brain simply not compute? (Which was also me throughout all of 8.02, as my brilliant friend cracked the code on empty charged shell after solid charged shell and I sat there questioning my understanding of calculus.)

And I too doubted my own work ethic — was I just being lazy? I still wonder this now, when I feel particularly tired and unwilling to start an experiment in lab. I don't think I'll ever find a satisfactory answer to this, so I try to focus on the solution: work on problems that interest me enough to push through mental or physical barriers, and work together with others, to provide a bouncing board for ideas and a relief from tedium.

I encourage you to try the class again next year, if you still have the interest; sometimes it just takes a few tries to get it! I understand a lot of things easily now that once brought the gears in my brain to a grinding halt. (Electromagnetism is not one of these things. On that front, I have

simply come to accept that some combination of genetics and not listening to my parents when they told me to study more math in high school has resulted in me being terrible at physics.)

At the same time, the world does not require everyone to know how to build a website from scratch! (I still haven't!) There are a million other rewarding and impactful things you can do.

"you say hackMIT is analogous to MIT as a whole: "It's intimidating, it's sometimes hard to get through, but you'll come through having met the greatest people and passing the most amazing time." i also see that you wrote this article a month into your freshman year, according to your graduation date. how did you know this was true so quickly? did it continue to hold for the next four years?"

I really don't know how I knew that was true! Optimism and faith in the fundamental goodness of people, maybe? That's gotten me through life so far. But I think MIT is just so chock full of wonderful people that even in one short month, you've met enough to know that it's representative of the whole. And yes, it absolutely held true! As for meeting the greatest people, that continues to hold true even now: you will continue to meet and be inspired by new MIT people after you graduate. The beacon of MIT shines far!

"the truth is, there is still some part of me who feels like i'm just running away from anything that i find difficult. if that's the case, then why am i here? i couldn't tell you. have you ever felt like that? like computer science, technology — this institute of technology — might be too much for you to hold?"

Oh, I (and probably 99% of MIT students) am all too familiar with the "why am I here" feeling, the feeling that I could never make the most of what MIT offered. I just said that MIT is a beacon of light; it also casts a long shadow. Even the other day, as I was innocuously biking home, my thoughts drifted to how I was feeling overwhelmed with doing several different projects at the same time, and yet even so it would never feel like enough- not because anyone is pressuring me with their expectations, but because I expect it of myself: to be good enough, successful enough, useful enough to the world (whatever any of that means) to live up to my MIT education. It's not the externally perceived prestige, necessarily, but rather that I know how much MIT offered — how many resources someone else could have received if I had not been admitted instead of them.

The only solution, for me, is to try and keep my imposter syndrome to a useful level: I'll never convince myself that I deserved to get into MIT for undergrad or Stanford for grad school, but since I was lucky enough to do so, I'll try to make the most of it.

I think that's all the questions! As you noted, HackMIT can leave you with a lot more than a non-to-partially-functioning

app, and I have reactions to offer on that front as well

"one of the many platonic loves of my life — a friend of a friend. i can't believe this is your first time meeting her, my other friend had insisted."

I'm thrilled that you discovered a platonic love through HackMIT, and hope you can nurture that friendship for years to come. I have had many friendships that fell by the wayside because the context for that friendship faded: we no longer took the same classes, participated in the same club, lived on the same floor, and so on. It is a bittersweet lesson that I learned after freshman year, and still continue to learn: friendships take active care to maintain, and yet, often all it takes is for one person to say Hello in the hallway or to suggest getting lunch together. I think we are all afraid of being the first to reach out, for fear of rejection, for finding that we are more invested than the other.

"a new hoodie, dark green and adorned with the hackMIT logo. i still wear it at least once a week"

I have several shirts from my first (and only) HackMIT that I wear to this day — they're incredibly light, comfortable, and breathable!

"a vague sense of regret. maybe, i'd chosen the wrong place to spend my time. a vague sense of regret, because what if, hackMIT could've been the thing to show me that computer science was possible? that i wasn't too far behind everyone else to learn?"

Regardless of whether or not a degree in computer science is in your future, rest assured that HackMIT will not be the last opportunity to figure it out. As I said before, computer science comes in many shapes and forms, and it's truly never too late to learn. A former roommate switched from course 20 to course 6 late in junior year, and in my first-year Ph.D. classes, there were students learning to code for the first time.

I'll end where you ended: "this is getting too long, and i have a feeling that i know what your answer to all my questions would be: i'm going to have to figure it out myself. so, i guess, here goes!"

I think that, with such an attitude, you are fully equipped to take on the world! Just remember, and I think you already know: though we each have to walk our own path and find our own answers, we don't need to do it alone. And as the aforementioned Chinese actor who provided me an excuse to stretch my coding muscles once said, when asked about difficult times in his life: "Every step is a part of your wealth; no one can replicate it or take it away."

Reflection can at times be a scouringly painful thing, but I'm very grateful to you for giving me the impetus to do so.

All the best,

It would be turtley awesome if you join The Tech



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WEATHER, p. 2
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Snow. WED: 32°F | 18°F

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Volume 131, Number 1

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WEATHER, p. 2

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Thursday, February 18, 2021

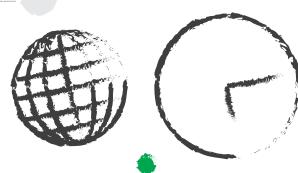


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Ode to Pod Semester

The abnormal in between the normal and the new normal

By Arun Wongprommoon

Increasingly often, I've caught myself referencing the pod semester to the younger classes and then meeting blank stares. Only half the seniors today have first-hand experience, and I realize that the pod semester is no longer a thing that people have collectively internalized. As time passes, I am nervous that I, too, will slowly erase the pod semester from my own brain as well. The lives of those during the pod semester were never described in detail in The Tech, as we were busy living it, so I'd like to take this time to throw myself down memory lane and recollect bits and pieces of my experience with the pod semester just around three years ago today.

I. THE PURGE

It was March of my frosh year at MIT. My parents had been talking about this new coronavirus since IAP, which was spreading mostly in China with some 70,000 cases, but had some 7,000 cases each in South Korea, Italy and Iran. People weren't even calling it COVID-19 yet that term came about in February. I remembered checking the case tracking dashboard on a JHU website. Yes, all the case graphs were, to date, exponential, which was alarming; however, it still felt so far away from me or my family. It's probably yet another one of those fearmongering news articles my parents shared with me. As with most others, I shrugged it off and lived life as usual.

Nobody around me was talking about this at all. Even in my home country, Thailand, close to China, there were a very countable forty-two cases, most of which were people who came directly from Wuhan or had contact with people in the first group through hospitals, planes, or cars. There were two cases of coronavirus in Massachusetts so far, one of which returned from Wuhan, and the other returned from Italy. My parents and I agreed that Thailand seemed to be closer to the epicenter of this new virus than the United States.

This photo was taken on March 9, 2020, which looks very ominous in hindsight. It was just a regular day of people coming and going to class, and as it was the first warm day in a while, campus sprung back to life, completely unaware of what was to come. I had just finished my dynaMIT interview and was walking back from Building 14, so I just snapped a quick pic of people enjoying the weather.

Over the next few days, we started hearing about the Biogen conference a few blocks down from where we were. Soon, the total number of cases steadily climbed up to a few dozen, and corona made its way into conversations at MIT. Professors, with magical foresight, started unofficially canceling lectures and recitations, using recordings, or moving things online. Zoom was not a commonly known solution yet—that came about in late March. Purell stands started popping up on campus.

Throughout the evening of Monday, March 9, 2020, rumors circulated that campus would be shut down and we would all have to leave, though it was supported only by a screenshotted Slack message from an attendee of a meeting with MIT administration. The one screenshot spread like wildfire, and we all held our breath from that evening all throughout the



[March 9, 2020] It was just a regular day of people coming and going to class...

next day, Tuesday, March 10, 2020, for any official email to come out. It was going to come out at 1 p.m., my morning 21M.606 class said. We didn't have the mental capacity to do anything that morning, and 21M.606 turned into an open-hearted conversation session as the professor sat us around in the stage area of W97.

And so we waited. And then we waited. Evervone seemed to be on autopilot that day, and even if people went to classes and recitations and labs, all that was going on in their minds was "What will the email say?" 1 p.m. came and went. 2 p.m.? 3 p.m.. 4 p.m.? 5 p.m.

And then it dropped.

"A significant new step in response to COV-ID-19," sent from L. Rafael Reif. Tuesday, March 10, 2020, 5:36 p.m.

"All classes are cancelled for the week of Monday, March 16 through Friday, March 20."

"Online instruction [...] will begin for all classes on Monday, March 30, and continue for the remainder of the semester."

"Undergraduates should not return to campus after spring break. Undergraduates who live in an MIT residence or fraternity, sorority or independent living group (FSILG) must begin packing and departing this Saturday, March 14. We are requiring undergraduates to depart from campus residences no later than noon on Tuesday, March 17."

"Classes will continue this week."

Even though everyone had been bracing for this email, once the email hit we were all at a loss. Does that mean I'm going home home? Thailand? Must be? Because I don't have a place to stay here? MIT is not providing any exceptions? Are they? To ensure "campus safety," must I travel through crowded areas, such as airports and airplanes, only to arrive in a country with even more cases? Do I need to book flights now? Do I need to pack up? Details were slowly unraveling, and a lot of questions remained unanswered. We international students were told to wait because more details were coming? What rumors and hearsay are real right now?

Some activities continued or heightened, such as The Tech and the Holy Purell event. Killian now looked different—at some point, someone took a Purell stand and sparked a

rally. Was it a celebration? Paying tribute? Manifestation of nervousness and discomfort? 6 p.m. came, so I went to The Tech office, where we were working overtime to keep up with the bombardment of news. We were our own support group, hearing each other out as we tried to make sense of the situation and work out an escape route.

I heard that someone heard that someone in a nearby college caught it, and someone went to that nearby college and then came back to some dorm at MIT. Suddenly, it felt like COVID-19 was a stone's throw away from me. tious meal prepping with friends, which... well... unfortunate timing.

"Undergraduate students who are unable to return to their home country, or to an off-campus location, may request permission to remain in MIT residences under limited

I petitioned to stay but I wasn't really sure if my circumstances were actually limited. I was rejected. Until I wasn't—I was granted an exception a day later. But I already booked my flight home. My flight back was carefully calculated to have a layover in a country, Turkey, that only had 5 reported cases then. The 24 hours of flight were surreal, and I held my breath all the way from Boston through Istanbul to Bangkok and into my parents' arms.

II. THE DOLDRUMS

I arrived back home before the Thai government started quarantining people who returned from abroad, but my parents quarantined me for 14 days anyway. My area was limited to my bedroom and the bathroom immediately next to it, and my mom would bring in food for every meal. For 2 weeks, I never even touched grass. There were no tests then, so symptoms—or lack thereof—were the only signs of infection.

These first couple weeks of experimental life were honestly quite entertaining because it was wildly different and hence not mundane (yet). There was a brief period of time when social life worked weirdly. Everyone was longing for connection, and we were having calls with people left and right, including groups that



[February 17, 2021] In general, tap access also wasn't as universal as it is now.

Have we caught it? Unfamiliar with COVID-19, I became quite paranoid those few days, fearing it had already infected me unnoticed. Even though I didn't feel anything, every instance of clearing my throat or a runny nose caused me to freak out over a possible infection.

We were all at different stages of grief those days. It was going to be an extended spring break, some thought optimistically, and then we'd come back. Until it was announced that we'd have an online spring semester. The next day saw eerily empty recitations, protest statements in Lobby 10, and purge cookouts and parties. Seniors, class of 2020, were suddenly hit with the realization that this was the end of their undergraduate experience, that their "June" came early for them. For me, I had just gone to Costco to buy groceries for an ambiI later had no idea of how they came about. Classes were getting creative and finding replacements both in terms of interactivity and time zones. My 11 a.m. morning classes were now right before sleep at 10 p.m. Discord servers popped up, Minecraft servers alike. I helped build a virtual MacGregor along with some buildings on campus like 34, 36, 38, and 54.

Two months had gone by and I still hadn't touched grass, and the fun wore out. My journaling stopped—there was no reason to journal because every day was the same: stuck in my room. Extremely occasionally I was able to go into Bangkok, the first time on May 30, especially once my parents were convinced that cases in Thailand leveled off. This was

Pod, Page 9

Does your name start with Jo?

Join the Jo's at The Tech!

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CAMPUS LIFE IN REVIEW

The Tech Campus Life section's purpose is to provide MIT students the opportunity to share their perspectives on a diverse range of topics. From the challenges of the first semester to cliques in computer science and friendship, each of these articles has a unique voice.

We are happy that Volume 143 for Campus Life features many new writers, which adds liveliness to this section. When all these distinctive voices come together, they are like individual musicians in an orchestra that plays harmoniously. While most of the articles are personal essays, we are happy to restart other columns such as Student Spotlight, a features column, and By the Numbers, a listicles column.

We hope that the next volume will continue with this same level of energy that made this volume end well. We welcome Alor Sahoo '26 as our next editor.

— Vivian Hir '25 Volume 143 Campus Life Editor

SMALL THINGS

Thanksgiving

Plymouth, Dosa-N-Curry, and dumplings. A Thanksgiving weekend well spent.

By Fiona Lu

Originally published in Vol. 143, Issue 20 on Dec. 14, 2023. **Read the full article online.**

11/23

This Thanksgiving, I forgot to be hankful.

Initially, I had wanted to travel to Plymouth on Thanksgiving Day, part of a tourist craze that had recently taken hold of my mind despite never having these inclinations back in California. After texting and calling, I couldn't find anybody to go with me on Thursday. I decided to go on Saturday instead, when Roshni, one of my friends, was free. I told myself that on Saturday the city would be less crowded and it would work better with my schedule. But inside, I couldn't help but feel disappointed, forced to stray from my original plan.

I spent most of the day at home, attempting to embroider a fruit bowl and make a hand turkey that I was unnaturally proud of. I also spent most of the day in my head — in the memories I waded through like a fog. The day before, I had gone to the Prudential and bought nothing — instead, I sat on a bench in the mall and cried.

There is something so human about crying in these mundane places. I sobbed while the world around me kept turning and turning and the fake Christmas lights glistened and the passersby walked past me as if they would rather be anywhere else but here. To know that life will always keep moving, just slightly too fast for you to keep up, not bothering to stop for your tears — it makes your struggles seem more

real. Tangible, even.

I cried because I thought about my friends from back home, about how they would be driving back to the Bay Area. I imagined them eating turkey with their families and going downtown together. All the while, I would be just around 3,000 miles away, right at the junction of the semester when the weather got colder and the psets got harder. Most of all, I just wanted to be with them again. To see them and talk to them through something other than an iPhone screen.

A fact about me: I never had Paypal or Venmo or Zelle before college. In high school, I belonged to a group of friends who paid for each others' expenses frequently and eagerly, expecting nothing in return. Like mini-caricatures of my Chinese relatives, we fought to foot the bill at restaurants. "I'll put it on your friend tab," we would joke as we signed receipts. "Friend tab" was a rather frivolous phrase that translated to "the amount unpaid by a friend." In other words: "a forgotten debt." Or: "it's worth it for our time together."

It was only in the evening that my mood improved. I took the T with Roshni and Amber to an Indian restaurant in Somerville called Dosa and Curry. There, Roshni taught me how to eat dosa and I tried Thums Up for the first time!

We walked back to the T stop through empty streets, the usual pedestrians lost to family reunions over home cooked meals. It felt like the three of us owned everything we could see: the streets, the city, the night itself. We talked about AP classes and roleplayed the Plastics from Mean Girls. We laughed into the soot-black sky, punctured with light.

11/24

I woke up to realize that I had missed my second appointment of the month, a session of a study I had signed up for in the pursuit of extra pocket money. The first appointment was a MakerSpace lathe training. I felt a pang of guilt when I received a passive-aggressive email that reminded me that I was "taking a spot away from another student" and "leaving a mentor with an empty seat in their class."

After I swallowed the initial burst of frustration — I felt like I was failing to manage even half of what those around me could — I voluntarily opened up Google Calendar for the first time in my life. What had kept my high school life in a precarious balance was a document on my desktop where I listed out all my commitments, deadlines, and tasks. I liked it for the little effort it demanded from me.

I spent an hour in Maseeh setting up my Google Calendar while eating a rather sparse breakfast at noon. As I moved each of my events from my text document to Google Calendar, I started to appreciate Google Calendar's color-coded calendars and week-by-week layout. The more time I spent at MIT, the more I felt like my brain was a kind of sieve. Detail after detail slipped through, no matter how hard I tried to grasp at them: equations from a lecture, early-morning commitments, the faces of acquaintances. Everything just leaked through the holes. I hoped the reminders would keep my life a little more on track.

There was a twinge of optimism in my chest after I put my last commitment into Google Calendar, my earlier frustration washed away. I think that all throughout my first semester, I have been learning how to be an MIT student. Afterwards, I

left Maseeh and rushed to Kendall Square, where I stumbled around above- and below-ground before finding Heidi, a friend from my FPOP, at the Ashmont/Braintree T-station. I had planned for us to walk the entire Freedom Trail, then take the bus to Castle Island to watch the sunset.

Unsurprisingly, we didn't get this done, especially with how early the sun sets here. Despite this, we walked most of the Freedom Trail, only stopping when it got dark outside. Along the way, we admired graveyards and churches and historic halls. We found and lost that faithful red line on the ground about a dozen times as we explored Boston. I discovered that Heidi's mother was once a Freedom Trail tour guide, and, unfortunately, that knowledge about Boston's history is not genetic.

While walking through the North End, we were tempted by a number of Italian restaurants and cafes, though we ultimately decided to eat at a Tatte near Bunker Hill. If culinary harmony existed, then I had discovered it at Tatte's table 25, right between a foggy window and a spa water dispenser.

Behind every impulsive urge is a desire. This was the day that I discovered why I loved this city so much, wanting to unfold every inch of it and hold it up to the light. I saw a Google headquarters across from a hundred-year-old pub, and walked past a Chipotle that used to be the Old Corner Bookstore, a stop on the Freedom Trail. This is a city that grows with the times and is all the more beautiful for it.

Our journey ended at Bunker Hill Community College, where we had to part ways: Heidi to a movie and I to a Thanksgiving dinner. But before we did, I made Heidi promise me that, someday in the near future, we would finish walking the Freedom Trail together.

VIVIAN'S REFLECTIONS

The Growth Mindset

Half full or half empty

By Vivian Hir
CAMPUS LIFE EDITOR

If there was one word I could use to describe sophomore fall, it would be disappointing. There were some good things that happened, but I felt like I was constantly on the verge of drowning in a sea of work. I performed below average on my midterms, wrote my lab reports last minute, and didn't feel like doing my assignments until it was too late. I was simply burnt out. After many years of pushing myself to succeed, something inside of me snapped, like a rope that was stretched far too long. During winter break, part of my mind kept cycling back to how my fall semester spiraled out of control. I was frustrated that I couldn't identify an exact reason why my academic performance was worse than my freshman year, even though my freshman spring was difficult. There were too many variables and factors to consider to account for this behavior change.

Maybe it was the constant anxiety from being uncertain about my future career that made me hit a slump. Perhaps I didn't detect the early signs of burnout and let this drag on until the end of the semester. There's just no good answer to my burning question of "Why, why, why,"

I had doubts about my ability to rebound from the disastrous semester. I wondered if the traits that I had been proud of growing up were a thing of the past. But I couldn't go on like this. There had to be light at the end of the tunnel. Right after finals ended, I decided to read Carol Dweck's Mindset: The New Psychology of Success. In Mindset, Stanford psychologist Carol Dweck discusses the benefits of the growth mindset in various settings, from parenting to education. Unlike the fixed mindset which believes that abilities are innate, the growth mindset believes that abilities can be cultivated over time

Part of the motivation to read Mindset came from wanting to start the new year smoothly, but the major factor was the need for a concrete solution to propel me forward. I found reassurance and encouragement in self-help books because of the detailed suggestions and recommendations they provided, unlike the self-affirmations that I had difficulty embracing.

While the act of reading a self-help book in one sitting may not seem like the first thing someone does at the start of their break, it was relieving and therapeutic for me. After I finished reading the book and processed what I had just read, I still did not have a definitive answer to the underlying reasons behind my feelings of burnout. However, I came to a conclusion that was more satisfying than previous ones — I had a fixed mindset instead of a growth mindset.

The truth is that my mindset wasn't that fixed before I came to MIT. I genuinely believed that as long as I constantly refined my study strategies and worked hard in school, I'd get good results. The problem was that high school was much easier, and I didn't take into account how hard college would be. I knew that I was going to be a small fish in a big pond at MIT, but imagining a situation isn't quite the same as experiencing it.

It wasn't until last year that imposter syndrome started to take over me. Gone were the days of PNR when I didn't worry too much about my grades. Instead, I wondered what was wrong with me when my peers turned in the 6.0001 problem set early, while I struggled and went to office hours all the time to complete the assignment. I was exasperated that I spent so much time studying for a 5.13 midterm, only to score below average, whereas others barely studied and performed above average. Over time, I started questioning whether the habits I cultivated in high school were sufficient for me to do well in college. It seemed like intelligence was just as important, if not more, than effort. I wasn't sure where to find my confidence in a place where many people were already more knowledgeable and experienced than me in various fields. In other words, being in an environment that consists of top students in the world made me go from having a growth mindset to a fixed mindset over time.

This slow, gradual change happened subconsciously, which is what makes it disturbing. I let imposter syndrome take over and control me. The recurring thoughts I had about my inadequacy affected my mindset, which ultimately took a toll on my mental health and hurt my academic life. I always knew that your mindset can have a big impact on various aspects of your life, whether it be leadership philosophy or views on relationships. The issue at hand is that I never thought of myself as someone who would undergo a significant shift in mindset. It wasn't until things became too late that I realized the damage that I did to myself. And that is what I find to be the most tragic thing that happened to me in 2022.

Mindset provided me with bursts of optimism, but also made me want to cry internally. I couldn't believe that my mindset devolved into something that my high school self wouldn't recognize. Reading about a boy who was excited rather than scared of solving a challenging puzzle pained me. I used to embody that attitude, but I became the opposite by avoiding challenges so I could feel a little better about myself. My fixed mindset was holding me back, not moving me forward.

The passage about the boy also reminded me of what I had said to my classmate last year about having reservations about taking 6.009: I felt the class would be too difficult for me. While it is undeniable that 6.009 is not easy for someone with little coding experience (like me), what was I thinking at that time? Wasn't life supposed to be about getting out of your comfort zone to learn new skills? The book was like a mirror, revealing uncomfortable truths about myself that I had never quite noticed.

I wished I had read Mindset the summer before entering college, though at that time I was optimistic and never saw myself as someone who would have a fixed mindset. Reading the book made me feel exposed at times, but I treated the main points as constructive feedback rather than a criticism of who I am, which helped me have a mental outline of steps to take in the future. The book may not address all the complex reasons behind my sophomore slump, but at least it has provided some sort of resolution and closure. Now that it is the spring semester, I am trying to view academic challenges with a growth mindset instead of a fixed mindset.

I have to admit that having a growth mindset requires a lot of mental energy to constantly battle the fixed mindset, but is necessary for my well-being. Something that is forcing me to have a growth mindset is 6.009, a class that I initially didn't see myself in but ended up taking. The labs have not led to nightmarish queues yet, but they already feel difficult. I spend hours trying to index my nested for loop or represent indices of my list correctly, yet I can't figure out the pattern. It's frustrating to spend so much time on something that seems so intuitive.

However, after an LA goes over the concepts with me and things start to click, I feel good that I am stretching my limits by learning new skills that I never imagined accomplishing before. My slow progress isn't necessarily because I am dumb, but rather because I am still in the early stages of learning how to code.

Instead of comparing myself to others around me, I remind myself that some people did a lot of programming in the past, whereas I barely touched it. This will require me to spend more time in the class than the average student. I shouldn't view this as a shortcoming, but as a sign that I want to devote more time to understanding the material.

On a more general note, I realized there's no point in fixating so much on intelligence and grades because obsessing over these things only distracted me from learning at my best. I am better off focusing on the learning and growing from these experiences because by doing so, other things will naturally come along. What's more important is developing key character traits crucial to thriving in a difficult environment like MIT, such as perseverance and resilience, instead of worrying about how dumb I am compared to others. Even if I get a B in a class, it's not a reflection of what I gained from the class, whether it is learning to recover after a bad midterm or trying my best despite how difficult the class is for me.

If I ever notice my mind shifting from a growth mindset to a fixed mindset when I experience failure, one question that can redirect me back to the right place is, "What's the fundamental goal of coming to MIT?" It is true that college is meant to prepare students for careers and professional goals. At the end of the day, however, the purpose of college is to foster our curiosity and love for learning. Achieving this goal is done best when one adopts a growth mindset over a fixed one. Having a growth mindset isn't easy, but in the long run, doing so will make our lives better and happier. It all comes down to how we choose to perceive a situation, good or bad.

Originally published in Vol. 143, Issue 4 on Mar. 9, 2023.

EXTRA ORDINARY

dear stranger,

i've been watching (in the least creepy way possible)

By Susan Hong

dear stranger who was sitting in maseeh hall on call with a friend,

thank you for making me laugh. "stop insulting vegetables by comparing yourself to them." what a line, and so perfectly de-

dear stranger playing piano on stud 4 just a few days after it opened,

you're amazing. i almost knocked on the door to tell you that, but i didn't want to startle you. in a way, there's a sort of beautiful peace that comes from sitting alone in a practice room, with nothing but the instrument in front of you and the ghost of hundred-year-old composers around you, and who was i to disturb that? but yes, i did hear your ondine, and yes, it was kind of magical.

dear stranger who barrelled down the hall in your mint green hoodie,

your backpack was unzipped. sorry for not telling you. i only realized after you'd walked away. i hope you didn't lose anything, and if you did, i hope it wasn't too important.

dear stranger across from my friend and me as our conversation settled into insanity,

i hope we didn't scare you too much. you see, there's something fun about leaning too much into the craziest aspects of ourselves sometimes. it's a little break from reality. it's nice to pretend we care too much about something that doesn't matter, because for a moment, the things that do matter become just a little lighter. we were definitely a little too loud, though. also, i hope you figured out the mystery of how to unwrap an onigiri.

dear stranger who rollerbladed through

i only caught a glimpse of you before you glided past us humble walkers, turning and twisting and dodging. i stopped breathing — just for a moment — before i realized that you didn't need it. that you didn't need me to hold my breath for you. that, in a way, breathing came more easily to you than it did to the rest of us.

dear stranger who sat at our table on stud 5 before we came,

why would you order a plain green tea without sugar at tea-do? respectfully, what's the point? just kidding. i admire your ability to distance yourself from sugar. an ability that i have yet to figure out.

dear strangers who hugged in front of stata that one cold morning,

i saw you from afar and above, insulated by thick glass and the height of the second floor. i was in lab, waiting for my cell media to thaw, and i had time, so i made up stories for you. was it a confession, perhaps? you, with your hands in your pocket, eyes on the ground as you spoke. you, looking at the other, smiling because you've dreamed of this moment for so long. or was it a reminder of your friendship? a see-youlater, let's-grab-lunch-sometime. a quiet

i've-missed-you. dear stranger who said crazy ex-girlfriend was your favorite show when you saw us watching it in the new house arcade,

you have fantastic taste how did start watching it, i wonder? were you bored one day, scrolling through netflix, and it unexpectedly caught your eye? or were you hounded by a super-fan friend for months, begged again and again to give the show a chance? you'll love it. i promise.

dear stranger who dropped your chapstick that rainy night as we weaved through the puddles lining dorm row,

sorry for scaring you when i handed it back, it was dark, and i kind of just appeared out of nowhere. i hope you weren't too startled. and i hope you didn't have that much longer to walk, because it was a cold, soggy night. the kind of cold that clings onto your skin and squishes beneath your toes.

dear strangers waltzing through an empty lobby 13,

i wish i could've stood there and watched you dance forever, you made the space seem so small: it was like you were everywhere at once, swishing and twirling and tapping and gliding and — almost flying.

love, susan

> Originally published in Vol. 143, Issue 20 on Dec. 14, 2023.

ALOR'S LORE

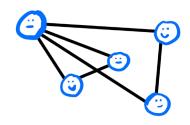
Clique Counting

Cliques in computer science... and socially

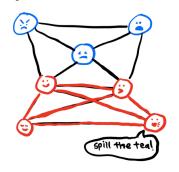
By Alor Sahoo STAFF WRITER

I've been frustrated by the idea of cliques, both in computer science and socially. Let me explain. The computer science "clique maximization" problem kinda goes like this: Within a graph, find and list all the biggest cliques, where a clique is a group of vertices where everyone is connected to everyone else.

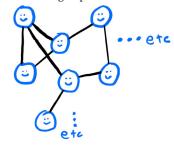
This is a graph, with smiley-face nodes and edges between them:



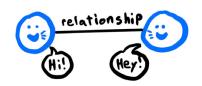
Here's an example of a graph, with the biggest clique colored in red:



How easy of a problem is it to solve? Very roughly, it's considered a "hard" problem to solve computationally. That's kind of funny to me, given how "cliques" also used to describe exclusive social groups.



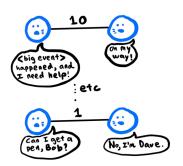
To integrate these two different views on cliques, here's a little walkthrough. Imagine that everyone in the MIT community is represented by a node:



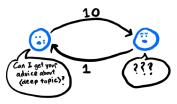
There's an edge between two nodes if and only if they are acquainted with each other.

Clearly, not every relationship is equally strong. So let's assign some arbitrary weights to represent the "value" of a relationship. Yes, this is very reductive:

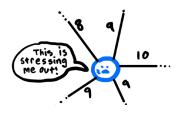
Hold on again, though. In some relation-



ships, there's some unevenness, with one person putting in more energy than the other. For another oversimplification, let's direct our edges, so that we can now have up to 2 weighted edges between any 2 nodes. Here's an example where the left person feels they have a stronger relationship with the right than the other way

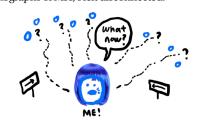


Of course, there are even more complications. For example, each person/node can only expand certain amounts of energy socially. Graphically, this limits the number of weights "exiting" a specific node, unless it stresses itself



My eventual conclusion is the following: people can't be friends with everyone they might possibly want to be friends with.

When I first spawned onto the MIT social graph during CPW, I looked for people nearby - people with similar experiences, interests, vibes, etc. At first, I was confused: the connections I'd formed seemed both sparse and weak. At CPW, there were obviously some people that I knew, and that knew of me, through Instagram or Messenger — but that was mostly it. As I walked through and across and over all the subgraphs of MIT, I felt disconnected:



This disconnect was surprisingly OK for me, as long as it was temporary. Surely, I just needed to wander through some more vertices, cross some edges, and then I'd stumble into the right group of people.

In other words, I wanted to solve my personal MIT clique maximization problem — and

This epiphany hit me in the middle of CPW Boba started taking its toll on my tastebuds, so I went to grab a real lunch at a dining hall. Nearby some dozen or so prefrosh were hanging out. I grabbed my food, sat at a nearby table, and while wolfing down rice pilaf, I caught casual bits of conversation — a "Mrs. So-and-So" and a "remember when XYZ did ABC?" and so on. Then it hit me: Duh, they all went to the same high school.

ТНЕ ТЕСН **R3**

It stung knowing that I'd never get that big, nostalgic high school-MIT crossover. Even when I met people I'd already known, I felt like I was missing out. Someone else always seemed to either be a part of cooler graphs or more graphs.

By Fall 2022, I started to realize that optimizing my number of connections wasn't a healthy goal. The primary driving force was exhaustion: I was too tired to "keep up." It worked out.

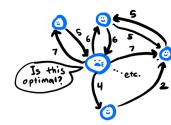
Later on, I started thinking about a new aspect of the "clique maximization" problem: what even defines one? When do group events go from special and inclusive to irritating and exclusive? Can a club that hangs out outside meetings become a clique? Was I part of one?

For sure, some of these groups are bound to be tight-knit: living groups, certain clubs, pset groups for grueling classes, and so on. But a lot of them are much bigger, once you include MEng students, alumni, friends of friends, etc. But what was the biggest one? Hard to define, but an obvious guess is each graduating class, if that counts. Between sophomore ring delivery to annual formals to fancy senior spring events, they're pretty cohesive, as much as a group of more than a thousand students can be.

So, as a quick exercise, I decided to calculate my "MIT friend age" average. Here's how it works: define 0 to be a brand-new frosh, 4 to be a graduated senior. My average? 2.3. Was that a bad thing? I didn't know. Was I just not "froshy" enough? I was pretty worried, and for a few weeks, I repeatedly asked myself:

Now, a semester later, I don't have the

But I also don't care. Because all approach-



es quantifying any aspect of this problem boil down to the same ideas: First of all, that being closer with some people means being more distant with others. Second of all, there is no perfect way of reconciling this difference whenever two corners of the MIT social graph intersect.

As a result, I'm giving up on the MIT clique maximization problem. I've spent way too long adding edges to my node, adjusting the weights, and removing edges, and so on. I'm going to just let my edges naturally form, break, weaken, and strengthen as the years go by. Most importantly, I learned that tinkering with my graph and trying to "solve" this unproblematic problem is futile: even the computer scientists admit that.

> Originally published in Vol. 143, Issue 11 on Aug. 3, 2023.

EUNICE EXISTS!!

the gis of eunice exists!!

i genuinely feel pretty happy about this first articlussy ງ(~~)∫(♡

By Eunice Zhang EXECUTIVE EDITOR

the trailer :<

- · "i feel like im reading a tumblr post not a newspaper article"
- · "overall very nice, and i think it gives a realistic perspective into a small quokkie's life in college!"
- "i'm not gonna lie I understood 10% of

introduction >:

i had to do an elevator pitch recently as part of a workshop thingy — and it made me realize, talking about yourself is extremely hard. like, what if "i'm MALIGN-ING you by not being my full, genuine, authentic self? then i'm lying and that's HORRIBLE — it's time to burn at the stake in hell, even god can't save me now" vibes.

you know, it's actually really funny because i've spent a LOT of time worrying about this article, but the trailer + first paragraph basically tells you everything you need to know about what to expect from 'eunice exists!!'

tl;dr: i am unhinged, i am constantly hrrgy, and i see the world as a series of long, winded, run-on sentences that somehow go everywhere and nowhere at

my sister emeri says that there are only two constants in life - change and yourself, and she's right (older sisters are always right!!) i experience constant emotional turmoil (change) & i am inded eunice (myself).

welcome to 'eunice exists!!' it's me!! i'm eunice!!! i exist!!!! onwards, babygirls, as we venture into the great, beautiful, unknown cosmos that is life.

side note: what's a hrrg?:C

well, i'm so glad you asked! also, it's probably good for me to explain this given that i'll be saying this A LOT in my articles (this one alone has 33 counts of the word hrrg) — plus, it always comforts me to realize that i'm not the only once experiencing these feelings, so i hope it can do the same for you.

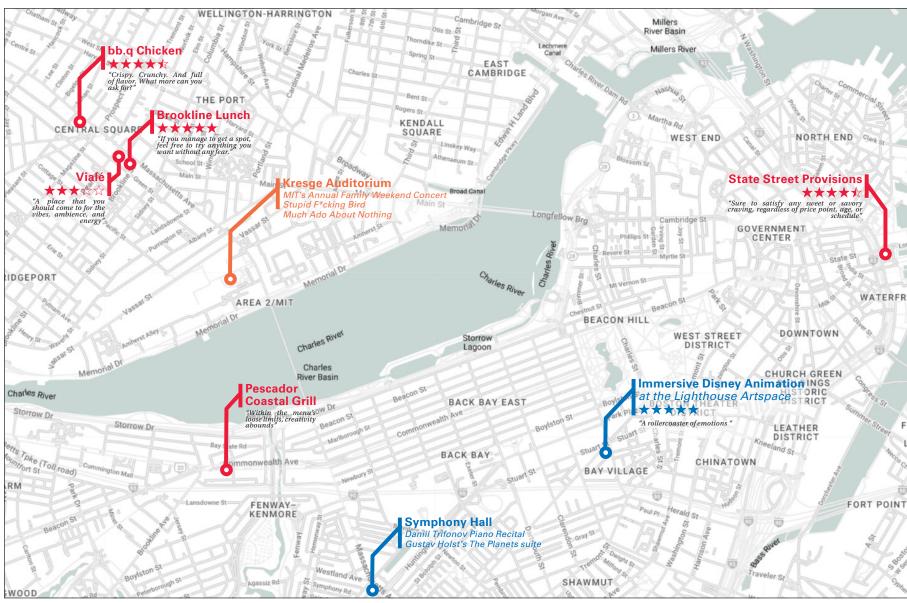
hrrg is more of a vibe than anything else, but if i had to define it: a feeling of stress/shame that may not be rational, vet you can't help but feel it anyways. hrrg can be used as a adjective, noun, verb, anything you want, really! ex: "i'm feeling so hrrgy today :(" "oh my god i hrrged all over the place" "do you want to talk about your hrrgs uwu?"

side side note — ultimately, the most important thing to remember is that you never hrrg alone ♥ it may sound cheesy, but i'm being so for real.

especially at a place like mit, where extreme hosage and hrrg can often feel like

Hrrg, Page R18

ARTS in 2023



RESTAURANT REVIEW

Cambridge Cuisine: Restaurant reviews in 2023

A compilation of The Tech's favorite foods from last year

Brookline Lunch By Vivian Hir, Alor Sahoo

bb.q Chicken

By Enoch Ellis

Brookline Lunch is an old, iconic diner hidden in a nook off of Mass Ave on Brookline St, near Central Square. Despite its unassuming exterior, lines of people

Established in Seoul, South

Korea, founder Yoon Hong-

guen's principles were simple:

"serve great tasting ...fried chick-

were patiently waiting outside around 11 a.m. — in fact, the first time we tried to eat here, the line was so long that we gave up. To avoid the wait, we came in around 8:30 a.m., the diner's opening time.

Overall, Brookline Lunch was a wonderful experience. The

Now as someone hailing from

the great state of Texas, I take

my barbeque very seriously. So

when some of my friends from

New York first introduced me to

this so-called barbeque, I was

more than a little skeptical. But

my openness to new experiences

calamari, the menu is enticing for

portions are sizable, the food is delicious, and the atmosphere is lively. If you manage to get a spot, feel free to try anything you want without any fear.

> Originally published in Vol. 143, Issue 21 on January 11, 2024.

- coupled with my motto of never turning down an opportunity for free food — led me to give the place a chance.

Suffice to say, I'm glad I did.

Originally published in Vol. 143, Issue 20 on Dec. 14, 2023.

ment was inviting and service was stellar. Overall, Vialé's a place that you should come to for the vibes, ambience, and energy, with tempered expectations for the food.

Issue 20 on Dec. 14, 2023.

By Vivian Hir, Alor Sahoo

en to the world."

Vialé

Vialé's website frames the restaurant as an upscale American take on Italian classics. From classics like the margherita pie pizza

Pescador's cuisine is hard to

pin down. Bazzinotti, the restau-

rant's executive chef, describes

the restaurant as a coastal grill:

"As long as it's seafood, it fits."

Pescador Coastal Grill

By Teddy Schoenfeld

many. Reviewers concurred, with Vialé voted Best Of Boston by Boston Magazine in 2018. Our experience here left us

with mixed impressions. While the food may have struggled to to the saffron lumache to the meet expectations, the environ-

The menu included items like

Bazzinotti's Peruvian ceviche,

something that he had been mak-

ing for years, as well as new prod-

ucts of experimentation like grilled

oysters. By the time it opened in

November 2022, the restaurant

offered everything from pizza and

bar snacks to ceviche and crudo to fully cooked, bone-in fish.

Today, Bazzinotti's kitchen still seems to operate like a culinary playground.

Originally published in Vol. 143, Issue 15 on Oct. 5, 2023.

What makes the PieCaken so

great is that it comes in so many

varieties. In fact, there is a unique

PieCaken creation for seemingly

Goldbelly By Kelly Kim

RTSARTSARTSAR

Goldbelly is a famous company that offers specialty food items from famous restaurants and chefs, ranging from oversized and plump New York bagels from Essa Bagel to Guy Fieri's trash can nachos.

But one of the most popular items is the viral PieCaken by celebrity pastry chef Zac Young (who you might have seen on various Food Network and Cooking Channel shows).

every holiday. Originally published in Vol. 143, Issue 5 on Mar. 23, 2023.

State Street Provisions By Kelly Kim

Located in the North End just steps away from Little Italy, State Street Provisions is near the wharf, where grand boats and a beautiful water view accompany

an equally attractive menu and restaurant interior.

Its fantastic and scenic location by the water makes State Street Provisions particularly worthy of being on your Sunday brunch spot list.

Whether you are a college student looking for an affordable but delicious brunch experience or a Boston local looking for a scenic eating spot, State Street Provisions is sure to satisfy any sweet or savory craving.

> Originally published in Vol. 143, Issue 1 on Feb. 9, 2023.

tech's picks **APPETIZERS** Blueberry Pancakes (STATE STREET PROVISIONS) WHIPPED HONEY BUTTER, MAPLE SYRUP Baklava Pancakes (BROOKLINE LUNCH) BAKLAVA & PISTACHIOS, HOMEMADE ROSEWATER SYRUP Breakfast Sandwich (STATE STREET PROVISIONS) FRIED EGG w/ AIOLI, APPLEWOOD BACON, & CRISPY POTATOES **ENTRÉES** Margherita Pie (VIALÉ)..... TOMATO, MOZZARELLA, BASIL Spicy Sausage Shakshuka (BROOKLINE LUNCH) \$16 POACHED EGGS, HOMEMADE FRIES, & NAAN Golden Original Chicken (BB.Q CHICKEN) **\$36**/FULL CHOICE OF **ORIGINAL** OR **SECRET SAUCE** SERVED w/ HOMEMADE FRIES & NAAN w/ EGGS, JAMAICAN JERK SAUCE, MAYO **SEAFOOD** SPANISH CHORIZO, SUNNY FGG Lobster Tacos (PESCADOR COASTAL GRILL) \$26/2 PCS w/ GRILLED CORN, RED CABBAGE, TOMATILLO SALSA \$36/3 PCS **DRINKS** Agave & Oil (PESCADOR COASTAL GRILL)......\$17 OLIVE OIL INFUSED TEQUILA REPOSADO Rey Campero Jabalí (PESCADOR COASTAL GRILL) \$24 **BAKERY** PECAN, TOFFEE, BRIOCHE Tres Leches Roulade (PESCADOR COASTAL GRILL)\$15 TOASTED COCONUT Beatty's Chocolate Cake (GOLDBELLY) \$100 SERVES 6-8 PEOPLE SEASONAL VARIANTS, SERVES 10-12 PEOPLE

2023 was a year full of experiences, both at MIT and in the wider world of Cambridge and Boston. *The Tech's* Arts writers explored solo performances and orchestral concerts at Boston Symphony Hall. They dined out at restaurants serving everything from spicy sausage shakshuka to margherita pie pizza to Peruvian ceviche. They played video games and watched movies of every genre.

As a whole, the department gained new members and branched out into previously-unexplored forms of media. Our writers this year particularly enjoyed the on-campus theater productions as well as the many new movie releases.

— Anahita Srinivasan '25 Volume 143 Arts Editor

STUDENT PERFORMANCES

Much Ado About Nothing, Family Weekend Concert

Page R6

also see in ARTS...

THE TECH'S PICKS IN ENTERTAINMENT:

Movies, Books, & Games

THEATRE REVIEW

Stupid F*cking Bird soars at MIT LOST's fall production

"Stupid f*cking play made me stupid f*cking cry <3"



Jon Rosario '24 and Susan Hong '27 as Dev and Mash, play ukulele while singing a song they've written together.

By Eunice Zhang EXECUTIVE EDITOR

The Seagull is a play by Russian playwright Anton Chekhov, adapted into the contemporary piece Stupid F*cking Bird by Aaron Posner. It's also the fall semester production of MIT LOST (Life on Stage Theatre), a student theater group founded in 2020. LOST has a reputation for delivering high-quality theater. As attendee Sofia Galiana '25 put it, "LOST consistently puts out good, high-quality shows," and Stupid F*cking Bird is no different.

The play centers around Conrad, a struggling playwright desperately in love with Nina, an aspiring actress and his flighty girlfriend. Conrad has a strained relationship with his mother Emma, which rapidly deteriorates after he catches Nina making out with his mother's girlfriend Trigorin. Add on a directed acyclic graph of unrequited love between Conrad, his best friends Dev, lonely house help Mash, plus friendly old Uncle Sorn who feels make-believe, and now you have a story.

What does it mean to truly love someone — familial, romantic, platonic? Why do we create art, how do we navigate our personal relationship with art and consumption, and how do "old forms" interact with "new forms"? Despite tackling a plethora of philosophical topics, Stupid F*cking Bird keeps the audience on the edge of their seats by intertwining these questions through dynamic interpersonal relations and delightful ukelele playing.

The simple yet realistic staging — from live smoothie blending to hand-made pies so intriguing they were featured on the MIT Confessions page — creates an immersive and intimate atmosphere. The open nature of Little Kresge Theatre made the interactive nature of the play particularly enticing, with Conrad jumping off stage into the seating to converse with the audience as a self-described "site-specific performance event."

But what truly shined most about Stupid F*cking Bird were the actors — passionate, loud, funny, and depressed, their spirit brought together thematic questions and well-designed props into something truly wonderful. While centered around Conrad, the production also gives each character a unique spotlight, allowing further expansion on themes outside of just Conrad's self-centered perspective.

A behind the scenes picture

I attended the play without knowing anything about Stupid F*cking Bird, but I left intrigued. How was this production selected, created, performed? I needed to know more, if not simply to help me navigate my newfound existential hrrgs about art and the meaning of life. MIT LOST welcomed my barrage of questions with welcome arms, telling me the story of just how this stellar production came to life.

The play brought together seven talented actors with a wide range of acting experience

— from freshmen like Mahdi Afshari '27 and Susan Hong '27 to seasoned actors like Joy Ma '25 and Alayo Oloko '25. "I have always had a high regard for people in theater but it seemed scary to join," stated Afshari. Hong echoed this sentiment, as theater was "always something that I wanted to experience, but I either never had the time or just chickened out."

Being a first-time actor didn't come without challenges. Hong struggled with "learning not to take myself too seriously" and feeling self-conscious. Despite being new to the theater world, both delivered great performances. If I hadn't known, I would have thought they were seasoned actors themselves!

Even for experienced actors like Oloko and Ma, Stupid F*cking Bird presented challenges in character immersion. Oloko, playing Conrad's mother Emma, struggled, as she had never played a similar character type before. But with the assistance of director Katrina Chan '26 and her fellow actors, Oloko was able to step into her role and feel satisfaction at her performance's "final form."

"I wish I hadn't had to put myself into Emma's shoes; those heels were rough," Oloko joked.

Ma played Trigorin, an aloof writer and Emma's girlfriend. "When you're working with getting 'inside' of your character... you also deal with a lot of your own inner struggles," Ma explained. For Ma, this meant advocating for herself and Trigorin after feeling a sense of disconnect between herself and her character. Following a practice performance, Chan gave Ma an iPad and pen and "told me to write: to tell her, to tell us about Donna Trigorin"

Through doing so, Ma was able to fully connect with Trigorin, and it showed in their natural and compelling demeanor on stage — aloof and powerful, demanding attention. "When you're able to step into that power, all of it will be worth it," Ma reflected. "I want to give a huge shoutout to the LOST cast and crew for all their hard work," attendee Kiera Reed '27 stated — they highlighted lighting and sound work as standouts. Galiana echoed this sentiment, especially how "real and professional" the exterior of the house looked.

Speaking with Chan opened my eyes to the sheer amount of time and effort put into making Stupid F*cking Bird possible. Chan has been part of MIT LOST for two years, and currently serves as the club's president. Her touch is evident throughout the production — from organizing auditions and rehearsals, managing the production timeline, even serving as set designer in addition to her directing and informal stage manager responsibilities.

"Every show is a labor of love," Chan reflected. She also highlighted the importance of paying "attention to mental health when it gets overwhelming."

Oloko also foisted multiple roles — acting as Emma and serving as the play's producer and electrician. As producer, Oloko's responsibilities included recruiting production staff, organizing weekly meetings, and managing grant applications and finances.

The entire production came together in only five weeks, especially impressive given the production's small size — seven actors and eight production staff.

Because Chan wanted to give actors as much time with the material, she condensed the auditions and callbacks process. Oloko reflected that Chan is "really good at what she does." Thanks to the well-organized schedule, "I felt really well prepared for the performances."

Hong noted that the small size of the production and the "relatively short timeline" helped everyone involved in the production become closer. Chan agreed, highlighting the

"love, community, family that emerged from this relatively short production."

The ways in which this play slayed

Stupid F*cking Bird didn't hesitate to defy tradition across numerous dimensions — a contemporary adaption, interactive screenplay, and its nature as a meta-play.

Actors don't hesitate to break the fourth wall — after Nina and Trigorin become romantically entangled, a despairing Conrad jumps off the stage and pleads with the audience: "How can I get [Nina] to love me again?"

Shwatal found that the "use of the space both on and off the stage really added to the atmosphere in unexpected ways." I personally found the interactive nature of the play both horrifying and hilarious — Conrad, the definition of a delusional man, forces us to confront his humanity — not as spectators, but

and ultimately his role to say the final line: "end the f*cking play."

So, what the f*ck's the point?

250+ MIT students and community members attended the five showings of Stupid F*cking Bird, and I was curious to see their takeaways. I was also interested in what the people behind the production took away from Stupid F*cking Bird thought, especially after spending hundreds of hours immersing themselves this world of their characters.

Despite being on different ends of the production — the actors creating and the audience spectating, a common theme that emerged was the messiness of our universal, human nature.

As an enjoyer of meta-art, Reed highlighted the play's unique approach to tackling how creating art interacts with concepts of "cre-



PHOTO COURTESY OF AUDREY CHE

Alayo Oloko '25 and Joy Ma '25 as Emma and Trigorin.

active participants in his tragic life story.

The audience gave him a myriad of advice, from "get therapy" to "if you love her, let her go." Suddenly, it wasn't just us laughing at the delusional man. Through our interactions, we became the delusional man ourselves — rooting for him to succeed, in one way or another.

Hong seconded this: "Honestly, we all have a little bit of Conrad in each of us." While he may seem "narcissistic" and "bat-shit insane," his flaws are "more relatable than people might realize."

It was also fascinating to see subtle power dynamics reveal themselves. Speaking with Chan also revealed a number of delightful Easter Eggs I hadn't originally noticed. A core motif of the play are the parallels between Nina and a seagull, with a desperate Conrad giving her a gift of a seagull he shot. In the original scene, Nina is wearing a striped navywhite dress. But when Nina self-identifies as a seagull, their roles switch and Conrad now dons a striped navy-white shirt.

Another neat feature was the genderswapping of Trigorin, who in the script was originally a man. Reimagining Trigorin and Emma's relationship as same-gender provided a new twist on gendered dynamics, and I personally appreciated the queer representation. At the end, the play delivers a final surprise — all along, this is an autobiographical play of Conrad's life. Everyone besides Conrad himself is an actor. Not only is Stupid F*cking Bird a commentary and a "new form" itself, the entire play is a play of a play.

In classic Chekhov fashion, the end of the play features Conrad contemplating shooting himself with a gun — the typical ending to a Russian tragedy, but he doesn't.

Despite raging that it's simply "another play, over and done," where "NOTHING REAL has happened," Conrad continues on. I found this symmetry satisfying — while the audience begins by "start[ing] the f*cking play," it's Conrad's creation. His life, his story,

ativity and personal fulfillment."

"Even old forms of art can be used for new forms of catharsis," Chan reflected. Oloko complemented this sentiment, instead feeling the importance of needing "new forms."

However, she also noted that ultimately the message of the play is left to the audience — how the play can mean different things to different people. "I'll leave it up to everyone to decide what the play meant to them, even if it just meant an entertaining two and a half hours," Oloko concluded.

Conclusion

Threading together themes of family, unrequited love, and the philosophical meaning of art, MIT LOST has succeeded in creating a stunning production, making attendees simultaneously laugh, cry, and wonder what the hell is going on, both in the play and the real world. It would not be remiss to say actors and attendees alike left Little Kresge with newfound existential crises.

The cast emphasized their satisfaction at the culmination of the showings of Stupid F*cking Bird. Hong highlighted seeing the audience's reactions to "experiencing the show for the first time" as the most rewarding aspect, as it "helped me see it through fresh eyes again."

Attendees felt the same way. "I hope they keep a lot of the same talent around for the next show because of the great job they always do," Galiana noted. Shwatal felt that the production did a great job, "the emotion and acting throughout was top notch!"

All in all, Stupid F*cking Bird was a phenomenal production — highlights were the passionate actors, immersive staging, thematic exploration, and lack of hesitation to defy theater transition with fourth-wall breaks and the meta-play.

Originally published in Vol. 143, Issue 20 on Dec. 14, 2023.

TECH's PICKS

MOVIES

THE BOY AND THE HERON

THE BOY AND THE HERON EXPLORES GRIEF, ACCEPTANCE, AND HAYAO MIYAZAKI'S INABILITY TO RETIRE: THE FILM REFLECTS ON MIYAZAKI'S CHILDHOOD IN CLASSIC STUDIO GHIBLI FASHION WHILE ALSO FEATURING BIRDS — A LOT OF BIRDS (REVIEWED ON DECEMBER 14, 2023)



KILLERS OF THE FLOWER MOON

SOMEONE NEEDS TO LEARN TO TELL MARTIN SCORSESE "NO"

(REVIEWED ON NOVEMBER 11, 2023)



BRIEF TENDER LIGHT

BRIEF TENDER LIGHT OFFERS A HALF-BAKED REFLECTION ON AMERICAN HIGHER EDUCATION FOR INTERNATIONAL STUDENTS (REVIEWED ON NOVEMBER 1, 2023)



THE CREATOR

THE CREATOR MANAGES TO CREATE A STUNNING WORLD WITHOUT MUCH SENSE (REVIEWED ON OCTOBER 18, 2023)



AVATAR: THE WAY OF WATERA GRAND CINEMATIC EXPERIENCE WITH A TEPID

(REVIEWED ON FEBRUARY 9, 2023)



THEATRE REVIEW

MIT Shakespeare Ensemble performs modern adaptation of Much Ado About Nothing

Set in 1970s post-Stonewall NYC, the play captures themes of empowerment and feminism

By Anahita Srinivasan

ARTS EDITOR

I've read my fair share of Shakespeare plays (both comedies and tragedies), and I'm always a fan of adaptations that seek to interpret the original text with a modern twist. So when the MIT Shakespeare Ensemble announced that they would be performing Much Ado About Nothing

this semester, I knew I had to see it for myself.

The MIT Shakespeare Ensemble is a community of students who share an interest in theater, specifically Shakespearean works. Every semester, they perform a full-length play and put together the entire show themselves: costumes, props, and script. The ensemble's production of Much Ado About Nothing ran for six

showings on October 27th, 28th, and 29th and on November 2nd, 3rd, and 4th. I had the opportunity to attend the closing night show on November 4th, and it was an excellent experience.

Much Ado About Nothing, originally written by William Shakespeare in 1598 and 1599, is a witty, banter-filled comedy following the love lives of two couples: Beatrice and Benedick and Claudio and

CONCERT REVIEW

Family Weekend concert keeps audience riveted

MIT Wind Ensemble (MITWE), MIT Jazz Ensemble, and MIT Vocal Jazz Ensemble perform live to audience of parents and students

By Anahita Srinivasan

After just six weeks of practice, MIT Wind Ensemble (MITWE), MIT Jazz Ensemble, and MIT Vocal Jazz Ensemble performed their annual Family Weekend Concert in front of a packed Kresge Auditorium, to the delight of students and their visiting loved ones. Pulling from a diverse collection of pieces, the three ensembles had the auditorium riveted from start to finish.

The major theme of the night's performances was gratitude. Dr. Frederick Harris Jr., director of MITWE, delivered a moving speech thanking the parents in the audience for supporting their students in their musical careers, especially during the early stages of learning when the music maybe isn't the best. He also thanked music teachers for investing in their students' futures and bringing their students up to a level that enabled them to play in such an ensemble.

MITWE president Charlotte Wickert '23 also spoke with great feeling about her experience with MITWE. She discussed her desire to join a community at MIT to keep creating music with others, and she explained how she didn't realize what wonderful opportunities the ensembles would turn out to be. MITWE and MIT Jazz Ensemble have had the chance to play a diverse array of music and collaborate with professional Boston-area musicians, and Wickert expressed gratitude for the opportunities the ensembles have afforded her.

MITWE kicked off the concert with Serge Prokofiev's Festival March, conducted by assistant conductor Kenneth Amis. This piece was an excellent choice for an opener: it was clean and sharp, and balanced moments of both hardness and lightness in a fluid way. This was followed by Shafer Mahoney's Sparkle, at which point Dr. Harris came on stage to direct. The flutes at the beginning of the piece really did sparkle, and the back and forth between the flutes and clarinets was reminiscent of a conversation. The piece was light and fluttery throughout and provided an excellent contrast to the more hard-hitting pieces on the program.

The showstopper of MITWE's performance, however, was the combination of The Thunderer(by John Philip Sousa) and After the Thunderer (a movement of a symphony by Ira Hearshen). Before the two pieces, Dr. Harris asked for something rather unusual: that the audience refrain from applauding until both pieces were finished, as the ensemble would be performing a "musical illusion" to transition into After the Thunderer. The latter piece borrows heavily from The Thunderer, which has a signature melody that repeats all the way through to the end.

The Thunderer was a very traditional yet powerful march, and the transition to After The Thunderer was absolutely beautiful. The chord progression that started with the clarinets and slowly incorporated the other instruments built tension organically and was the perfect escalation to the next piece. I also appreciated the use of timpani and cymbals to imitate the sound of thunder.

MITWE's portion of the performance concluded with Clifton Williams's Fiesta. I was not expecting the mood to be ominous initially, but the piece quickly shifted into a light and flowery melody that propelled forward. "Fiesta" ultimately proved to be a great choice to wrap up the first half of the concert.

After the fifteen-minute intermission, the MIT Jazz Ensemble took the stage with "Love for Sale" by Cole Porter, the perfect choice for reengaging the audience. As a smaller group, the jazz ensemble allows for each individual to stand out, which led to some impressive saxophone solos that brought the audience to applause. Dr. Harris was not so much conducting as he was dancing, and the crowd was clapping along to the beat.

The ensemble followed this up with "Angel Eyes" by Matt Dennis (lyrics by Earl Brent), which opened with an alto saxophone solo that really formed the centerpiece of this performance. This piece was really a standout from the jazz ensemble's portion of the concert. The slow, languorous beat could have belonged in a jazz club, and by no means was this a quiet performance;

the musicians created a wonderfully believable atmosphere.

"Social Call" by Gigi Gryce and Jon Hendricks had a wonderful surprise component: Emily Jin '25 added her vocals to mix with a beautiful alto-tenor voice that was full and deep with rich intonation. The piano was a standout instrument in this piece and complemented Jin's voice beautifully. Ultimately, "Social Call" was such a fun and atmospheric piece, only made better by the vocals.

MIT's Vocal Jazz Ensemble took the stage next to perform the world premiere of director Laura Grill Jaye's arrangement of "Shaw 'Nuff." Again, as a small ensemble, each member was able to stand out, and it was clear that the vocalists were enjoying themselves, which in turn transferred to the audience. I appreciated the use of scatting throughout, especially during the scatting "conversation" between two of the singers. The ending consisted of a smooth vocal glide to the final note, which created a striking effect.

To wrap up the concert, the MIT Jazz Ensemble returned to the stage to perform "Beulah Witch" by Don Menza and "Standing Up In a Hammock" by Bill Potts, both of which were accompanied by tap dancer Sabrina Grammis G. The sound of Grammis's shoes on the stage was absolutely mesmerizing, and she provided the perfect visual counterpoint to the jazz. The highlights of "Beulah Witch" were the solos, which were absolutely magical: the musicians were hitting impressively high notes and absolutely pouring their hearts and souls into the music. Finally, "Standing Up In a Hammock" formed the perfect ending piece. It was fast-paced and interspersed saxophone solos, tap solos, and piano solos with the full

Ultimately, the concert was a smashing success. The piece selection balanced lighter moods with more hard-hitting ones, and the audience was riveted throughout. It was a wonderful concert to kick off the season.

Originally published in Vol. 143, Issue 17 on Nov. 2, 2023.

GAMES

KING OF THE CASTLE

KING OF THE CASTLE PRESENTS AN IMMERSIVE PARTY GAME THEMED AROUND MEDIEVAL POLITICAL INTRIGUE (REVIEWED ON MAY 19, 2023)

THE LAST WORKER

THE LAST WORKER: AN ABSURDIST ANTI-CAPITALIST NARRATIVE THAT TAKES ITSELF A TAD TOO SERIOUSLY (REVIEWED ON APRIL 27, 2023)

SCARS ABOVE

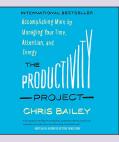
SCARS ABOVE OFFERS AN INTENSE SCI-FI SOULSLIKE EXPERIENCE WITH MORE FIELDWORK THAN FIGHTING

(REVIEWED ON APRIL 9, 2023)

BOOKS

THE PRODUCTIVITY PROJECT

A LITTLE HEAVY ON THE KOOL-AID: THE PRODUCTIVITY PROJECT BY CHRIS BAILEY
(REVIEWED ON JANUARY 25, 2024)



A DEFINITIVE RANKING OF THE TAYLOR JENKINS REID UNIVERSE

FOUR BOOKS, FOUR ERAS: WHICH DESERVES TO BE ON TOP?
(REVIEWED ON APRIL 27, 2023)

THE SEVEN HUSBANDS OF EVELYN HUGO ***

DAISY JONES AND THE SIX
★★★☆

MALIBU RISING
★★☆☆

CARRIE SOTO IS BACK
★★★☆

Hero. Beatrice and Benedick are both tricked into believing the other is in love with them, which leads to them actually falling in love, while Hero faces a false accusation regarding her modesty that leads to the dissolution of (but eventual happy ending to) her engagement with Claudio. The original play is set in Messina, on the island of Sicily, but the ensemble chose to set the show in 1970s New York City, post-Stonewall, in order to explore the concepts of internalized homophobia and second-wave feminism.

This proved to be an excellent choice. The original play already explores the themes of gender roles and empowerment, but by portraying Benedick as a girl and exploring how Beatrice and Benedick's relationship would change if they were a same-sex couple, this version of the play was able to dig deep into some difficult topics with grace and lightness.

Speaking of Benedick, Claire Wang '27's performance was excellent. Benedick had some great comedic moments in the

show: one such example was when Beatrice reluctantly invites her to dinner and Benedick, in her love-struck fantasy, decides to interpret Beatrice's irritation as concealing her true feelings. Beatrice, portrayed by Kiersten Mitzel '24, also did a fantastic job. In general, Beatrice and Benedick's relationship was heartwarming with moments of both hilarity and emotion.

I also really appreciated Hero (played by Susan Hong '27)'s character arc. Hero is introduced to us almost entirely silently. For the first half of the play, she basically accepts whatever fate is handed to her; sure, she's in love with Claudio and agrees to marry him, but we never really see her take an active role in their relationship. This changes when Claudio leaves her at the altar for an offense she never actually committed. I loved seeing Hero stand up for herself afterwards, especially during the scene of Claudio's second wedding in which Hero is revealed to be the bride.

Much Ado About Nothing is also plain hilarious. The main villain, Don John, has one goal and one goal only: to stir up trouble, which Ellie Winkler '25 does masterfully. All of the interactions between Don John, her accomplices, and the police had the audience in stitches. The ineptitude of the police combined with Don John's flair for the dramatic and the accomplices' complete bewilderment was comedy gold.

Plus, there was quite a bit of camaraderie between the actors during the play itself. Several of them broke character during Hero and Claudio's wedding scene, which in turn brought the audience to laughter. I later learned that there had been several pranks played on the cast as part of a closing night tradition for the students for whom this would be their last show.

There's a scene in which Beatrice juggles oranges on stage impromptu in an attempt to impress Benedick, and Don Pedro appears on stage in a crown and sunglasses, to the amusement of the other cast members. This explained the breaks in character: none of the cast members were expecting these rather comical changes. You could really tell that the Ensemble as a whole is a tightknit community.

Ultimately, MIT Shakespeare Ensemble kept the audience riveted for two and a half hours, a difficult feat in and of itself, but only made more so by how complicated Shakespearean works are. The language is difficult to decipher, both on a page and especially when spoken live. Much of the vocabulary is outdated, and there are idioms and turns of phrase that have since gone out of use. You didn't need to understand the language to understand the themes or the story: the cast's acting was enough to propel the action forward. It was truly an excellent performance.

Originally published in Vol. 143, Issue 18 on Nov. 16, 2023.

STUDENT PRODUCTIONS















































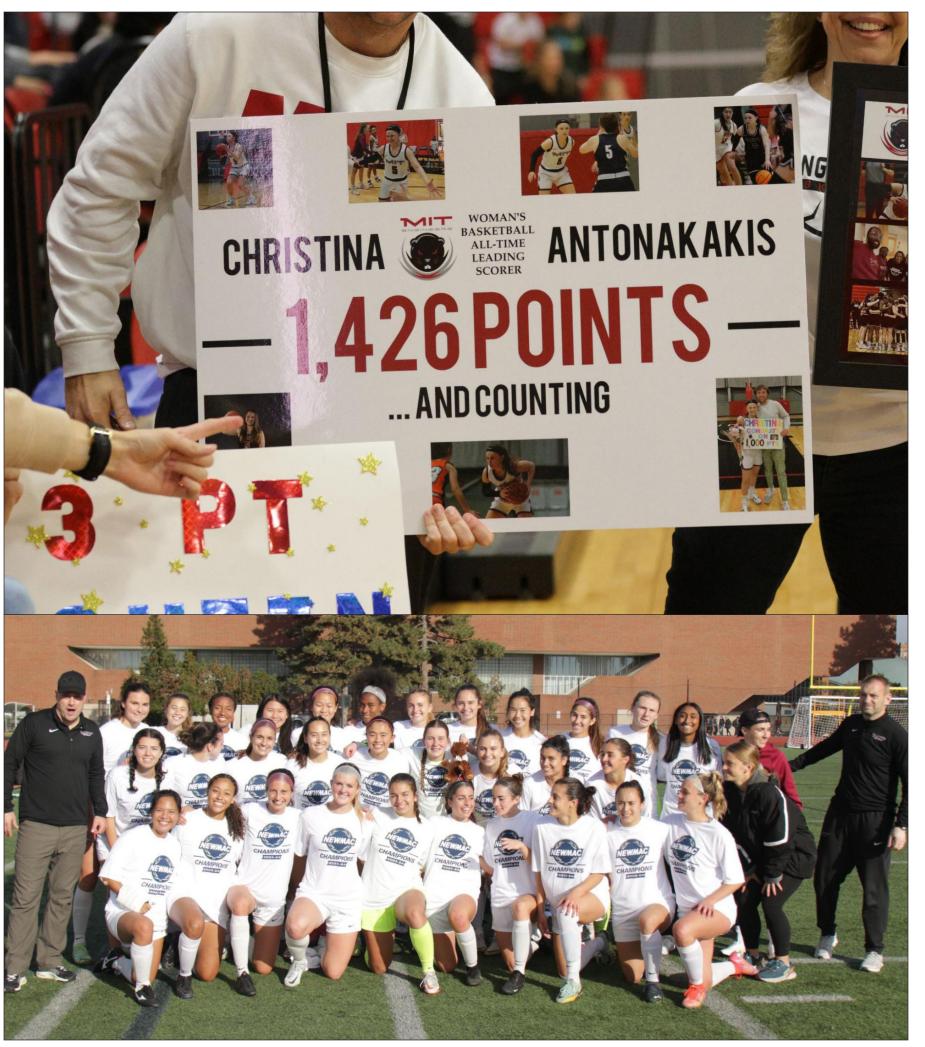








SPORTS SPORTS SPOR



Everything you need to SPORTS Timeline know about Superbowl 58

By Hannah Friedman SPORTS EDITOR

On Sunday February 10th, Super Bowl LVIII will take place in Las Vegas with the Kansas City Chiefs facing off in a rematch against the San Francisco 49ers. The Chiefs have reached the Super Bowl 4 times since 2019 and they are eager to get their 3rd championship ring. On the other hand, the 49ers are prepared to get revenge after losing to the Chiefs in SuperBowl LIV. Leading the Chiefs is the dynamic duo Quarterback Patrick Mahomes and Tight End Travis Kelce (known to some as the athlete who is dating Taylor Swift). The 49ers showcase Mr. Irrelevant (the nickname given to the final pick in the NFL draft) Brock Purdy who- against all odds- became the first string Quarterback and brought his team to the national championship.

In order to reach this monumental game, each team had to win their conference championship titles. The Chiefs dethroned the number 1 seed Baltimore Ravens 17-10 with a fantastic Defensive performance that shutdown the MVP favorite Lamar Jackson and included various impressive offensive plays between Mahomes and Kelce.

The pivotal moment of this conference game was when Ravens Wide Receiver Zay Flowers fumbled the football inches before the endzone (not long after he received a taunting penalty) which derailed Baltimore's possible victory (they say after this play the odds of the Ravens emerging victorious plummeted 14%). On the west coast, the 49ers came back from a 17 point deficit at halftime to defeat the Detroit Lions 34-31. Where the Lions have never reached the Superbowl in franchise history, the 49ers will be attending their 8th (having won 5 of them already).

The 58th Superbowl will kickoff at 6:30 pm EST with Usher will be performing the halftime show. After defeating the Philadelphia Eagles last year, the Chiefs will be defending their title and the 49ers fandom is eager to hoist the Vince Lombardi Trophy which they have not touched since 1995. According to some betting sites, Kansas City is considered to be the underdogs in this match, but the Chiefs have been known to put up a fight so only time will tell.

October 22 Men's Water Polo: Won the Division III East Championship title. November 4 Women's Soccer: Claimed the NEWMAC

championship title.

September 15

Field Hockey: Paige Forester broke the program record for goals with a stunning total of 70 against Smith College

October 28

Cross Country: Women's and Men's team claimed the NEWMAC championship title.

November 12

Women's Volleyball: Wins NEWMAC Championship.

Men's Fencing: Andy Zhang was the first athlete in program history to be named NFC Rookie of the Year and Fencer of the year in the same season

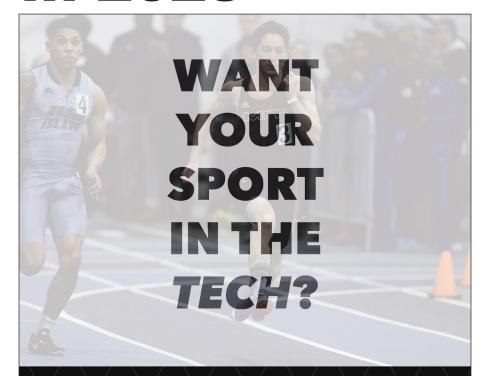
November 19

Men's Fencing and Women's Fencing: held undefeated records in the NFC Competition.

Women's Basketball: Christina Antonakakis broke the points record now 1,426 points)



SPORTS in 2023



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University of Michigan Football finished off their perfect 15-0 season with programs first national championship title in 26 years. Led by Head Coach Jim Harbaugh and Quarterback J.J. McCarthy, the Wolverines defeated the University of Washington 34-13. Both J.J. McCarthy and Jim Harbaugh have their eyes on the NFL with McCarthy declaring for 2024 NFL Draft and Harbaugh signing to coach the LA Chargers.

The Texas Rangers won the 2023 World Series—for the first time in franchise history (52 years in the making)- in game 5 over the Arizona Diamondbacks. Before grabbing this title, the Rangers were the oldest team in the MLB without winning the national championship. Impressively, the Rangers entered the post-season as the 5th of 6 seeds in the American League, yet managed to pull off this historic victory.

January 1st, 2024 didn't just reign in the new year, but debuted the Professional Women's Hockey League (PWHL)- which consists of 6 teams- launched with a puck drop in Toronto. This is the 3rd time since 2007 that North America has attempted to launch a women's league, but this one looks more optimistic than the past failures since this is backed by billionaire funder Mark Walter. The opening game had 8,000 fans in comparison to the NHL's opener with a mere 700 (and the NHL tickets were handed out for free). There have been 2 major rules changes with the premier of the PWHL that differs from the NHL: a distinct game point system and a new way to end power plays.

Iowa Women's basketball is one of the hottest teams in college sports at the moment, grabbing national attention and filling an arena at every game. The Iowa Hawkeyes have been led by their star Senior Guard Caitlin Clark who has been averaging a stunning 32 points per game so far this season. Now, Clark is only 5 points away from taking 3rd place on the women's all-time scoring list (she currently has 3,389 points).



shuttered unexpectedly and reopened months

times was that I was a witness to the successes

of this Institute. Professor Moungi Bawendi

0

The Tech interviews math

professor, former NFL player

Professor John Urschel was ap-

pointed assistant professor in fall of

John Urschel

HRS Dean speaks about po-

tential housing rate changes

HRS Senior Associate Dean David

Friedrich discussed a potential

shift to a one-rate model for all on-

campus housing.

2023 was a year fraught with change. Al-

though we finally broke free of the shackles of

dalism" by HRS

resident.

BC President Cameron Kleiman '24

noted that "stenciled bird murals"

had appeared in common areas,

and estimated that the fees for re-

painting would be around \$10 per

the pandemic, in this new year, we step for-365 days did not pass without controversy. won the Nobel Prize in Chemistry for his reward into uncertainty as the specters of the MIT's student body president was recalled search on quantum dots. Ayomikun Ayodeji past loom and manifest themselves around after numerous displays of hate speech ap-'22 was selected as a Rhodes Scholar. Findings this world and on this campus. peared across campus. A year after its reopenby Professor Mriganka Sur and his group at the Change came along many fronts of this ing, Burton Conner saw new murals appear on Brain and Cognitive Sciences made fourteen campus: sometimes, we were prepared. Other years prior culminated in the first FDA apits walls; its residents were met with fines and proved drug for Rett's Syndrome. times, we were not. Dr. Sally Kornbluth bewarnings. One line from those murals resonat-MIT-GSU speaks about came the 18th President of MIT and embarked ed with me: "give us our culture back." In its 143rd volume, The Tech was not implans to make new contract's on a listening tour upon her arrival. After a Happenings around the nation and world mune to hardship. There were many issues benefits more accessible year of negotiations with the administration, forced this campus to face difficult realities where I was the sole person working in the Sophie Coppieters 't Wallant, Presithe Graduate Student Union ratified a contract about combatting inequities in society and News Department. But as we worked to redent of the GSU, and June Stenzel, that brought further exercising freedom of speech. The aftermath build our staff, we knew that our work is spe-Campus Chief Steward of the GSU, benefits to the gradufollowing the Supreme Court ruling that overcial because it transcends us. In the future, the discussed with The Tech their plans turned race-conscious admissions practices pieces we write will be portals to the perspecate student to make the new contract's bencame as a shock to many, but the MIT comtives of the present MIT. The stories we write population. efits more accessible. The Stratmunity remained resilient. will become the story of this Institute. I'm The ongoing Israel-Hamas-Palestine conton Student deeply grateful to have shared them with you. flict prompted members of the community Center to amplify their voices on our campus — Alex Tang '26 Emma Pearl Wilmer-Shiles and elsewhere. President Kornbluth. Volume 143 News Editor 18 and G. Lochie Ferrier '19 less than a year after assuming FEBRUARY 2023 passed away her position, testified in front of President Sally Kornbluth an-Congress. nounced the deaths of Emma Pearl What was hearten-Willmer-Shiles '18 G and Lochie ing for me dur-Ferrier '19 in a plane crash off the ing these coast of California. Stratton Student Center closed due to flooding Structural failures triggered an in-JANUARY definite closure and early renova-MIT Medition of the Stratton Student Center. cal adopts 49th MLK celebration is the new name of "Night at the marked by the Institute MIT Health Museum" event MLK celebration began on Feb. 8, Dr. Cecilia Stuoopens for '26 under-The Margaret Cheney Room celebrating the legacy and life of pis, Chief Health reopens after renovations graduates Martin Luther King Jr. for the 49th Officer of MIT Members of the class The Cheney Room, a dedicated time in the Institute. Health, announced space for women since 1884, reof 2026 attended the that MIT Mediopened after months of renova-"Night at the Museum" cal adopted the event. tions. new name of MIT Health. **Building 45 opens** Building 45, the Schwarzman School of Computing, opened on **43rd Annual Mystery Hunt** Vassar Street. begins The 43rd annual Mystery Hunt took place over the MLK day weekend, Kornbluth reflects on the first in-person Hunt in three Lauren Brock '27 passed her first year as President at MIT President Sally Kornbluth an-January marked Sally Kornblunounced the death of Lauren th's first year as MIT's President, Brock '27. and she sat down with The Tech to reflect on her tenure so far as President. **NEWS IN REVIEW** MIT Medical reimplements masking mandate for staff Dr. Cecilia Stuopis, Chief Health Officer of MIT Medical, stated that MIT Medical Karl Reid '84, would implement a masking requirement SM '85 is anfor all clinical staff in Cambridge and Lex-FEBRUARY 2022 FEBRUARY 2023 nounced to be the ington care centers starting Jan. 8. new VPEI Kornbluth announced that Karl Reid '84, SM '85 will become the new Lynn Yamada Davis '78, Chancellor Melissa Nobles vice president for equity known for her "Cooking with reveals upcoming "Standing and inclusion (VPEI) Lynja" videos, passed away Together Against Hate" panels beginning Mar. 3rd. Davis '78, who graduated with a In an email to the community, bachelor's degree in Course 1 and Chancellor Melissa Nobles unwas a former Chairperson of The veiled several upcoming events this Tech, passed away at 67 on Jan. 1 year "to build understanding and foster respectful dialogue." from complications of esophageal Kornbluth testifies before the US House Committee on Education MIT net assets drop for the and the Workforce The MIT administration adsecond year in a row Kornbluth testified before the U.S. House dresses the demonstration at MIT reported a loss in net assets Committee on Education and the Work-Lobby 7 for the fiscal year ending June 30, force in a hearing titled "Holding Cam-President Sally Kornbluth provided an update following protests in Lobby 7 and the Infinite Corridor ing Antisemitism." on Nov. 9. DECEMBER 2023 The Tech interviews the newly announced Rhodes Scholar Ayomikun Ayodeji Ayomikun "Ayo" Ayodeji '22 sat down with The Tech to share his journey and passions regarding energy systems and management in Africa. Kornbluth to testify in Congress on Dec. 5 Students raise concerns Fifth-year doctoral stu-MIT President Sally Kornbluth will over suggested modificadent in Chemistry Tiansi testify on Dec. 5 before the House tions to MIT's housing rates Xin passed away Committee on Education and the Students expressed concerns re-Tiansi Xin, a fifth-year doctoral garding proposed changes to MIT's student in Chemistry at the housing rates at a Dormcon Cummins lab, passed away on BC residents fined for "van-

NOVEMBER 2023

MIT orgs. respond to Insti-

tute stance on hate speech.

Organizations from MIT drafted a

letter to President Sally Kornbluth

to discuss how "hate speech is not

a matter of nuance."

NEWS in 2023

MIT Monologues perfor-

mances for the 23rd time

Performances highlighted "margin-

alized communities" and "issues

of gender, sex, relationships, and

MIT's Oldest and Largest Information Transit Authority thetech.com

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Stratton

Student

Center officially

closes for reno-

The Stratton Stu-

dent Center en-

tered a phase of

total closure for

renovations.

Affirmative action

brought down by

vations

1,259 admitted to class of

The 4.68% acceptance rate for this

year increased from the previous

year (3.96%), but remained mark-

edly lower than pre-pandemic ac-

ceptance rates (approximately

2027

TWITTER

MARCH 2023

IS&T discusses internet disruptions

MIT IS&T acknowledges the need for improvements in internet in-

Protests erupt after fatal shooting by city police

GSU bargains with Institute

on safety, financial issues

The GSU and the MIT administra-

tion debated in six sessions to ad-

dress issues including discrimina-

tion, harassment, and tuition.

Protests began after Sayed Faisal, a 20-year-old University of Massachusetts Boston Student, was fatally shot by po-

frastructure.

remained shuttered.

partially reopens with some floors remaining closed The Stratton Student Center partially reopened, yet most floors

President Kornbluth sits down with The Tech President Kornbluth spoke with The Tech following her official inauguration, saying "people here are just full of fantastic ideas, energy, and entrepreneurial spirit."

CPW 2023 Commences MIT hosted the second in-person CPW since the start of the pandemic, **Stratton Student Center** and the weather was just as hot as

David Spicer officially re-

called, Andre Hamelberg

named 2023-2024 UA President

David Spicer was officially recalled

after a special election. Andre

Hamelberg was subsequently elect-

ed 2023-2024 UA President.

UA President David Spicer

the action.

subjected to recall election Undergraduate Association Vice President Shruti Ravikumar took over as interim UA President while David Spicer was subject to a recall election.

Mark Rober delivers **Commencement address** Mark Rober, a science educator and former NASA engineer, addressed the Class of 2023 under-

graduates at commencement

Supreme Court

Rett Syndrome drug is de-

veloped by Professor Mrig-

A Rett Syndrome drug, originating from research conducted by Pro-

fessor Mriganka Sur's lab was ap-

proved by the FDA-the first for

anka Sur's lab

this disease.

The Supreme Court struck down affirmative action, ruling that raceconscious admissions processes at Harvard and the University of North Carolina were unconstitutional.In a campuswide email, President Kornbluth wrote, "We will do everything within the law that we can to sustain the MIT community as we know it.'

Search for Institute Community and Equity Officer begins

President Sally Kornbluth announced the search for the new Institute Community and Equity Officer following the departure of John Dozier.

Professor Gilbert Strang teach-

Professor Gilbert Strang marked the

end of his 66-year-long career at MIT

by giving his final 18.06 lecture, a class

that has garnered millions of views on

MIT's OpenCourseWare.

es his last class

GSU reach agreements President Kornbluth sent an email about an agreement regarding workplace provisions, raise in wage rates, and a tuition remission between MIT administration and the Graduate Student Union.

MIT administration and

President Kornbluth Focuses on AI, Climate Change, and Administration for Listening Tour

President Kornbluth shared an initial listening tour summary, addressing common community concerns about AI, climate change, and realigning the administration.

Permanent closure of Steam

and Koch Cafes announced The Director of Campus Dining announced the permanent closure of the Steam and Koch Cafes due to

Prof. Moungi Bawendi wins 2023 Chemistry Nobel Prize Quantum dots have applications ranging from solar cells to surgery

EMBER 2023

After an email from the MIT Bargaining Team with a tentative agreement, the Graduate Student Union will have to vote to ratify the agreement.

Student Union

MIT Bargaining Team

Agreement with Graduate

on the listening tour, President Sally Kornbluth appointed Maria Zuber as the new Presidential Advisor, and started the search for Vice Provost of Research.

Professor of Geophys-

ics Maria Zuber named Presidential Advisor for Sci-

ence and Technology Policy

In response to concerns heard

Local 26 Union Representing MIT Dining Staff Protest MIT's Handling of Steam and **Koch Cafes** Dining workers protested MIT's

closure of the Steam and Koch Cafes, which eliminated nine posi-

The Tech interviews Dr. Bawendi to discuss research and mentality.

The Tech spoke with Professor Bawendi about his approach to and the content of his work.

Student Center Reopens with Newly Renovated Study

Spots and Varied Dining Options The Stud reopened after a closure in February, with a new "Wellbeing Lab," study spots, extracurricular spaces, and popular restaurants Tea-Do and Bibim Box.

SCIENCE IN REVIEW

Whether it's biology, chemistry, physics, or engineering, MIT faculty and students are not only talented with innovation and discovery but also sharing the importance of such work with the public. After all, science doesn't exist in a vacuum. The Tech Science section aims to make science more accessible - regardless of your expertise.

After an 11-month hiatus ending in October 2023, The Tech Science section published 9 articles and launched a new "3 Questions" series, which shares the interests and experiences of undergraduates and alumni of MIT.

Science writers covered a breakthrough from the Kavli Institute, which pushed the limits of quantum physics to measure space-time on "scales 10 thousand trillion times smaller than a human hair." An interview with an undergraduate delves into why science is innately intertwined with politics and policy-making, and how one can pursue these angles at MIT. We gained

insights from the Media Lab into the complex nature of AI-human interactions, and what future research may reveal about the consequences of chatbots. Interviews with scientists from MIT Ocean Engineering and the Woods Hole Oceanographic Institute revealed how a user interface makes deepwater exploration accessible remotely.

From minuscule quantum measurements, to ocean depths beyond human reach, The Tech Science is committed to sharing a breadth of discoveries and interdisciplinary perspectives to enlighten and

Thank you to the faculty, PhD students, graduate students, and undergraduates from MIT and other universities alike who shared their work and views with us. Thank you very much to our readers. We look forward to V144!

> — Karie Shen '27 Volume 143 Photo Editor



HEALTH

Can scientists mimic the benefits of using cannabis? without

A team of researchers has uncovered a mechanism by which CBD prevents severe epileptic seizures.

By Karie Shen

To some, this conjures a distinct sought-after "high" caused by the psychoactive compound THC. To others, it evokes the thought of a remedy for insomnia or anxiety. The primary compound behind these effects is cannabidiol (CBD). Both THC and CBD are found in the leaves and flowers of the cannabis plant. But there's another potential application for CBD: as a medicine for serious neurological disorders.

In June 2018, the FDA approved Epidiolex, the first and only prescription CBD, for the treatment of severe seizures. Back then, scientists were unclear on how CBD brings about these changes in the brain. Today, they largely still are - but researchers are gradually uncovering the mechanisms behind CBD's medicinal effects.

In a recent study published in Nature Communications, a team from Princeton, Tsinghua, and Harvard University reported that they had identified two different binding sites CBD uses to inhibit voltage-gated sodium (NaV) channels in the brain.

NaV channels play a crucial role in initiating brain neuron firing. When they malfunction, often due to mutations, those neurons fire irregularly. In some cases, this results in a seizure. CBD prevents neuron dysfunction by binding to NaV channels.

According to Bruce Bean, professor of neurobiology at Harvard and an author of the study, it was previously known that CBD could help epilepsy by inhibiting the NaV channels, but "the binding sites for CBD on the channels were not known." The team used cryo-electron

high-resolution image of CBD bound to NaV channels. Though cryo-EM was first developed in the 1970s, it has rapidly grown in popularity because it allows researchers to obtain detailed images of biomolecules, which was not possible with traditional techniques.

One of the two binding sites identified in the paper helps to explain why CBD can reduce the activity of sodium channels and abnormal electrical activity without completely blocking brain function. This is key for CBD's use in treating epilepsy since it can prevent abnormal firing without disrupting normal

Though there are other treatments for epilepsy, CBD addresses a crucial gap in current practice. Dravet syndrome, a severe form of epilepsy that begins in the first year of life, cannot be treated with sodium channel blockers that are often used to treat other forms of epilepsy. Epidiolex was the first drug approved to treat Dravet syndrome, along with Lennox-Gastaut syndrome and tuberous sclerosis complex, another severe form of epilepsy and a genetic disorder that can cause seizures.

Jill Crittenden, a scientific researcher and advisor at the McGovern Institute who is not connected to this study, has previously studied cannabis-activated receptors in the brain. "The findings on epilepsy are just phenomenal," she states. "It's hard science based on clinical trials1. [CBD] really does make a difference that nothing else does in the lives of these kids. They'll have multiple severe seizures every day. It's just devastating."

Cannabis research is limited, however, by federal restrictions, despite the increased legalization at the state level. microscopy, or cryo-EM, to capture a This poses a direct challenge to the drug regimen Bean and his colleagues are investigating. At high concentrations, CBD has effects on the nervous system that are still not completely understood. Bean argues that researchers need to learn more about those.

According to Bean, the CBD dosage for children with epilepsy is about 700 mg. In comparison, the dosage for consumer products, such as gummies, is around 20 mg. When trying to extract such high amounts of CBD from the cannabis plant, it is challenging to avoid contamination with the psychoactive component THC.

"It's not so much that contamination is so high that it really interferes with people. But it means that they're always struggling with the federal legalization, because if you have more than a certain amount of psychoactive cannabis, then it's an illegal compound. They're always balancing that."

The discovery of these specific binding sites opens an opportunity to create a synthetic compound that can bind to those same sites without contamination from THC. Synthetic compounds might also be developed that can avoid side effects of the current medications, which include sleep problems, liver damage, weight loss, and digestive issues.

"There's a lot in this paper about new techniques and discoveries that could lead to designing smarter drugs," Crittenden says. Many mothers of children with severe epilepsy were drivers of cannabinoid research and legalization. "Those are some of the heroes of our society - people who really drive change because they want to see better health outcomes for the people in their lives."

> Originally published in Vol. 143, Issue 22 on Ian 25, 2024

Are you a tetris ninja?

Use your powers for good!

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...by joining the production department at The Tech!

Silicon Souls: Priming beliefs about AI in chatbot conversations

How preconceived notions about AI influence human interaction with them

By Russel Ismael

NEWS WRITER

It has been a subject of science-fiction many times, wondering whether or not a machine will ever truly feel. Although the research on such AIs is still decades behind, this will not deter the curious about what may happen when science-fiction becomes non-fiction, But for now, the MIT Media Lab's recent publication should be enough to satisfy such

Researchers Ruby Liu and Pat Pataranutaporn co-authored a paper about how users who talk to chatbots can be conditioned to respond to such chatbots differently depending on the information told about them. Liu is a PhD student at the Harvard-MIT Health Sciences and Technology, while Pataranutaporn is a PhD candidate in the Fluid Interfaces research group at the MIT Media Lab.

"I'm trying to understand how human-like bias and psychology influence the way that [humans] interact with intelligent machines," Pataranutaporn explained in an interview with The Tech. "These AIs, they're like a mirror to the human, so the important purpose I want to bring in is what we get out of the AI. I'll definitely pay a lot of attention to the human dimension.

Liu, on the other hand, is more interested in defining the relationship between chatbots and humans because of their personal experiences online.

"You see a lot of human interactions [online], and it's also a very creative space. I like to write—I write to people," Liu stated. "I've been curious about how people's minds work, how they interact with other people, and how they interact with things that are not people." Liu also added that they were curious about how an AI can interact with a person, and if this subjective experience can be manipulated.

Liu and Pataranutaporn further explain that such online communities are instrumental in determining the "intersection between technology, imagination, and fantasy" because of the unique culture such communities

Liu said, "There's plenty of roleplaying, where you interact with a fictional entity or act as a fictional entity."

Together, their expertise is what allows them to address the "Ghost in the Shell" in chatbots, and how the human factor is crucial in shaping it. The researchers primed the experiments' participants with statements about what the AI they are conversing with is supposed to do. They ascribed three motives to the same AI: caring, manipulative, or no motivations.

We have this fun name for it called 'Ghost in the Shell' from a sci-fi," Pataranutaporn said. "The robotic shell or the human soul. Which one actually makes the AI? Is it the observable behavior that we see when we think of AI, or what we imagine the AI is on the inside that made it affect you?"

> Originally published in Vol. 143, Issue 19 on Nov. 30, 2023 Read the full article online.

THREE QUESTIONS

Siddhu Pachipala '27 on politics and research

The MIT undergraduate explains his path from research on mental health to his desire to transform science into policy.

By Karie Shen

Siddhu Pachipala '27 intends to study Course 17 (political science) at MIT. He believes there is a need to become fluent in both the languages of science and politics in order to change the world for the better. He sat down with The Tech to discuss his journey from a psychology researcher to an aspiring politician.

Q: In high school, you participated in the Regeneron Science Talent search. What was your research about?

A: The current systems for the detection and treatment of mental illnesses are premised on a single book: the Diagnostic and Statistical Manual of Mental Disorders (DSM). This is a textbook of every psychological illness recognized by the American Psychiatric Association and the symptoms associated with them. The problem is that symptoms don't cleanly map onto problems in the body, so the name of a condition doesn't tell us what's going on.

My research focused on creating an alternative approach to detecting mental illnesses. I used 112 different markers from MRI scans and psychosocial inventories to create a biopsychosocial characterization of an individual rather than a symptom-based one.

This biopsychosocial system was hitting 80-90% accuracy in identifying what treatment a patient should take, compared to the current system's 30-40% accuracy. We're seeing precision medicine in many medical fields but less in psychiatry, so this was a proof of concept that something like this could work.

Q: How did your research shape your current career trajectory?

A: In order to revise the system of detection and treatment, there has to be collaboration between researchers and legislators. The DSM is used because of the way our insurance system is framed. The fact that a psychiatrist can put their finger on a very specific illness affecting a person helps with billing. It's convenient and downstream from the way our healthcare system works. But psychiatric illnesses are much more muddled and amorphous.

I saw two approaches to this issue: scientific and political. Through a scientific lens, we can ask, "What are our methods for testing patients, determining if they are high-risk, and treating them?" Through a political lens, "Are people able to find in-network mental health professionals? Are mental health professionals willing to take insurance?"

If we, scientists, fail to engage with the political, then we risk letting our work sit a journal. It doesn't end up shaping the world. It's important to come back to the people who are going to write the bills that change our systems.

Q: How do you think that your time at MIT will help you reach your goals in research and politics?

A: MIT has a legacy of bringing rigor and data to whatever it touches. In terms of political science, there's a lot of great work on understanding when systems work best to capture people's opinions, what government structures are most effective, and how means of activism produce optimal results. We analyze politics through a quantitative lens. At MIT, the "science" in political science isn't undervalued.

In addition, the MIT Science Policy Initiative goes to Washington, D.C. every year to meet with legislators and people working for executive agencies at the intersection of science, technology, and policy. This is where the rubber meets the road in terms of translating scientific data into the text of a bill. I hope to be part of that.

> Originally published in Vol. 143, Issue 18 on Nov. 16 2023.

Volume VVV, Number NNNN#

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HOPE TO SEE YOU THERE

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PHYSICS

LIGO surpasses the quantum limit

Barsotti: "We are finally taking advantage of our gravitational universe"

By Alex Tang, Jayashabari Shankar, and Tina Zhang

On Oct. 23, LIGO researchers at MIT, Caltech, and other institutions reported that they had surpassed the quantum limit. This marked a significant advance in quantum squeezing, a method for reducing quantum noise to obtain more precise measurements. Researchers will now be able to measure a larger volume of the universe by analyzing gravitational frequencies.

According to MIT News, LIGO is able to measure the "stretching and squeezing of the fabric of space-time on scales 10 thousand trillion times smaller than a human hair." Its precision however, has continued to be limited by the laws of quantum physics, namely the Heisenberg uncertainty principle. Heisenberg's uncertainty principle states that one cannot determine the position and momentum of objects (or the frequency and power of light) at the same time.

Since 2019, LIGO's twin detectors

have been squeezing light in such a way as to improve their sensitivity to the upper frequency range of gravitational waves they detect. However, due to Heisenberg's uncertainty principle, making LIGO's measurements more precise at the high frequencies will lead to measurements becoming less precise at lower frequencies.

"At some point, if you do more squeezing, you aren't going to gain much. We needed to prepare for what was to come next in our ability to detect gravitational waves," Lisa Barsotti, a senior research scientist at MIT who oversaw the development of the new LIGO technology, said. The original project was spearheaded by Matt Evans, professor of physics, and Nergis Mavalvala, the Curtis and Kathleen Marble Professor of Astrophysics and the dean of the School of Science.

LIGO's partner observatory, Virgo, will likely also use frequency-dependent squeezing technology within the current run, which will continue until

roughly the end of 2024. Next-generation larger gravitational-wave detectors, such as the planned ground-based Cosmic Explorer, will also reap the benefits of squeezed light.

The solution was to squeeze light in different ways depending on the frequency of the gravitational waves. This was accomplished by LIGO's new frequency-dependent squeezing cavity, which allows researchers to selectively move the quantum noise into different features of light based on the frequency range of gravitational waves.

This breakthrough will enable LIGO to detect even more black hole and neutron star collisions. "We are finally taking advantage of our gravitational universe," Barsotti said. "In the future, we can improve our sensitivity even more. I would like to see how far we can push it." A full press release can be found

> Originally published in Vol. 143, Issue 17 on Nov. 2, 2023.

OCEANOGRAPHY

Uncovering secrets at the bottom of Earth's oceans

How a new user interface developed by MIT researchers in collaboration with other institutions can help scientists operate deep ocean submersibles with easeuniverse"

By Ved Ganesh

From sharks that can live for up to 400 years to microbes that could be the evolutionary ancestors of all complex life on Earth: if we've learned anything about Earth's oceans in the past decade, it's how little we really know. When each year brings a new and unexpected find, one begins to wonder: how much are we missing?

The SHared Autonomy for Remote Collaboration (SHARC) framework could go a long way towards helping scientists answer that question. Developed by researchers at MIT, the Woods Hole Oceanographic Institute (WHOI), and the Toyota Technological Institute of Chicago (TTI), SHARC offers scientists a new, user-friendly means of controlling underwater Remotely Operated Vehicles (ROVs) from afar. ROVs are the mainstays of deep-water oceanography, operating like drones tethered to their parent vessels by an umbilical cord of wires transmitting power and instructions. ROVs allow scientists to collect data from depths that could crush the human body like a tin can due to the water pressure.

They also happen to be terribly expensive and difficult to use. Most ROV operators, or pilots, must train for years before they're considered qualified to command one of these machines. For busy scientists, ROV control is a skill they don't have the time to learn, resulting in a bottleneck in the research pipeline. SHARC's designers, hoping to make an immediate dent in that wall, chose to focus on a small but high-impact aspect of ROV operation: the arm.

Traditionally, a pilot controls the arm with a joystick, similar to a claw machine at a carnival. An ROV's arm, however, is jointed with several elbows to improve its range of motion. That makes even primitive actions — like picking up a tool — immensely complicated.

In an intricate game of domino, an ROV pilot must use "switch mode control" to toggle between joints along the arm, carefully nudging each joint to achieve the desired overall motion. It's a process known as "inverse kinematics," and it can turn five seconds on land into five minutes underwater. But when each day a research vessel spends at sea costs a hundred grand or more, "time is money," says Matthew Walter, Associate Professor at TTI and one of the SHARC developers.

SHARC smooths away this inefficiency by offloading inverse kinematics problems to the ROV's onboard autonomy. Instead of directing the arm via joystick, pilots assign tasks to the ROV via written and spoken messages—or gestures when using SHARC's virtual reality interface. Almost instantaneously, they receive a projection of the arm's requested path. Then, upon the pilot's approval, the ROV autonomously executes the motion.

SHARC so radically flattens the learning curve that Amy Phung, a candidate in the MIT-WHOI joint Ph.D. program and one of SHARC's primary developers, says, "it felt like playing a video game. [Only] this 'video game' was happening in real life, and the sample I was 'looking at' digitally was actually a real sample with scientific value."

By lowering the barrier for entry, SHARC opens the door to a future where ROVs, and with them the deep ocean, can become readily available to users worldwide via the internet," Walter said. Walter imagines a world where student groups watch on the big screen while scientists across the globe provide annotations and suggest mission changes in real-time as the experiment progresses.

Dr. Andrew Bennett, a member of the Ocean Engineering faculty at MIT who was not involved with SHARC, is emphatic about the technology's potential. "Oil companies sometimes operate ROVs in deep water, and every now and then they come across something strange and they'll send it to the biologists, and the biologists will go crazy," he says. "And had they been there, in control of the ROV, we might've seen more."

When asked if he thinks SHARC is a breakthrough for engineering or accessibility, Bennett says he thinks it's both. To Bennett, SHARC solves a recurring problem in our fast-accelerating world: "We've got the processing power, and we've got the sensors; people just couldn't keep up with the potential." SHARC could be just the thing to close that gap.

> Originally published in Vol. 143, Issue 22 on Jan. 25, 2024.

OPINION IN REVIEW

Editing opinion articles poses a bit of a challenge. Unlike news articles, which adhere to stylistic guidelines so strict that there's usually a single approach to the presentation of a piece of information, the foremost goal in editing opinion pieces is to preserve the writer's voice. In fact, while opinion articles are checked for accuracy, additional suggestions — such as lines of reasoning that we feel would strengthen the arguments in the piece — are only given after an evaluation of whether they would change the writer's intent or tone. As such, editing these articles is a balancing act, often requiring restraint and sensitivity.

Our commitment to preserving the authenticity of these perspectives ensures that, as readers of The Tech, you can be confident that you are engaging with the genuine voices of our student body. The Tech acts as a filter — we attempt to enhance the strength and credibility of arguments while ensuring that the opinions presented remain true to the author's intent. In today's climate, where accurate information can be elusive, the importance of turning to vetted sources cannot be overstated.

At the same time, it's important to acknowledge that opinion writing inherently carries an agenda. The anecdotes chosen, the comparisons drawn, and the narratives framed, even when factually correct, form an argumentative strategy deliberately selected to support the author's perspective —

a perspective with which The Tech does not interfere. We urge you to engage critically with these pieces while remaining openminded. The onus is on you to discern the intent behind the words; in this partnership of communication, we ask for responsible readership as we commit to responsible editorship.

This year, two of our campus' most contentious debates concerned former UA President David Spicer's chosen form of protest against campus free expression policies; and issues related to administrative repression of, and the downstream anti-Semitism and Islamophobia stemming from free speech. Both prompted editorials with opposing viewpoints, three of which one on the postering issue and two on anti-Semitism, Islamophobia, and free speech — are featured in our year-in-review here. I am particularly proud of our work in editing these pieces. I sincerely believe that we have done our very best to preserve the authors' purposes while bolstering their arguments, even when we did not subscribe to the stances taken in the pieces.

I hope that we have affirmed the value of your opinions and treated them with the respect and rigor they deserve, and that in this environment of mutual trust, you will continue to share your opinions with us, 2024 and beyond.

— Srinidhi Narayanan '24 Volume 143 Opinion Editor

GUEST COLUMN

Vote 'yes' on recall, and other thoughts about student advocacy

On David Spicer, shared governance, and the freedom of expression

I am writing this after learning about allegations that David Spicer, the current UA President, was a member of a group of people who recently created and put up posters around campus which contained hateful speech and slurs against multiple marginalized groups, including LGBTQ+ people, ethnic minorities, and women. As a queer, non-binary student, I have seen these posters and felt a kind of hurt I have not felt since coming to MIT. As a student leader, I am furious.

In November 2022, The Tech published an opinion column by Spicer criticizing the freedom of expression report, a report compiled by the Ad Hoc Working Group on Free Expression in June. The problem with this column is not solely that David's argumentation is flimsy, taking some solid ideas and diluting them with poor writing and uncontextualized anecdotes, but that by tossing out such a document with seemingly minimal forethought, he diminishes the credibility of student governance as a whole. Instead of presenting a seasoned response to a report with genuine flaws, he presents half-baked arguments-such as complaints about the report's length-allowing faculty members to assume that this is the best students can come up with in response. If this was the quality of Spicer's contribution to the Ad Hoc Working Group, it is no wonder it was unpersuasive.

Indeed, there are problems with the Freedom of Expression report, such as the failure to acknowledge the extent to which "time, place, and manner" restrictions may place different burdens on faculty, staff, and students; or the continued inconsistencies between its theoretical grounding in the First Amendment, which also protects anonymous speech, and current policy. These are problems that the report fails to grapple with deeply, responding to a difficult scenario involving "conflict over student speech" by merely offering the option of more "viewpoint-neutral" restrictions, which seems to contradict the desire for additional free speech (p. 25).

The UA will continue to fail as a student advocacy organization so long as it is stuck in a mindset of "politics as point-scoring," where the correct way to accomplish things is to make a lot of noise about issues which sound like issues we ought to be working on. I get it—saying that you worked on the "freedom of expression" policy at MIT sounds great. But by engaging in vigilantism, rather than putting in the actual legwork of building consensus on the subject with his constituents and the administration, he doomed his mission before it ever took off. In fact, the amount of active

harm Spicer has done in the process of trying to accomplish his goal massively outweighs any benefit which could have been gained by students. This was already true before the posters—he has wasted hours "working" on the subject with senior administrators and the UA Council to no avail, time which could've been better spent addressing student-centered issues, such as food security or mental health—but it is undeniably true now.

MIT has a strong history of student governance, and it is a tradition I am proud to be a part of. We know that, by working together, students and administrators can design initiatives and make decisions which can benefit both parties. This is the only reason students continue to have a seat at the table—it is because of the hard work of previous student leaders to maintain good relationships with administrators and win positive, feasible change along the way. It has not always been easy. Changes do not happen overnight. But, by working in good faith as collaborators tackling difficult issues, rather than as adversaries fighting for a particular cause, we can make a difference. When it comes, therefore, to leaders who seem to think that their particular issue is the most important one, and are not willing to engage collaboratively and in good faith with people with actual power-who must, someting move slowly—we ought to reject them.

The UA Council has voted to trigger a recall election for David Spicer, and I thank them for their service. I urge him to step down and apologize to the groups he has hurt, but, barring that, I urge my fellow undergraduates to vote 'yes' on recalling him when the ballot opens. More importantly, however, I urge the incoming UA leadership to consider this tale a cautionary one; that is, not just a dismissable outlier, but rather a painful and important lesson to take your job seriously, to earn respect from administrators and faculty rather than demand it, and to work with the institution in a manner which directly benefits the undergraduates they represent. This kind of myopia has no place at our school, much less our student government.

Alan Zhu is a fourth-year undergraduate studying Creative Writing and Computer Science. They are the current Vice President of the Dormitory Council (DormCon), and served as the Next House President in 2022. This editorial reflects only their opinion and not the opinion of DormCon, nor of any other organizations they belong to.

Originally published in Vol. 143, Issue 7 on Apr. 20, 2023. **GUEST COLUMN**

Why you need to care about policies, practices, and people

Between a right to free expression and a right to be free of discrimination, what value prevails? At MIT, the answer seems to be free expression.

I said it. Wondering if you heard me correctly? Well, let me confirm for you — I said it. My article will answer a simple, yet complex, question: Why?

As I wrote in an op-ed in The Tech on November 9, 2022, free expression does not come freely. Someone has to pay a price. The campaign team of which I was a member was composed of marginalized students heated and passionate about the pattern at MIT, and in the broader society, of our communities paying the highest price for others' free expression. When there is a conflict — and there will be one eventually — between a right to free expression and a right to be free of discrimination, what value prevails? At MIT, the answer seems to be free expression.

This answer did not sit right with the postering campaign team, who felt that the MIT Ad Hoc Working Group on Free Expression (FEWG)'s report and faculty-approved statement failed to wrestle with students' concerns about discrimination, bias, and harassment. Where can, and should, the line between free expression and other moral values and legal obligations be drawn? This was the guiding question for the campaign.

President Kornbluth can preach all day about the "distinction between what we can say to each other — in other words, what we have a right to say - and what we should say to each other", but her opinion has no bearing on the question of: can, not should, I poster harmful speech? President Kornbluth's answer? Yes. You have a legal right to poster harmful speech — go wild. Why? MIT's policies protect such speech. In fact, when an MIT administrator violated Institute policy by taking down a poster in February, they were warned that "per MIT's Office of the General Council, it is recommended that community members refrain from taking down the posters in question as to do so may be in violation of MIT postering guidelines."

The postering campaign curated intentionally provocative postering that complied with all content-neutral policies, contrary to allegations from Professor Edward Schiappa that such posters were not signed. To be signed a poster must contain three elements: sponsoring party, contact information, and date of postering. Since there are no requirements for the size of the font, or even language saying such signing must be obvious, the posters were signed in small font (e.g., size 3). Furthermore, the postering campaign noted, and documented, several instances of only its posters being taken down while other posters that were not signed were allowed to stay up. This unequal enforcement of signing policies demonstrates viewpoint discrimination: "Hey, President Kornbluth, isn't this what you've made the MIT community work so hard to prevent?" This situation poses the question of what weight does or can Institute policy carry if MIT is unwilling to honor its promises or policies whether one agrees or disagrees with said policy.

I want to emphasize that Institute policies hold an incredible amount of power. The Mind & Hand book, which has a free expression policy protecting the postering campaign, prevents me from facing disciplinary charges no matter how offensive my actions by postering were. This should be upsetting. I was told by a member of MIT's Bias Response Team that the postering campaign solicited the largest number of Institute Discrimination and Harassment Response (IDHR) reports, yet I was not summoned once by IDHR yet alone disciplined for my actions. Why? Because the postering campaign broke no policies.

I want to be clear that the MIT administration knew about my involvement in the postering campaign since February 2023 but could do little, nay nothing, to discipline me because they are the ones to allow the postering campaign in the first place. If you are interested in learning more about how the postering campaign advocated to senior leadership I encourage to explore these slides and one-pager of recommendations that were presented to Chancellor Melissa Nobles, Provost Cyntheia Barnhart, Chair

of the Faculty Lily Tsai, Vice Chancellor and Dean of Student Life Suzy Nelson, Dean David Randall, and several faculty members of the FEWG.

I also want to address a few counterarguments that I have heard during the postering campaign.

First, why poster during CPW? If MIT wants to stand by its free expression policies, then it should do so at all times, including, or perhaps especially, when dinner guests are over. People who are considering whether or not to call MIT home for the next four years deserve to know exactly the type of campus MIT can foster.

Second, why were only certain identity groups targeted? The members of the postering campaign limited its content to our communities. For example, I would make a poster about Latinx issues, since I am Latinx, but I would not be comfortable making content about other racial or ethnic groups that I do not belong to — this was a personal decision, not a legal one.

Third, why use harmful speech if that is the very thing you are protesting? The postering campaign is exposing a flaw with the way this campus deals with this free expression by creating a simulated experience. We personally do not agree with the content on the posters, but with the rise of radicalization of certain groups, it is a real possibility that there will come a time when people post such content sincerely (I have certainly seen such statements growing up in the Deep South). We hope the MIT administration will recognize the impact of this policy as this campaign serves as a case study.

My decision to participate in the postering campaign was not one made lightly. I decided to join in the effort because I wanted, and still want, an MIT that supports students on the margin. When I opened Canva to make posters quoting pro-conversion therapy arguments, I was reminded of my time in the Texas conversion therapy center that my father sent me to. But whatever discomfort I felt, I knew it was also important to show that policy needs to change.

As a personal reflection, in participating in this postering campaign, I realized there is an issue beyond that of free expression: MIT's honoring of its own policies. Time and time again, I reported instances of MIT violating its own policies, violating students' rights. For example, despite the Mind & Hand Book explicitly saying that "It is not appropriate to remove or deface the poster," community members, including MIT administrators, violated this principle. While I can agree with the intention behind why someone might want to remove the poster, I do not believe the solution is to break a policy — an offense that the postering campaign has not committed. If MIT doesn't honor its free expression obligations, how car I be sure MIT will fulfill its anti-discrimination or anti-sexual assault obligations?

I understand that not everyone will agree with the message or method of the postering campaign, and I accept this fact and respect it. Despite the controversy behind the postering campaign, I remain supportive of its intentions: (1) awareness of what MIT's free expression allows and will protect and (2) demonstrate that the MIT community is not willing to accept the postering campaign on its legal merits, despite its compliance with Institute policies.

Put simply, MIT needs to rework its policies. My aim now is to provide my story, which before this moment, has not been made public. I urge you to evaluate my arguments, agree or disagree, and let this movement contribute to our collective understanding of why policies, practices, and people are critical in shaping the MIT you want to see. I hope this moment of care towards free expression does not escape us.

David Spicer is a fourth-year undergraduate majoring in political science, and is a member of the MIT Pre-Law Society.

Originally published in Vol. 143, Issue 7 on Apr. 20, 2023. **GUEST COLUMN**

Calls for 'Intifada' are traumatizing MIT's Jewish community

To Jews with connections to Israel, the word "intifada" is associated with suicide bombings, terrorism and the wanton loss of innocent life

The MIT Jewish community huddled together in Hillel, supporting one another, as a swelling crowd loudly called for the extermination of our friends and family. Outside, the crowd was chanting "one solution, intifada revolution," using a term which connotes violent uprising against Jews and thereby implying that the brutal murder of Israeli civilians is anything other than morally abhorrent terror. To say that I felt unsafe would be a gross understatement of the fear and horror I experienced as a group of students from the university which I have chosen to call my home supported violent, indiscriminate attacks against the home of my people.

For those who are not yet aware, a few weeks ago, Hamas, an Iran-backed terror group, murdered over 1,400 Israeli civilians and kidnapped 222 hostages in a single day. This terrorist attack, which targeted women, children, and the elderly, constituted the biggest loss of Jewish life in a single day since the Holocaust. Jewish communities all over the globe are still reeling from the unprecedented scale and brutality of the attacks.

Many of us are reminded of the pogroms of Kristallnacht, which were smaller in scale, especially since one of the hostages is an elderly Holocaust survivor. These attacks were not legitimate acts of war, as some on this campus have unfortunately claimed (see dormspam from Oct. 8, subject line: Rally for Palestine TOMORROW: Statement and Call to Action). They were abhorrent acts of "intifada," a word which signifies the slaughter of innocent Jewish civilians.

This is not the first time Jews have heard the word "intifada". Most recent in our memory is the Second Intifada, a series of violent attacks against Israel in which 3,000 Palestinians and 1,000 Israelis lost their lives.

Although I was not in Israel during the intifada, many of my friends and family were, and they experienced trauma beyond description. To Jews with connections to Israel, the word "intifada" is associated with suicide bombings, terrorism and the wanton loss of innocent life. As such, when Jewish students at MIT hear calls for "intifada revolution", we cannot interpret them as anything but an active

call to violence against the Jewish nation. Words gain meaning from the historical context in which they are used. In this case, the historical context is violence and terrorism in the name of resistance. Claims to the contrary are either misinformed or dishonest.

As a Jew, I have experienced hate because of who I am. During my time at MIT so far, I have been inspired by the university's commitment to combating antisemitism and helping me feel secure in my identity. That sense of belonging came crashing down as I observed the Institute's passivity and complacence in the face of violent speech. I firmly support MIT's deep commitment to fostering free speech on campus.

The CAA has the legal and moral right to express their violent opinions, just as neo-Nazis have the right to free assembly. But, in the words of MIT's 18th president, there exists a "clear distinction between what we can say ... and what we should say." When students on campus call for attacks against Jews, MIT's administration has a moral responsibility to state unequivocally that it does not support,

and in fact abhors, such violent ideas.

Sadly, MIT has failed to fulfill this responsibility. In the hours after the intifada rally, President Kornbluth released a lukewarm statement in which she denounced all forms of hate without mentioning the CAA by name or making note of their calls to violence. We call on President Kornbluth to use her presidential voice to directly condemn these calls for violent intifada against Jews.

The sun set, and the voices outside, full of anger and vitriol, continued to chant. Some of my friends took an Uber home, fearful of walking across their own campus. Many more remained, attempting to process the shock, grief, and trauma of the past few weeks. In this dark time, when it felt as if the whole world was turning against us, we somehow found solace in togetherness and community.

Avi Balsam is a sophomore, studying computer science and mathematics. He is a vice president of the MIT Hillel student board.

Originally published in Vol. 143, Issue 17 on Nov. 2, 2023.

GUEST COLUMN

Speaking out against genocide in Palestine and repression of free speech on MIT's campus

A statement from a collective of graduate students in HASTS at MIT

We, a collective of graduate students in the MIT Doctoral Program in History, Anthropology, and Science, Technology, and Society (HASTS), forcefully condemn the recent actions of the MIT administration toward members of our campus community speaking out against the violent oppression of Palestinian people and genocide being enacted in Gaza by the Israeli state, which has received military and financial backing from the United States.

We stand in solidarity with student groups across campus—including MIT Jews for Ceasefire, the Arab Student Organization, the Black Graduate Student Association, the Black Students' Union, the Asian American Initiative, and the broader MIT Coalition for Palestine—in calling for the liberation of Palestine and an end to more than 75 years of Israeli settler-occupation, towards a land with freedom and equal rights for all. We grieve all lives lost and fiercely oppose all forms of Islamophobic, anti-Semitic, and racist violence.

We are extremely concerned that the Institute chose to deploy armed campus police to cancel a peaceful teach-in on Friday, November 10, 2023, quashing dissent through fear-based tactics that have infamous historical precedents at MIT and in the US more broadly. We are especially alarmed by the Institute's threat to suspend students—even if only from non-academic activities—who had participated in a sit-in on Thursday, November 9.

While MIT justified this disciplinary action by claiming that demonstrators were acting against Institute guidelines by organizing a demonstration in an unapproved location, the guideline changing Lobby 7 from a preferred location to a by-approval-only one was introduced after the sit-in had already been organized and announced, raising questions about its timing and purpose. We see this as a contradiction to MIT's stated commitment to academic freedom and freedom

of expression.

Our concerns are heightened amidst rising censorship on US university campuses about Palestinian human rights, which scholars have termed the "Palestine exception" to free speech. Actively preventing students and researchers from speaking openly about historical events and their ongoing implications is not only a moral and ethical failure—it also flies in the face of MIT's commitment to the pursuit of knowledge based on empirical

It is disturbing that Institute administrators chose to punish students who are standing against a "mass ethnic cleansing," in the words of the UN Special Rapporteur on the occupied Palestinian territories. We are worried that the Institute's current approach—including the expansion of police presence on campus—impedes campus safety for all students, especially those from already marginalized groups, and degrades the Institute as a space of learning and empowerment.

We urge MIT to oppose apartheid in Israel and call out the ethnic cleansing of Palestinians by severing its academic, financial, and political partnerships with entities that facilitate this violence, including the Lockheed Martin Seed Fund. We are optimistic that institutional change is possible given the precedents set by such student movements of the past. In 1969, for example, MIT students and faculty held an anti-war research strike, successfully forcing MIT to officially divest from the MIT Instrumentation Laboratory (now Draper Laboratories).

Informed by this history, we believe in MIT's power to create meaningful change, in both the local and international spheres. We ask the MIT administration to support all students whose safety and well-being are adversely impacted by the decades-long violence in Israel and Palestine and who are expressing their views on campus. To ensure this, our requests are as follows:

• We urge that peaceful demonstrations

be allowed on campus, including by groups that were unfairly threatened with suspension from non-academic activities for the non-violent sit-in on November 9. The way we see it, the goal of a demonstration is to disrupt, to acknowledge that business should not go on as usual. Even so, the demonstration for which protestors were punished did not prevent any students from going to class nor cause significant disruption.

- We demand that MIT conduct open and thorough investigations of ongoing harassment, intimidation and doxxing faced by students supporting Palestinian human rights, faced by students supporting Palestinian human rights, and to take concrete measures ensuring that all students are protected from such harassment. This includes ensuring that protesters are not filmed against their consent with the goal of intimidation and doxxing as occurred at the sit-in on November
- We ask the Institute to be transparent about its Ad Hoc Complaint Response Team, including communicating to the community: what behavior constitutes harassment; where and how it can be reported; how complaints will be reviewed; what the disciplinary consequences are for specific harassing actions; and where further support and resources can be found at MIT.
- We ask that the proposed council Standing Together Against Hate clearly distinguish between anti-Semitism and Islamophobia on the one hand, and the protest of states and state policies on the other, as MIT Jews for Ceasefire has also demanded.
- We ask that the administration and its various offices make clear what students' legal and institutional rights are in demonstrating on and off campus, and how to seek protection if needed. We echo the demands made by faculty for clarity about disciplinary decision-

making processes and students' right to due process.

· We ask that the Institute allocate financial and human resources to existing departments, centers, and programs that are best suited to provide educational programming on the Israeli-Palestinian conflict, especially through the School of Humanities, Arts, and Social Sciences (SHASS). The History department already offers courses that explore MIT's historical and ongoing involvement in systemic inequality and oppression, such as MIT and Slavery and The Indigenous History of MIT. We ask MIT to similarly invest in educational programming about MIT's ties to militarism and the Israeli-Palestinian conflict by, for instance, developing a course on MIT and Defense Funding/Research.

Above all, we ask that MIT be an institution true to its values as a place where rights to freedom of expression are upheld, and where commitments toward making a better world are driven by the desire for human flourishing—not the interests of donors, the net gain of financial holdings, or US foreign policy agendas.

Until that time arrives, we join our voices to those of our campus colleagues to demand that MIT stop repressing members of the community who are bravely giving their time and energy to advocate for an end to the violence in occupied Palestine. An institution of MIT's caliber deserves better leadership.

This statement was collectively authored and/or endorsed by a group of 20 doctoral students in History, Anthropology, and Science, Technology, and Society (HASTS) at MIT, a program committed to the interdisciplinary study of the social, cultural, and political life of science and technology. It represents our own views, not those of all individuals in the program nor those of the program itself.

Originally published in Vol. 143, Issue 19 on Nov. 30, 2023.

File Edit Options Buffers Tools Im-Python Python Help

from new_skills import *

def learnMarketableJobSkills():
 return linux, OSX, javascript, applescript, perl, python, PHP

if self.interest == True:
 print "E-mail join@tech.mit.edu"

----:---F1 joinTechno.py

(Python)--L1--Top----

PHOTO IN REVIEW

2023 was an eventful year for MIT and the world. The MIT community celebrated the inauguration of President Sally Kornbluth, saw the renovation and reopening of the student center, and witnessed significant campus activism, with community members organizing rallies to protest or raise awareness on issues ranging from the Israeli-Palestinian conflict to graduate student contracts and local workers' rights. It is undeniable that our community has faced challenges in navigating the balance of freedom of expression with mutual respect over the past year, as we experienced provocative postering campaigns last spring and multiple moments of tension surrounding differing perspectives on conflict in the Middle East this fall. As we start a new year and a new semester, it is a time for us all to reflect on how we may work towards fostering respectful, informed dialogue while rebuilding trust and caring for one another.

For Volume 143, The Tech's Photo Department continued our mission to record and report both momentous occurrences

on campus and slices of everyday MIT life. From major campus events such as commencement to performances by a wide variety of student groups to protests and demonstrations, we hope that we were able to capture these moments accurately, respectfully, and with integrity.

It has been a privilege to serve as The Tech's photo editor for Volume 143. This invaluable experience has allowed me to feel a greater sense of belonging and connection to the wider MIT community. I hope that the work of the Photo Department has also, in some small way, had an impact on MIT's community. Of course, none of this work would have been possible without our wonderful staff in the Photo Department, and I am so grateful for all their hard work and support over the past year. We look forward to welcoming the new year, with Alexa Simao and Omar Orozco as our new photo editors for Volume 144.

— Kate Lu '25 Volume 143 Photo Editor











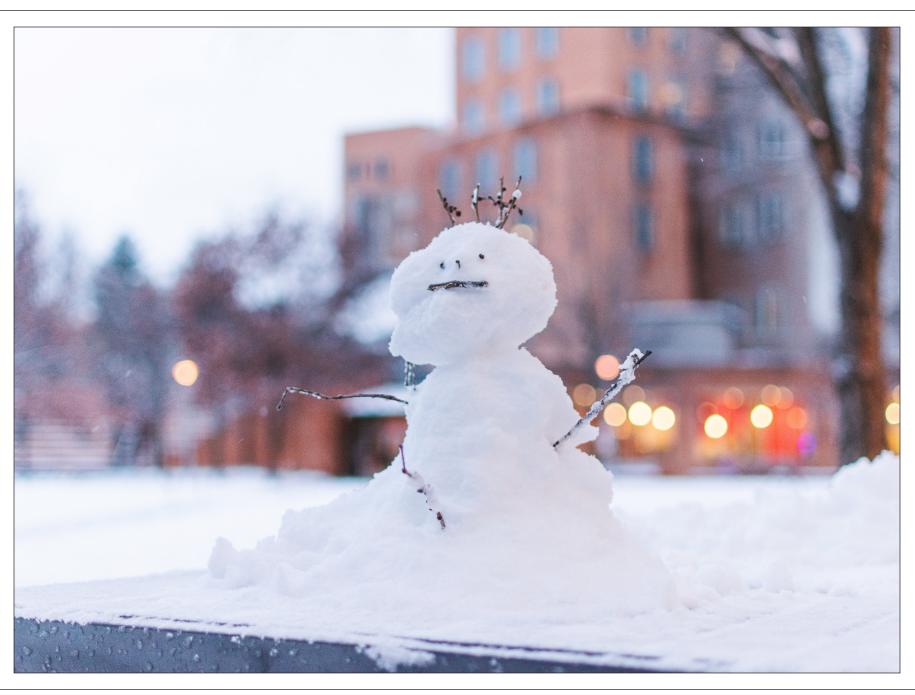








ТО РНОТО РНОТО РНОТО



YEAR IN REVIEW

We get you the tickets. You get us the review.

ARTS at Established Internal Consorts

events • movies • theater • concerts music • books • restaurants • interviews

join@the-tech.mit.edu

eunice exists

Hrrg, from Page R3

the default state of existence, it can be easy to drown yourself in a hrrgalicious frenzy — but i hope you can remember there are so many people who love you and want to support you!

whether that's a friend, a family member, gra, professors/ta's, s^3, there are plenty

of people who want you to succeed and do well! plus, if this helps — there's a 99% chance that i'm experiencing massive hrrgs right now too, because to be honest i always am.

so at least that's one other person hrrging with you!!~ and i'm rooting for you, always $((\Box^*)_{\mathfrak{I}} \otimes (\Box^*)_{\mathfrak{I}})$

a proper introduction! :0

hello!! it's very nice to meet you. my name is eunice. you can also refer to me as euni, moonicorn iphone7, don moonicorleone, or the love of your mother's life;)

i am a queer, chinese-american girl (?? woman ??? feminine-presenting person ???? idk, gender is weird and scary ;-;). i really enjoy eating bread + nyommy foods, and appending -ussy to every single word possible. i grew up in a number of beautiful places, which you'll learn more about if you stick around for this column:D

speaking of places... you know what's a pretty cool place?

mit!! let me tell you more about that! i'm an urban planning & computer science (11-6) major, because i really like trains. (side note: one of the best decisions i ever made was declaring 11-6 instead of 6-3. "you're not going to find a job anyways, so you might as well do something you like," as my lovely & brutally honest friend jess so kindly put it.)

my primary spheres of existence here are beast (2e on east campus; nertz, haikus, and waffle night!), mit esp (educational studies program; we run splash!), and of course, the tech (you should join us!! email $\underline{\text{tt-join@}}$ $\underline{\text{mit.edu}}$ — we have good food and even better people \heartsuit).

while this introduction is getting long, it'd be remiss to truly introduce myself without talking about the most important people in my life — my sisters: zizi, emeri, and emmanuelle.

they are the best things that have ever happened to me and probably the best thing that ever will; there will never be enough words or ways to explain the depth of how much love i have for them.

it is very rare for words to not capture the intensity of my feelings, and this is one of those times. how can i possibly put into the words the feeling of knowing there are three gorgeous, beautiful, amazing, pussy-popping

slay QUEENS(!!) who have supported me unconditionally through my lowest lows and highest highs? it's love, and true love is something you feel in your heart rather than intellectualize in your brain.

so while i may say "my story," it's really "our story" — my life is inextricably also the lives of my sisters — every time we cried together and smiled together; every time we laughed over degenerate memes on instagram, called the quokka signal in times of great distress, had blowout arguments over that one (1) pair of abercrombie shorts (i am still traumatized)

my life is a story of knowing — knowing always, that there are maybe only two, but really three constants in my life — change, myself, and the eternal love of my sisters. i love them for all the words, memories, and stories we've shared together — i love them with all of this, and then a thousand

what's a GIS? O:

over the summer, i started a practice of writing 'general intent statements' (GIS!) for my new projects — basically, a GIS is a document explaining what i'm doing, why i'm doing it, and then any other thoughts or vibes i was in the mood to share at the time of writing.

first, the meta-GIS of the GIS — why GIS?

i get stressed and depressed very often, and when this happens it's extremely easy to rapidly descend into a hrrg spiral. reasons for having a hrrg spiral can range from anything from "oh my god this person HATES me" even though i have zero (0) evidence of this being true or "oh my god i have no friends i'll be a lonely potato forever:(((("

but ultimately, all forms of hrrg spiral end in one place and one place only: "life sucks, everything sucks, i suck." in a way, it's oddly comforting because (1) there's a sense of familiarity — i've been here, experienced the bottom of the spiral before, and i've gotten through it before!! (2) i'm not alone, hrrg spirals are universal!

and while rational eunice knows that these hrrgs are Objectively Not True™, stressed and depressed eunice does not. so having a GIS is nice to ground myself, to know that while current eunice is operating under a "oh no this is horrible and embarrassing and scary and weird and i just want to go back into my cozy cave room and hibernate like a turtle" mindset, rational eunice has Reasons and Rationale™ for writing this campus life article!

Originally published in Vol. 143, Issue 16 on Oct. 9, 2023.

SIXPENCE

belonging, home, and me

"your old house, it feels smaller/will it fade out if we wait longer?" - sadie jean, "16"

By Vi Trinh

i've never really known what it meant to have a "home." when most people talk about their homes, they refer to their childhood house, the team that they've been through unspeakable horrors with, or the four friends that they never stop spending time with.

but for whatever reason, home to me is a feeling that i can't ever seem to grasp for more than a second. fleeting, fleeing, gone, as are most things in the world.

you see, ever since middle school, i've had this growing dread in my stomach, spurred by the realization that i've never really "belonged" anywhere no matter how much i tried. i've always been just too offputting, just too weird, and always, always too much. but whenever i tried to be any less than what i currently was, it made me feel horrible — an imposter &, almost.

it seems that i'm doomed to be this way.

it's akin to the way void termina is the version of kirby that was never exposed to friendship and love — destined to wander the universe alone, with only the ability to destroy things.

sounds like average teenage angst, right?

since i am not in fact an almighty god of destruction, i opted to wallow in my sadness instead, which was only slightly less disastrous. even during cpw, preorientation, and the first month of the semester, i still felt the presence of this gnawing hole in my heart.

what if you never find anywhere that accepts you? what if everyone was right, and you, at your core, are unworthy of companionship and love?

i was terrified for a while, horrified that my fate would be like that of rain slipping in between concrete cracks, seeping into a mixture of gravel and dirt where i'd forever remain unseen. an outsider to the world passing by, left to spend the rest of my time watching people come and go.

thankfully, i was horribly wrong. in mid-to-late september, i started going to mit esp meetings, which was possibly one of the best decisions i've ever made.

esp, which stands for the educational studies program, runs many educational programs for middle and high school students, the most notable one being splash.

i joined esp because my host for cpw remembered who i was when i came up to them whilst they were boothing for esp, and i thought that was the sweetest thing ever. on top of that, they sent me a dm on insta telling me to go to one of esp's meetings and i was like "oh my god, they want me here?????"

yeah, i know that it's not really the highest of standards.

still, i'm so glad that i joined — i love them so, so very much. as i got assimilated into esp, the little voice in my head got buried under all of these warm feelings and stopped shouting "you're not really one of them," but now pleads "can you stay a little longer?"

of course, i oblige with a grin on my

for the first week of cascade, a sixweek program for underserved students in the Boston area, i carted laptops all the way from faraway maseeh hall over to building 56, which got me a chewing-out because it was dangerous for me to do so. afterwards, we sang happy birthday for an admin who forgot it was their birthday (they only remembered because i jokingly told them happy birthday).

at splash, a two-day educational program for high schoolers, i ran around lobby 13 setting up and participating in different walk-in classes taught by esp admin and other teachers, went to the bush room to take a break and check in on other people, and accidentally overslept sunday morning (although everyone else had me covered).

in the office, i lean on a friend's shoulder during weekly meetings while the data czar presents the data graph of the week and chairs present internal fuzzies (an external vocalization of esp members' appreciation for one another). in the weeks leading up to a program, i read emails and schedule classes while listening to some random banter across the room.

part of the reason that i've gotten so attached to the people at esp is that they've accepted every facet of my existence. they've helped me get through my queer anguish, let me pet and bite and hug them, and have supported me through my academic endeavors. often, my pursuits are quite reasonable, but sometimes they are not — turns out trying to take six classes freshman spring is not advisable. despite that sporadic irrationality, they continue to show me that i'm not too much — not tolerable, like i used to aim for, but wanted, even in all of my intensity.

the other part of it is that they're all such wonderful, admirable people to be around. not only are they all so excited to learn more about their passions, but also to teach others how to do things (sometimes for the purpose of making their lives easier, but hey, learning how to use a power drill is pretty fun). perhaps the joy of teaching and learning is embedded into all of our hearts...

well, at least mine — enough so to call esp home. as i write this, my eyes are currently bloodshot from crying all day wednesday before thanksgiving break. i used to cry because i had to see my parents again, who are very icky, but i wasn't feeling particularly upset that i had to see them again — rather, i was absolutely destroyed at the fact that i had to leave my newfound home for a few days.

leaving behind a place where i can be a little more "me" always hurts. i pick back up an incorrect name, an outdated idea of who i am, and a false persona, and then take a deep breath.

trusting that i can internalize all the affirmations and confidence that i've gathered over these past few months, i'll make sure to carry all the love they've given me.

it's the least i can do.

also hi! this is a bit of a late introduction, but you might be wondering "who on earth is this kid writing an article?"

my name is vi (pronounced like the letter) and i'm a freshman. i'm starting this column cause i wanna write more and share my unhinged thoughts with the world!

if you want to talk to me, you can always email me at tvi@ or message me on discord (@pikaolive)

hope y'all enjoy (>u<)/

Originally published in Vol. 143, Issue 19 on Nov. 30, 2023.



STUDENT SPOTLIGHT

History and South End House: what's after MIT?

Meet Tobit, a 2023 who majored in 18 and 21H

By Claire Wang

This interview has been edited for length and clarity.

Name and Class: Tobit Glenhaber, Class of 2023 Areas of Study: Major in Course 18 (Mathematics) and 21H (History) Living Group: Random Hall Home State: Somerville, MA Activities: Secretary, Trainer, and Spinner for MIT Spinning Arts

After graduating from MIT in June, what are you currently doing?

I am a paralegal at a law firm in Baltimore. As a senior, I thought I might want to do law school but wanted some experience in the legal profession before committing to the rather high financial and time commitment. Now that I know I enjoy it, I'm applying to law school.

Before coming to MIT, what were you planning to major in? Did you expect to double in 21H? What made you decide to double in 21H?

Back when I was applying to MIT, I don't think I could have predicted I'd be a 21H/18 double major but I've always been interested in history and math. MIT's SHASS department is really good, and it's often overlooked. So when I got to MIT, I started taking history classes alongside my math classes, and that snowballed into "wait, I'm taking enough classes I

can just double major in this!" Towards the end of my time at MIT, I became interested in law school in no small part because of some of the history classes I

Math and history really complement each other too, so it was pretty manageable since they're intense in very different ways. Instead of having four psets a week, it felt like a nice combination of readings and essays alongside psets.

Some history classes I particularly

History of the Ghetto: From Venice to Harlem (21H.385), taught by Prof. Craig Wilder. He was an incredible professor. I took it during my sophomore fall, and it really cemented the era of history I realized I was interested in, the late 19th and early 20th centuries.

History of Capitalism — This involved a series of classes on topics like Commodity History, the History of American Economic Regulation (Harvard Law School History 2477), Global Commodities, American Dreams (21H.388), the History of Capitalism (21H.S01/11.S944): The Institutions of Modern Capitalism and the Rise of Market Society, taken in my senior spring), and so on taught me how capitalism has affected American history. These classes had persistent themes of what the government was doing and how the law was being shaped by historical trends, which led to me wanting to go to law school.

What did you write for your 21H thesis?

I wrote my thesis on the South End House, an example of the settlement house movement. This concept took off in the late 1800s and early 1900s, as college-educated women created new ideas and techniques for charity work. Because of the Gilded Age, there were massive slums in many cities, and they were trying to figure out how to reform this. Specifically, I studied the ones in Boston (South End House), and I essentially found some things that are emblematic of the Progressive Era (which is how the historical period is usually framed), but some ways still look at Gilded Age-esque view of capitalism.

The main thing these women did was to teach the people in the slums "how to succeed in Capitalism." They never questioned if this was the best thing to do; they taught the people how to have (what they percieved as) a "good" work ethic or get hired, which perpetuated these capitalistic systems.

They further believed that, by succeeding at capitalism, the people they helped would be able to prosper in all dimensions of American society. I was initially interested in how the settlement house movement used big data techniques to inform their work, but the thesis ultimately took on a life of its own in the directions it went.

Do you see any intersections between what you learned from Course 18 and 21 H, or do you see them as separate entities?

In many ways, they are different, where

math is more purely built up from axioms and history is reasoning backwards from the limited set of end results that have survived, but they're both really about abstractions at some point. They're both a limited view of the world, and you have to try to see what you can say from various disparate sources. For example, math asks how multiplication is like addition, if you ignore the right things. Often, mathematicians will take a tool from one field and apply it somewhere else by saying "from a certain point of view, these two areas of math are actually talking about the same thing."

History has some of the energy of looking at multiple things in a weird way to see in what ways they're the same. Like how the 70s is similar to the 20s depending on the way you squint to look at it. One of the key tools in both the historian and mathematician's toolbox is abstraction to be able to compare disparate ideas.

If you were not either a Course 18 or 21H major, what major would you have been?

Possibly a Course 11-6 (Urban Science and Planning with Computer Science). Looking back at this possible major is interesting. I took CS in high school, and for whatever reason, didn't take a CS class until 6.009 [6.1010] (Fundamentals of Programming) in my senior year, so it never really happened for me. But I can definitely see myself being a Course 6.

Originally published in Vol. 143, Issue 20 on Dec. 14, 2023.

GUEST COLUMN

HRS is Failing Undergrads

I won't be living on campus next year — but not by choice.

By Elijah Fernández

In February 2021, I arrived on campus for the first time. I had made it through my first semester at MIT, although it had felt more like an addendum to high school since I'd only taken GIRs and hadn't really tried to make friends with anybody over Zoom — a common experience for many 2024s. My dad helped me move my bags into MacGregor House, said a quick masked goodbye, and then immediately started his trip back home, leaving me alone in my room.

Q-Week began with a Discord call to meet my new floormates, the same people who are still my closest friends here and my main support network. That virtual semester was filled with late nights getting to know my new suitemates, an endless stream of the cartoon *Regular Show*, post-all-nighter sunrise viewings, and a wonderful trip to Rockport to cap it all off.

Despite everyone on the floor growing quite close and living together without issue, we went our separate ways to explore different dorms that fall. A few of us ended up at Simmons, and while we liked it there, we quickly realized that we missed living together and began planning to return to MacGregor for our junior year.

That first somewhat regular semester was full of all kinds of ups and downs, and I was excited to be back home for winter break spending time with family, seeing my high school friends, and getting some much-needed rest and relaxation. However, it was not long after getting back home that I started to rest too much — sleeping almost all day, every day.

I was waking up at 10am, going back to bed by noon, and then sleeping until my family woke me for dinner, before passing out again for the night. And it wasn't good sleep, either — I was having night sweats and hallucinatory fever dreams all the time. After two weeks of back-to-back doctor's visits and a litany of blood work and scans, I was diagnosed with Stage III non-Hodgkin diffuse large B cell lymphoma, just two days after my 20th birthday.

My family and friends were understandably terrified, but to be honest, throughout those five months of chemotherapy, I was never particularly scared. I had incredible care from all my doctors and nurses and was told from the very beginning that this kind of cancer responded very well to treatment.

The part that bothered me the most was having to take a semester away from school on medical leave. I greatly missed spending time with my friends doing nothing of particular value, the daily routine of going to classes and working on problem sets, and everything else that wasn't being stuck in a hospital bed all day.

During this time, my friends from MIT came to visit me at the beginning of spring break. I know it must have been hard for them to see me in that state, but I nonetheless couldn't have appreciated their company more. It was so nice to see them again, and I was happy just to spend time around my friends, chatting about things that didn't matter, as if everything had gone back to "normal."

Along with our usual light-hearted conversation and our bizarre humor, one of the things we talked about the most was our plans for being back in MacGregor. We jokingly discussed making posters to find a sixth person to fill our suite, or our ideas for floor brunch every weekend, and were overall looking forward to the upcoming fall very much.

As my treatment ended that summer, my life slowly started to become "normal" again. I was working at a summer camp, my hair began to grow back slowly but surely, I could spend time with friends without risk of becoming sick easily, and I even got to go on vacation with my family.

Over these months, I started to keep note of how many days in a row I could go without thinking about the unfortunate happenings of the year. It became a measure of normalcy for me.

Working at camp, I could go a day or two. On vacation in Jamaica, as we visited family, however, hardly a day passed where I didn't have to talk about my experience to everyone who was so worried about me for all those months, but unprompted, I still wasn't thinking about cancer.

As August wrapped up, I was getting antsy about returning to campus, but I still didn't know where I would be living. I made several long-distance calls

to Housing & Residential Services (HRS) with my bad cell service. Eventually, I got through and learned that I would not be offered housing in an undergraduate residence hall. Students who take a leave of absence are not guaranteed housing upon return to campus. I knew this, but I was hopeful that I would get an offer from the waitlist. I did not. In a few days, I would instead be arriving at Tang Hall.

And I adjusted to living in Tang Hall. I adjusted to the longer walk from the western extremes of campus to my classes in Building 2, and to generally not being around other undergrads. I would, and still do, stay until the wee hours of the morning in MacGregor with my friends, who welcomed me back to MIT as if the whole year had just been a bad dream.

Then I walked back just to sleep in Tang for the night; it's been a house, but certainly not my home. It was harder to have days without thinking about the past year when I knew the only reason I was walking all the way down Amherst Alley was a direct result of my unfortunate circumstances. But I also adjusted to this, and have had long spans where things felt normal again.

Now the spring semester has rolled around, and I'm more than a year out from my diagnosis and the beginning of my treatment. Thankfully, my experience with cancer has few tangible manifestations in my daily life anymore. I have a few scars, and I learned from genetic testing that I shouldn't eat fava beans, but that's the extent of it.

At least, that's what I thought it would be. For yet another year, I will not be guaranteed undergraduate housing by MIT, since I do not currently live in undergrad housing. Taking time away from school to let doctors literally save my life meant forfeiting my rights to housing, and that will roll over into the next year. I will likely spend another year not living in undergrad housing. What's worse, I learned that my current spot in Tang Hall isn't secure either, and I will be on the waitlist for both graduate and undergraduate housing.

Where you live while at MIT can really shape your experience, especially as an undergrad. Each of the dorms has a unique culture, set of traditions, and vibe.

Not being around other undergrads and partaking in one of these communities can feel very isolating at times. This is why it's so important that HRS guarantees on-campus housing to undergrads. They seem to understand this too: the HRS website talks about how a dorm is much more than just a place you sleep, calling dorms "central" to a student's experience.

The fact that all first-year students are guaranteed housing also demonstrates that HRS considers students having a dorm community to be important. Placing me and other undergrads in graduate housing, along with not guaranteeing us housing next year, however, directly calls into question how much HRS really cares about guaranteed housing for anybody else.

Obviously, things could have been a lot worse. I am extremely fortunate to have had everything turn out the way it did, in terms of my health, and the support I received from my family and friends through the last year was integral to my being able to bounce back so quickly. However, I have not been supported by HRS in the same way; in fact, they've made a medical situation that should already be resolved into an ongoing issue in my life. I think it's evident their protocol for students returning from medical leave is inadequate and unfair.

I'm not the only one in this situation. Other undergrads were put into grad housing after returning from other kinds of leaves, or even because HRS simply double-booked their guaranteed housing and then didn't have anywhere else to put them. With the impending closure of East Campus for renovation, I only expect this situation to get worse.

The fact that HRS has guaranteed EC residents housing makes me almost 100% confident that I will not live on campus for the rest of my time here, and likewise for anybody not already guaranteed housing. It's awful that this should be a factor in anyone's decision, but if you are thinking about taking a leave in the next few years, you now need to consider what you will do for housing for the rest of your time at MIT.

Originally published in Vol. 143, Issue 5 on Mar. 23, 2023.

Dear readers,

Curating a newspaper for a student body as large and diverse as ours is nontrivial. Doing so in a year as turbulent as 2023 has been even more complicated.

The year began with the unexpected closure of the Student Center, the reopening of the Cheney Room, and excitement about President Kornbluth's upcoming inauguration; in the middle, we confronted questions of free speech, appropriate protest, and the "right" way to effect change with the recall election for former UA President David Spicer; and in recent months, we have felt the pain of the Israel-Hamas-Palestine conflict far too closely as it affects many of our own.

As we contended with these challenges, pervasive in our News and Opinion sections, we took solace in the arts. Productions like MIT Monologues, LOST's Stupid F*cking Bird, and Shake-

speare Ensemble's Much Ado About Nothing gave us food for thought and many laughs. Moreover, The Tech was fortunate to interview some of the creators involved in the MITMo and LOST shows, opening our eyes to the passion, dedication, and artistic depth inherent to each endeavor. We also saw a return to the familiar and comforting consistency the first in-person Mystery Hunt in three years, MLK Day Celebrations, and the third year of the OneMIT graduation plan. For our part, The Tech revived relics of the pre-COVID era in restoring our Science and Sports columns.

This past year calls on us to realize that our community thrives because of the myriad ways in which we engage with the world around us. We have equal need for the activists who feature in our news stories, the thinkers whose opinions help us reframe our own, the artists we look to

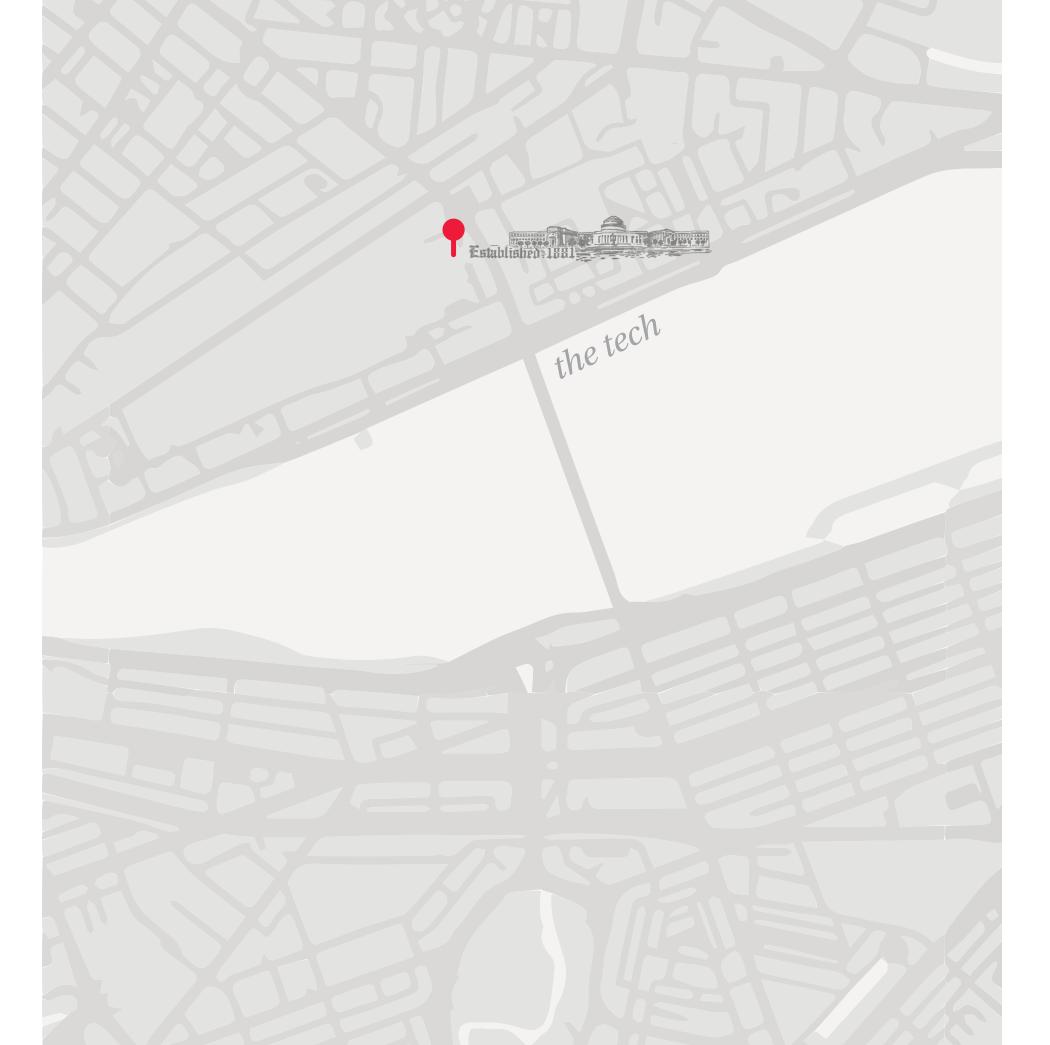
in the toughest of times, and the scientists who champion innovation and discovery. The Tech has strived to mirror this richness in our coverage, recognizing that every department contributes uniquely and indispensably to our narrative.

On a personal note, I joined The Tech in my freshman fall. Over the last three and a half years, I've had the privilege of serving as News Editor, Opinion Editor, and Editor-in-Chief. In each role, I've seen shining examples of the best our student body has to offer. At the same time, I've encountered difficult questions and needed to approach situations with nuance: When do authors deserve anonymity? Should every opinion piece be published, irrespective of its position's extremity? Where does the line between comedy and offense lie? These poles remind me every week

that serving in these positions is indeed a privilege, but it comes with just as much responsibility. This responsibility — to uplift the voices of our community in a conscientious way — is not one I've borne on alone. The Tech's Managing Board, fifteen individuals who understand this commitment intimately, have helped me grapple with these questions, provided input on every decision, and performed beyond the call of duty so that the paper may thrive. I thank each of them for helping me grow as a writer and leader.

I hope you have all enjoyed, learned from, and felt represented by the words of The Tech this year, and I am confident that our incoming Managing Board will continue to do justice to our 143-year-strong tradition.

— Srinidhi Narayanan '24 Volume 143 Editor-in-Chief



Thursday, February 8, 2024

The Tech 9

The ride back to MIT was surreal. 11

months away, yet MIT looked the same,

save for the beautiful blanket of snow that

now lined the entire campus. It felt slightly

dangerous, but it felt nostalgic and wel-

coming. February 14 ended with me be-

Ode to Pod Semester

Pod, from Page 8

during a time where timelines of location and activity were published for every single case in Bangkok and where people would still mask indoors, outdoors, and keep their distance away from the other people and places listed. Soon, Thailand's first wave was over: the total number of cases in the whole country was around 3,000, while the number of cases in the US reached 1,770,000. I thought to myself that coming back was a good decision.

Summer came and went. I was doing a remote UROP in a group of 10 that met every day at 8 p.m. Pacific, 11 p.m. Eastern, and 10 a.m. Bangkok. I have little to no recollection of what happened each day because every day was the same: stuck in my room.

Fall came and went. MIT outlined a plan for the 2020-2021 academic year, which consisted of having seniors back on campus in the fall and the other three classes back in the spring. This meant that my life was going to stay the same for a while, so I better get used to these online classes. I took an egregious number of classes that fall semester, but all of them looked the same. I ate dinner, hopped into one Zoom, then hopped onto another, slept, then woke up to catch up on all the messages everyone sent and all the afternoon classes by watching recordings and spent the rest of the day psetting alone because nobody in the US was awake. Every day was the same: stuck in my room.

That semester was the peak of mundaneness — everything was stripped to its bare minimum. Even The Tech was a Zoom call (later Gather), indistinguishable from everything else. I got hooked into playing Minecraft speedrunning Twitch streams in the background just to hear anyone other than my parents and my inner monologue. There was one silver lining during the semester, and I had to thank Thailand's continually low case numbers for this: we were able to explore real life outside of Minecraft but inside the country during breaks. I spent my Thanksgiving break going on a masked trip to Lampang and Chiang Mai along with other American college students who were sent home to Thailand. We properly freaked out when we heard that one person in the entire province of Chiang Mai caught COVID-19 a few days before we were there. Other than that, every day was the same: stuck in my room.

IAP was no exception. I tried to take a couple classes like Battlecode and Quantum Computing but didn't have the energy to fully commit to either. The Zoom fatigue was real. Need I say it again? Every day was the same: stuck in my room.

III. THE POD

November 2nd, 2020 marked the inception of the concept of the pod semester. MIT experimented with having seniors, class of 2021, partially back on campus for the 2020 fall semester, with moderate success. There was regular testing, and there were cases, but it seemed like things were under control. Of course, I didn't know much about that — I, along with juniors (class of 2022) and frosh (class of 2024), was in the doldrums.

"Current plans for the spring semester," was sent to undergraduates by Cynthia Barnhart. "Specifically, as we hoped for the upcoming term, all current first-years, sophomores, and juniors who would like to live and learn on campus will be able to do so." Hope.

"Because cold weather makes it harder to socialize outdoors and because the toand-fro of spring break travel presents an obvious risk of viral spread, the spring semester will start two weeks later for all students; instruction will be entirely online for the first two weeks to accommodate a oneweek quarantine period for all on-campus students; and we will replace spring break with several long weekends distributed throughout the semester." Okay.

"The undergraduate pod program and the graduate residential visitors policy will be available to students in the spring. Undergraduate students residing on campus will be required to be on a meal plan, which MIT will continue to subsidize." Sure.

Even so, with all the excitement going through me, I was nervous and unsure whether I actually should return to campus in the spring. Actually, I wasn't even sure if I could, in relation to my government and government-sponsored scholarship restrict-

ing / strongly recommending leaving the country, being the helicopter parent more so than my parents. Hm. The logistics also seemed hard. Would I rather live in a dorm with a bunch of rules and restrictions or at home without any? But, friends.



ARUN WONGPROMMOON - THE TEC.

[February 15, 2021] Your average Simmons meal, circa Pod Semester.

As the weeks went by, the emails ramped up from all sides, including from HRS, and uncertainty remained. It was going to be a very interesting process because the dorms would be decided first, then the pods would form within each dorm and be cemented into writing. This sounded reasonable until my friends and I realized that our top priority for us was podding together, while the specific dorm was secondary. My friends and I ranked dorms entirely the same with a note to HRS to guarantee placement in the same dorm and allow for us to pod.

Here's a graph theory question: with all the nodes and edges that are MIT undergraduates, how do you divide nodes into groups of at most 6? This is socially impossible; social life isn't quite discrete like that. Cue a mess of trying to pod up — I joined a group of people whose headcount grew to at least 11 — imagine the horror of needing to split that up into two pods. People were also at different confidence levels of returning when this happened, and mine was the lowest, adding to the chaos.

January rolled around, and I did all the paperwork needed to convince my scholarship to let me back to the United States, and all the forms with HRS. I ended up being the only class of 2023 student from Thailand out of three who returned. The opportunity for vaccinations and a normal-ish MIT experience, including in-person social interactions and living in the same time zone, trumped the risk of infection and all the restrictions in place. I was then officially added as the fifth member of a pod of five and did all the pod paperwork. The interleaving deadlines and documents were stressful (something that I'll have to get used to for the rest of my life), but a wave of relief came afterward, leaving behind excitement. I WOULD BE RETURN-ING TO CAMPUS!!

Our five-person pod was a star-like graph, where everybody knew the "center" person but not all the rest. I personally knew one person and two more by name from a singular chance encounter during the purge. We had one initial relatively awkward bonding call playing an online board game the week before school started.

I took a PCR test in preparation for the flight, and gosh did that hurt my insides. Then, the day of the flight came: February 14, 2021. It was a day of love, and my love was MIT, so much so that I extended that day by 11 hours (time zones). The airport and airplane were eerily empty. It was about a one-to-one ratio of air hostesses to passengers, and economy looked like first class. I deliberately chose a seat in the back section of the plane 20 rows away from anybody else, but with strong persuasion from the crew, I moved up to the front section of the plane, still some 3 rows away from anybody else.

ing in Simmons, wildly unprepared for the weather and confused about the elevators and the 9 windows in my room. Two boxes laid in my room that were packed up from a year before—one was missing. Just like entering MacGregor for the first time my frosh year, I didn't have bedsheets. Some podmates already came, and I shuffled across the hallway to ask one of them, a stranger I only knew the name of, if I could borrow her beddings.

Q Week descended, and it was reminiscent of my quarantine period at home. Everyone had to quarantine in their rooms, and physical interactions were limited to a minimum. Since nobody was permitted to cook, every dorm became a dining dorm even EC, which used Walker as their makeshift dining hall. As such, we could and had to leave our rooms, mask up, go down and get food. Three times a day, my pod altogether went down to the Simmons dining hall. Everything was takeout—we were given a box each, and as we went through the choices, we told the dining staff what items we would like. Afterwards, we had to take our food to eat in our own rooms. We called each other on Zoom, which was ridiculous because we could also hear each other through the walls.

Getting tested was quite a ritual during pod semester. Right when people arrived and at the end of Q Week, we had to test, and for the rest of the semester afterwards, we had to test twice a week. Remember, this was before rapid test take-home CO-VID test kits were a thing. The ice rink was transformed into a PCR test venue, with a few booths where one can (literally) screw their nose with an extremely stiff and sharp swab in privacy. We would get results the next day or two, and our tests were valid for 4 days, hence the need to test twice a week. Sometimes, the results would be invalid as well (if we didn't swab well enough), and we'd have to get tested again the day after.

Daily attestations, a series of questions surveying symptoms and compliance and such, were also something that we had to do in addition to tests, and this too had impacts. Only when the daily attestations were done, plus some fifteen minutes, would one be able to tap into campus buildings outside of their own dorm. Otherwise, you'd just be stuck outside, like multiple people were. In general, tap access also wasn't as universal as it is now. Each person, depending on their course, would be granted zones of buildings to access. As an undergrad, I got Simmons and the main campus buildings.

Now, podmates lived right next to each other, and each pod had a designated pod lounge, which could either be an actual lounge or a person's room (which, for this reason, would be larger than usual). We were only able to take off our masks when we were

with our podmates in the pod lounge or in one of the members' rooms. Otherwise, if you were to go see someone outside your pod, you have to mask up and/or be distant from them. There were some pod rules and perks as well, such as a budget, but I can't quite recall the rest anymore. This whole pod mechanic obviously created quite the social dynamic.

Even though we were on campus, only half the undergraduate population was, and classes were mostly virtual. My day would mostly start with me crawling out of my bed, joining a Zoom meeting, joining the next Zoom meeting, and another, and then psetting for the rest of the day. Yes, it sounded the same as what I was doing back home, but at the same time it couldn't be more different. Being in a pod meant that I could count on being able to walk over to my neighbors and hang out with them at night every single night as I pleased, especially since I was in the ideal time zone. My podmates became very close friends, and oftentimes it felt like these six were the only people in the world.

Some lab classes were hybrid, including a class I was an LA one year later after being kicked out of campus as a student in 6.08. The contrast between how the class was run then and now was quite impressive, yet chilling. The physical classrooms were only a quarter filled, and the rest of the lab queue was waiting behind online meeting rooms.

Despite all the restrictions, there's a lot that happened during pod semester for me. Pod semester, because of their distribution of holidays throughout the semester, as well as the circumstances of everything being online and people were being grouped up in sixes, allowed for many day trips and weekend trips. We went to Cape Cod, New Hampshire, Maine, Rhode Island, and since one of those weekends coincided with my birthday, I got a good birthday trip and surprise, complete with some soju as a rite of passage as I turned 21. I was also able to get vaccinated in April and May, quite a few months before I would have been able to had I stayed in Thailand.

By the end of May, it was time for us all to pack up. The experimental semester was over, and the fall semester of the next academic year was announced to be a return to somewhat normal, albeit still with masks and testing. It was a wrap, as were our things wrapped in boxes and our experiences wrapped as memories.

$\hbox{ IV. THE AFTERMATH }$

Off everyone went on their summer journeys. A subset of the pod were doing internships, which in 2021 were all virtual. This meant it didn't matter where we were as long as we worked during work hours. We decided to take advantage of this once-in-a-lifetime opportunity to band together and go on the world's slowest road trip, or more faithfully a trip where we hopped cities every two weeks to a month. We started in San Francisco, went up to Tahoe, decided to be in Boise for a bit (why not?), and ended in Seattle.

Over the next couple years since the pod semester, my social life still largely consisted of the pod. Sure, we could interact with other people now, and I did interact with people I met before and after the pod semester, but there was something special with the pod. This was the group of people I returned to MIT and quarantined with and spent a full four months seeing almost exclusively 24/7.

Graduation came with the realization that the gang was getting broken up, and people were moving away. This academic year, of the six of us, two are still on campus doing their M.Eng., one is still a senior, one works in Cambridge, and two work in San Francisco. Next year, it is looking like two (one of which is me) will join the Bay Area gang. Even though we are split across the country, we still reunite every so often, once back in October in Boston and once in January in San Jose. I flew and surprised people with my physical presence in the Bay, and we had a good reunification day of Topgolf, boba, udon, and goofing around. I crashed in the apartment of the two now living in San Francisco, and waking up to my former podmates down the hallway threw me into proper nostalgia. The bond is still there, and all the memories and interactions and personalities kept reminding me how crazy of a story this all was, and how grateful I am to have these people alongside me as we go through and figure out our lives, move into adulthood and out of campus.

STUDENT SPOTLIGHT

Putting the pieces together

Meet Justin Yu '25, Tetris world champion

By Russel Ismael & Josh Nix

This interview has been edited for length and clarity.

Name and Class: Justin Yu, Class Areas of Study: Major in Course 6-3 (Computer Science), Minor in Music Technology Living Group: Next Hall Home State: Dallas, TX Activities: Video Game Orchestra,

Justin Yu '25 has recently become just the second person ever to beat Tetris and is the reigning champion of the Tetris World Championship. Justin sat down with The Tech to discuss strategy, math, Tetris variations, and the future of the world's most famous game of colorful

Justin didn't become the best just by luck; he put in the hours.

How long have you been playing Tetris?

This version of Tetris [Classical Tetris], five years. Random versions of Tetris, I played many for many years before, but never for more than an hour at a time. But that was before I started playing seriously. Now, it's like, three or four hour sessions.

How would you explain your Tetris strategies to the average person?

Contrary to what most would believe, the goal is actually not to make the board look as nice as possible. Essentially, the game of Tetris is just to survive as long as you can while simultaneously looking for tetrises, which occur when you get a long, straight block that wipes out multiple rows in one single drop.

What's the difference between Classical **Tetris and Modern Tetris?**

So, Modern Tetris gives a lot of qualityof-life things that can be used to make the game [streamlined to user experience]. The stuff that Modern Tetris gives is like more depth, but it also makes the goal of survival easier. So, NES Tetris is a game all about survival, so you aren't given as

What tools am I talking about? For example, if you don't like the piece you don't have right now, in Modern, you have the opportunity to hold it. That's not

an option here [in Classical Tetris]. However, in Modern Tetris, you're often given three or four pieces that you can look at in the future. And in Modern, they have this special randomizer that's meant to be really fair, but this concept was not figured out in 1989, so we don't have that. Thus, pieces are a little more chaotic and the challenge of surviving is a lot greater. Every time this comes up, I want to stress that I don't think Modern is easier or worse because it has, like, all these extra mechanics

How can you explain Classical Tetris strategies? Like the rolling technique, for example?

Rolling is kind of out of necessity for the game because the game doesn't give great movement options out of the box. So, being able to wait for pieces is maybe the most important part of the game. And just basic probability, the longer you're able to wait, the more likely it is that there's a piece that you want.

What this means is that being able to move left and right as fast as possible is extremely important, and the game gives you a really slow auto-repeat mechanism that only goes like 10 frames per second, which is decent, but not great. The way we get around this is this technique that presses the button as many times as possible. We split the load over all five of our fingers, and we use the back of the controller because it's a wider surface area than the actual button itself. So, if we do that, it creates this rolling motion where you're getting all five of your fingers on the controller, that's where it comes from. We can reach up to 30 frames a second.

How do you apply the principles of mathematical solving to a game like Tetris?

I did a lot of math competitions in high school, so I think having that brain has helped me here. The main skill I think I have over my competitors is that I'm constantly analyzing every single placement, just this idea of self-evaluation and always considering the best decisions. On the whole, I think that kind of helps when it comes to problem solving.

For something more technical, I kind of see improving in Tetris as basically performing reinforcement learning on yourself, but that's another rabbit hole.

What advice would you give to someone trying to get into Tetris?

The most important thing is to ensure you actually enjoy the game. I see plenty of people start getting into Tetris and decide they want to be competitive just for the sake of competitiveness, not out of enjoyment. As for a sort of training regimen, I mainly recommend practicing the slower levels. Just like anything else, getting good at Tetris is just a matter of practice and dedication. Another tip that's gone a long way for myself is watching Tetris streams - being involved in Tetris as much as you can is the key to improving.

How do you balance your Tetris life with other commitments like Video Game Orchestra?

I think it's just a matter of making sure that I get all the essential stuff done first, so then I can play Tetris afterwards if I want. I think this most importantly comes up whenever I have to travel for world championships because this means I'm missing several days of school. I always make sure that I'm completing my homework for that period well in advance, so that I don't have to worry or stress about it.

Does this mean you solved Classical Tetris? Do you think you'll still be able to top your score skillswise?

So, you can crash the game by playing a single at 1489 lines. But as we saw that's the one I did, at E89 except it's single - it's also possible not to, like any other line clear. It turns out, by making sure that you're clearing a different amount of lines than the ones that have a chance of causing a crash, you can just avoid it. So, you can play forever or you can play on a special mode we made that actually fixes the crash, and this means that we can just worry about scoring.

Would you describe yourself as competitive? Did the recent news of someone beating Tetris inspire you to do the

Technically, I inspired [Willis Gibson]! Editor's note: Gibson was the first person to beat Tetris at the age of 13.

I think there being competition helps me make less silly decisions just because there's an actual threat of somebody else getting to goal before me, but in general, I like to go for categories that I make up and just play at my own pace. When it comes to chasing the world record, for competitive head-to-head competitions,

How do you expect the Tetris community to improve skillswise? Do you think we're reaching the skill ceiling?

I think people have been thinking we're gonna die off and have peaked for the past few years; I don't know, it's kind of difficult.

One thing I would say is that getting to the game crash and getting beyond the game crash, I don't think I've actually tested the skill ceiling that much. What I find more interesting is playing shorter games, but going for more Tetrises, and taking more risks in the process. That is the kind of format that the head-tohead competitions are going to be using, and that is still extremely far from being optimized.

I think we still have a bit of life in that department.

Do you think you integrate your Tetris skills into your everyday life?

Tetris has had a major impact on how I think about randomness. For example, it's very hard for humans to estimate when things will occur, and a big part of that is recognizing that things are actually independent. Like, if there is an event with two outcomes of equal probability and the event has occurred as just one of the outcomes the past ten times, the probability that the next event will have the opposite outcome is still just 50 percent, not any greater.

You mentioned in previous interviews that your future goal is to help run Tetris websites and tournaments instead of participating in them. What inspired this change of pace?

Nothing really specific. I have just been to a bunch of live events over many years of playing, and I love meeting people there, and I love playing Tetris there. And that's all because of the work of people who are always working in the background, the stuff behind the scenes.

There's this massive control center with all these wires connecting TVs and game cartridges and just keeping all of that running, and making sure people show up on time to big efforts, and this one that I think goes unappreciated.

Actually, a couple of weeks ago, I had my chance to host my own event here.

Was that Tetris event publicized? Would you say there's a lively Tetris scene at

It wasn't actually publicized. We still ended up having like 50 to 60 people show up by word of mouth and getting friends to attend.

I would not say that [there is a Tetris scene at MIT]. It was mostly people coming in from the outside, but maybe there could be.

STUDENT SPOTLIGHT

Face behind the cards: Meet Alex Zhang, **President of Pokerbots**

Meet Alex, this year's president of Pokerbots

By Josh Nix

This interview has been edited for length and clarity.

Alex Zhang '26 is the president of the recently finished and wildly popular IAP course 6.9630, Pokerbots. Alex sat down with The Tech to discuss training computers to play poker, exciting poker variations, and the rewarding process of organizing such a large event.

So what exactly is Pokerbots?

Pokerbots is a yearly-offered IAP course in which students form teams and train computers to play poker. The first two weeks consist of lectures teaching basic game theory, poker theory, and counterfactual regret minimization strategies that teams can adapt and implement into Machine Learning (ML) models. During this time, students refine their bots by playing them against other teams' bots on the scrimmage server and even against themselves on local playgrounds. Pokerbots culminates in a final tournament with over \$40,000 in prizes and networking with sponsors.

What are some common student challenges?

The biggest challenge for students is not a lack of prior poker background Zhang himself only started playing seriously once he got to MIT. Instead, it turns out that most students struggled with the limitations set by Pokerbots' homemade engine system. That is, Pokerbots utilizes a different poker variation each year, so students can't count on using some bot written in the past; they have to start from scratch. Students have to be able to play 1000 hands in thirty seconds, so it isn't feasible to just copy a bot found online.

What are some innovative or surprising strategies that have emerged in past competitions?

A few years ago, a team developed a bot that went all-in on every single hand. This bot was surprisingly hard to counter in real-time without an accurate history of its playing style, but since then we've mentioned it in lectures and bots with similar strategies don't do as well anymore. The key insight here is

that even given a hand with a high expectation of equity, if it also has high variance because of future cards (the draw and the river), it typically outperforms its equity. Typically, bots that exploit opponent weaknesses, especially those that utilize the most poker theory and heuristics, fare the best.

What's been the most rewarding part about being Pokerbots president?

It takes a long time to put all this together and we spent nearly all of Christmas break working on it. The best part was just seeing it all come together. We also have a very small team compared to other IAP classes with only nine of us, so it was great to see them all succeed. This year, we had the most sponsors we've ever had and also the largest turnout for the final event, so it was very exciting. There were a lot of firsts this year; for example, there was the implementation of a local playground feature and a physical poker tournament without the bots. I think Pokerbots has a very promising future and I'm excited to see where it goes.







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BOOK REVIEW

Corpses, bad name-based puns, and 100 pages too many: The Undertaking of Hart and Mercy

This book is 415 pages long, and for what?

**** The Undertaking of Hart and Mercy by Megan Bannen **Orbit**

By Alexis Yi

August 23, 2022

In my opinion, romance is the hardest genre of writing to do successfully. My metric of success is highly scientific: does the storyteller convince me specifically that these two made-up people connect to each other on a level we could call love? A lot of times, the answer is 'no': the banter is awkward and annoving, or worse, there's no banter at all; the characters are as bland as the tofu served in McCormick dining and together they somehow have even less substance, or maybe the trajectory of their romance is so contrived that I check out before we even get to the third act miscommunication. Basically, a lot of things can go wrong in a love story.

Unfortunately, a lot goes wrong in The Undertaking of Hart and Mercy by Megan Bannen. The Undertaking is a fantasy romance set in Bushong, a province - a city? It's unclear to me, and that's one of the problems with this book. It's set in the Federated Islands of Cadmus, a world that feels very similar to our own, except with less technology and more paganism. One of the main characters, Hart Ralston, is a demigod patrolman who patrols Tanria, a magical territory within Bushong from which dangerous creatures sometimes escape. These creatures — drudges — are corpses infected by lost souls who attack living people.

The other main character, and Hart's romantic interest, is Mercy Birdsall, a female undertaker who is very tall (which we're reminded of a lot). She's also trying to keep her family business afloat, Birdsall & Son, an undertaking business on the edge of Tanria, which processes dead bodies. The two often see each other due to their lines of work, and they hate each other because Hart was rude the first time they met years ago and Mercy responded in kind.

One day, Hart gets super lonely and sends a desperate unaddressed letter. Mercy receives it, and then they become anonymous penpals. A spicy premise.

My major issues with this book were world-building and the development of atmosphere, or the lack thereof. After 415 pages immersed in this world, I still have barely any idea what anything looks like. Bannen fails to describe most things.

from side characters to creatures to landscapes, adequately or at all. I found myself flipping back and forth often to try to figure out what certain things were. For example, Hart rides this animal called an equimaris, which is supposed to be some kind of watery horse, yet I don't know whether this is a horse with special nautical hair or an actual seahorse. I have barely any idea how big Tanria is or what Mercy's place of work looks like or anything about the world outside of Tanria and its bordering towns. The descriptions that Bannen offers, if she does offer any, are given once and only once, because God forbid she come up with another way to describe the same thing.

The way Bannen offers world-building information is also pretty transparent, and while it's not the most awkward world development I've ever seen, it's also not seamless. Giant chunks of information are presented at once, such as when Hart teaches his new apprentice about Tanria, or sometimes there are just straight paragraphs of mythology, and not a lot of it stuck in my head.

This world also has its own religious system, one that seems to be loosely inspired by Greek mythology: there are Old Gods and New Gods, each with their own domains, and these gods are all related to one another. But the names and figures of this mythological system are not mentioned often enough outside of swearing and brief prayers or differentiated enough from one another to create any kind of meaningful atmosphere. These gods don't actually seem to have that much of a hold over the people in the story, despite what the author seems to be trying to get across. The characters did not feel like characters living in a world where gods were alive and well — they felt like characters from a small town in America.

And that was one of the weirdest things about this book for me. Despite the fantastical setting, this felt very much like a small-town romance, complete with the whole struggling-familybusiness trope going on with Mercy's family (which consists of herself, her ailing father, younger brother, and brother and sister-in-law). This isn't necessarily an issue per se, but the adherence to the small-town romance tone really slowed down the pace for me in the beginning.

And wow, the plot really dragged for the first 300 pages. In this part, we just get a lot of Mercy and Hart griping about their lives, both internally as they go about their world and through the letters they send to each other. The letters themselves came across as a little pretentious, and I didn't think they really sounded like either of the characters. It was hard to get invested in the letters, yet those were the only connection between Mercy and Hart until nearly 200 pages in. Given that this is a romance novel, that's a pretty big problem. When they do get together, it's after a near-death situation. Near-death situations trigger the most significant developments in their

relationship throughout the book, which makes their whole dynamic feel very inorganic. They also have this weird thing of calling each other puns based on their names - for example, "Merciless" and "Hart-ache" at the beginning when they hate each other — which is maybe supposed to be cute and banter-y but mostly just strikes me as odd.

Structurally, Mercy and Hart's relationship mostly follows the stereotypical romance plot points: initial meeting, getting together, honeymoon phase, third act miscommunication or conflict, separation, then reunification and happy ending. And I'm not upset by that - those plot points exist for a reason and they can still be executed well. But once again there were pacing issues for me. While the build-up to Mercy and Hart getting together was super slow, the honeymoon phase felt way too fast. I had a hard time believing that these two people who had supposedly been on acrimonious terms for years could suddenly just be all over each other, when (mild spoiler alert) Mercy doesn't even know that Hart is her pen pal when they get together. The third-act miscommunication was also very predictable and it failed to really trigger the kind of angst in me that this plot point usually should.

The secondary plot about a sudden dangerous increase in drudges (those possessed corpses that attack people) was also unsatisfying. The villain is cartoonish and pretty obvious, and I predicted the outcome at least 100 pages before it was explicitly resolved in the text. This subplot clearly took second stage to the romance, which is fine since this is a romance first and a fantasy second, but there was so little effort to create some kind of meaningful, thought-provoking conflict for the characters. And ultimately, a plot without meaningful struggle for its characters leads to uninteresting characters.

Mercy's and Hart's character concepts seemed very promising in the blurb, but the execution of these characters was uninspired, and they were both stereotypical romance leads. Mercy is a tall girl who really wants a man who matches her height. She's also super quirky because she likes books and pastries (or something like that). She actually doesn't even think much about undertaking or the process of dealing with dead bodies at all outside of when she's doing her job, which is such a lost opportunity for a cool interest that is not often found in a romantic lead. She's voluptuous and Bannen never calls her "plain," which are refreshing choices in a landscape full of stick-thin female romance leads who are mysteriously unaware of their physical appeal. But beyond that, Bannen doesn't really take this character into any really interesting territory.

demigod who doesn't know his godly parentage, and somehow this is barely talked about until the last quarter of the book. Being partly god is a really thematically rich concept and Bannen barely touches it. I will say that he's much more emotionally repressed and angsty than Mercy, which is always very fun to see in a character. But once again, Bannen doesn't go as crazy with the repression as she could. Lastly, Hart works as a marshal, which is basically a cowboy/ cop figure in this world. I'm just not going to get too into that.

There were other character development choices that irked me. For one, we don't see enough of either person's background or memories. There are very few flashbacks or prolonged scenes of active recall of Mercy's or Hart's pasts, and this just means that we don't see either of them fully as characters. Ultimately, I was primarily irritated that these characters weren't made more extraordinary, with more problems — we're literally in a fantasy world! Anything is possible! And somehow, these characters just tread the same emotional and psychological territory that you might find on The Disney Channel. Finally, one minor nitpick was Mercy's family — there were just too many characters, and I didn't particularly care for any of them or the conflicts introduced among them. The Birdsalls are very much the Big Happy Family where misunderstandings occur, but ultimately there are no serious relationship problems between any of them, and it's just such a boring choice.

Despite the issues I had with the book on all these levels, the writing style itself was pretty competent. Sentences did not feel clunky or misplaced. That said, the writing also wasn't very striking or notable. I only had one moment where I thought, "Wow, this is actually an interesting sentence or concept." When Mercy and Hart wake up after having sex for the first time and Hart is late for work, Bannen writes that Hart "laughed with a self-deprecation that Mercy could eat with a spoon." I like that sentence, and that sentence only, in this book. Elsewhere, I often felt that the emotions of each character were overexplained. The narration is quick to identify exactly what each character is feeling explicitly before any attempt to show us. There's also no creativity in varying the syntax to create different moods.

Ultimately, my verdict is that no romance novel needs to be more than 400 pages and this book is no exception to the rule. The Undertaking's fantasy aspects aren't developed enough to justify the page count here. Beyond that, this book just felt really stale. Nothing was very exciting. The author executed what she promised in the safest way possible and brought nothing else to the table. It's quite a disappointment given the interesting ideas introduced in the blurb and the first few chapters.

I guess if I want to satisfy my romance The same can be said for Hart. He's cravings, I'll have to rewatch the second season of Fleabag, where the protagonist has recently recovered from a period of high libido and falls in love with a Catholic priest...



MUSICAL REVIEW

Musical Theatre Guild brings to life *Chicago*'s razzle and dazzle

The musical about the Windy City's celebrity criminals was a whirlwind.

Chicago

Staged by MIT Musical Theatre Guild

By Russel Ismael

NEWS EDITOR

Billy Flynn (Reidyn Wingate '25) told Roxie Hart (Xochitl Luna '22) that if she wants to be saved from the hangman's noose, then it would be crucial to get sympathy from the press. Well, she sure did!

I had the pleasure of attending the Musical Theatre Guild's (MTG) rendition of Chicago, a dazzling musical set in an age of jazz, cabarets, and loose morals. This is the very first musical I have ever watched, and I could not have chosen a better one.

Chicago is unapologetically gleaming and exuberant and as bright as a resplendent star. Of course, Chicago's blinding glare is only appropriate considering how ruthlessly it portrays stardom and fame. After Roxie Hart's lover, Fred Casely (Ian Rosado '25), breaks things off with her, an enraged Roxie guns him down, with the drums punctuating each of her shots with a bang.

The murder is juxtaposed by a vibrant

choral group singing about night-life thrills and Roxie's reaction to the murder
— "I gotta pee!"

The opening act set the musical's tone and principal conflict. Fred Casely's cold-blooded murder did not evoke any emotion from Roxie aside from contempt, believing that Fred was just receiving his comeuppance.

This moment is later played for laughs when Billy and Roxie are being interviewed by Mary Sunshine (Grace Anderson G). Mary asks if Roxie is sorry for Fred's murder, prompting Roxie to break off from Billy's apparent ventriloquism to snark at the question. Luna's delivery of "Are you kidding?" caused the audience to erupt in chuckles.

Roxie's lack of remorse regarding the murder is on display when Sergeant Fogarty (Elvin Yang G) is interrogating the meek and often forgotten Amos Hart (Jon Rosario '24). The more murder-inclined of the Harts sings a humorous song about how despite Amos' shortcomings, ranging from his lack of great physique to his lack of smarts, at least he would stand up for her. But Roxie's tune becomes more scathing once Amos pieces together that his wife is having an affair with Fred, leading to him turning against her.

The stage lights were put to great use, accentuating a lot of moments including Amos' interrogation. This was more impactful in the Murderess' Row scene, where the entire stage operated under a scarlet cover as each murderess details

how they killed their lover — except for Hunyak (Julie Steele '26), the Hungarian who does not speak English, who is, of course, not guilty.

In opposition to Roxie is Velma Kelly (Rachel Waggoner '27), who is essentially Chicago's premier murderess after Velma kills both her lover and sister after catching them in the act. Velma and Roxie trade many barbs throughout the show, as Velma is initially presented as the quintessential celebrity criminal and Roxie as just a social-climbing clout chaser.

However, Velma starts to slip from the public consciousness when Roxie is catapulted into greater fame for being a "reformed sinner," causing more friction between the two characters — doubly so when Roxie takes Velma's rhinestone shoes to wear at the trial. The inversion of their statuses foreshadows what would eventually happen to Roxie.

The musical was also surprisingly meta. There were scenes where characters had the self-awareness that they were in a musical. Characters call for their exit music (except for poor Amos who has none), play poker with the orchestra members, and call the spotlight on them (except for Amos, who is missed). There is even an instance where Velma hands a newspaper (The Tech, at that! It appeared twice!) to the conductor, Sydney Nguyen '24, which made me realize how delightful this musical truly was. Moments like these highlighted the brilliant teamwork the stagecast, crew, and orchestra had

in crafting a meta experience for the audience.

What took the cake for this musical, however, was Billy Flynn's All I Care About is Love performance during which he rips his shirt off completely. The unexpected move electrified the audience, and I laughed when Billy chucked his ripped shirt to an ensemble performer, barely missing her from my perspective.

Chicago's nature made me want to kick my shins for not catching the point of the show much earlier. The musical is a brilliant satire of the media sensationalizing criminals and making them "celebrities," albeit for only 15 minutes. It makes fun of public trials where even the worst defendants can garner sympathy from the public despite their crimes.

It only registered to me when, in the midst of Roxie's trial, a news reporter bursts in shouting about a woman whose murders eclipse even those of Roxie's, causing the jury to leave the court. And if this still went over your head, Velma and Roxie thank the audience at the end for our belief in their innocence, exclaiming that we are a living example of what America is like.

Overall, I went to this show not knowing what to expect, but I left in a brighter mood. The cast members were terrific, the orchestra was euphonic, and the crew elevated the musical experience. I can confidently say that the lights of MTG's Chicago razzled and dazzled me: Chicago was truly an unassailable performance.

RESTAURANT REVIEW

Mu Lan Taiwanese Restaurant: a great Cambridge dining staple

a place that satisfies your cravings for Taiwanese food

Mu Lan

Taiwanese, \$\$

228 Broadway

Cambridge, MA 02139

Monday to Saturday 11 a.m.–7 p.m.

By Vivian Hir & Alexis Yi

The last time I went to Mu Lan, a Taiwanese restaurant on Broadway 15 minutes away from Lobby 7, I had one of the worst meals of my life. It was 8 nm, on a Saturday night during Family Weekend. After a cold scary walk alone in the dark, I met my parents and a group of Chinese-American families from Minnesota at Mu Lan. To give a sense of the gathering's vibe for those who don't have immigrant parents, some of the adults wore "Harvard parent" pins on their chests like they'd won something. The college students of the group were made to introduce ourselves and say where we went to school before we'd even ordered. For the next ten minutes, every other word out of anyone's mouth was "MIT" or "Harvard". It was excruciating, and the rest of the dinner wasn't much better. I left as soon as I fin-

Thankfully, my most recent experience at Mu Lan with Vivian was much better. We'd eaten together at Mu Lan before, and once Vivian and I agreed to start writing restaurant reviews together, this venue — a place with decent Chinese food not too far from campus — seemed like a great place to start

When you first walk into Mu Lan, you're greeted by waitstaff at the podium, who then seat you. The main room is very welcoming, with soft yellow lighting, big open windows, spacious seating, and consistent

East Asian decor. About two-thirds of the tables were occupied when we went, so there was a nice buzz of conversation in the background. Despite this, Vivian and I could still hear each other. There were also people speaking Mandarin around us, which is always a good sign. Vivian arrived first and sat down at a small table for two near the front of the room, by the windows. I joined a few minutes later.

Before we ordered, we got complimentary jasmine green tea and a small plate of pickled vegetables. The pickled vegetables were surprisingly flavorful, given that at first glance they seemed to just be unseasoned raw vegetables. They worked well as an appetizer, and best of all, we didn't have to pay for them.

The waiter came soon after we sat down. It was a bit hard to choose what to order at first, since Mu Lan's menu boasts a total of 179 dishes. The options included seafood, many vegetable dishes, and a diverse range of meat options. There's also a lunch special on the weekdays for reduced prices, but with smaller portion sizes. Since we went on Saturday, that unfortunately wasn't an option for us. We ended up ordering stirfried string beans (干扁四季豆) and fish filet in spicy bean sauce (豆瓣魚片). We ate family-style, the only correct way to eat at a Chinese/Taiwanese restaurant.

The stir-fried string beans arrived within ten minutes of ordering, which was a pleasant surprise given how busy the place was. The portion size was good for its price of \$13.95. The beans had a dark, shiny soy sauce glaze and a generous amount of cooking oil. According to the waiter, the beans were first deep-fried, then stir-fried. The beans weren't overcooked or burnt. They were a bit soft though, and could have been more crispy, especially since they were deep-fried.

The sauce had a nice savory taste but could have used a bit more salt. This dish can sometimes be really oily, but that wasn't an issue at Mu Lan. The minced garlic bits on the beans were properly burnt, and the green beans were appropriately wrinkly. Overall, it was a solid rendition of a



VIVIAN HIR - THE TECH

Fish fillet in spicy bean sauce (豆瓣魚片).

pretty famous Sichuan dish, even though it wasn't spicy. (Other restaurants often serve this dish spicy, but Mu Lan had no such option.) The dish had a pleasant umami taste, but there was a hint of melted granulated sugar and ginger in the sauce, which gave the beans a more complex and enriching flavor

The fish filet in spicy bean sauce was also decently sized, though at \$24, it was on the more expensive end. The first bite was a satisfying experience because of how warm and soft it was. The viscous red sauce was a nice mix of sweet and sour, which complemented the spiciness. While there were a couple of red chili flakes sprinkled on the fish, the piquancy was rather light. The crunchiness and freshness of the scallion garnish on the fish helped balance out the sauce. The fish filet had a pleasant taste, though for some people this dish may not have been spicy enough for their palate.

We also got individual rice bowls, each for \$1.95. That's a bit pricey for rice, but we really couldn't have eaten the dishes we ordered without it, given the strengths of the individual sauces.

As a whole, the dining experience at Mu

Lan was delightful because the dishes had contrasting tastes and textures. For those who want Chinese or Taiwanese food but don't want to make the trip to Chinatown, Mu Lan is a great option for its proximity to campus, the variety of menu options, and its moderate price range. You can bring a large group, or go with a friend. The service is fast and friendly; our waiter was knowledgeable about the dishes and happy to answer our questions. Mu Lan is certainly a place worth going back to.



Stir-fried string beans (干扁四季豆).

AMPUS LIFE

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cover new

campus policy...

and find out how MIT connects to the rest of the world.



TECH's PICKS: ENTERTAINMENT THIS ISSUE

THURSDAY, FEBRUARY 8 – WEDNESDAY, FEBRUARY 21

FILM

LISA FRANKENSTEIN (FRI, FEB 9)



BOB MARLEY: ONE LOVE (WED, FEB 14)



TV **TRACKER** (SUN, FEB 11)



THE NEW LOOK (WED, FEB 14)



FILM

MADAME WEB (WEB, FEB 14)



BLEEDING LOVE (FRI, FEB 16)



VIDEO GAMES HELLDIVERS 2 (THU, FEB 8)



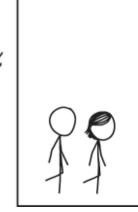
DEEP ROCK GALACTIC: SURVIVOR (WED, FEB 14)



[1981] Rickrolling Anniversary









election than to today.

A WEBCOMIC OF ROMANCE. SARCASM. MATH. AND LANGUAGE by Randall Munroe

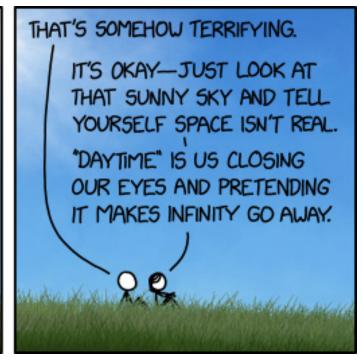
Want to feel old? The 'want to feel old?' factoid meme dates back to around 2011, closer to the Bush/Kerry

[2849] Under the Stars





CONSTELLATIONS WHEEL OVERHEAD; THEY'RE JUST PAINTED OVER WITH BLUE. EVERY SKY IS FULL OF STARS.



If you live in Los Angeles (around 33°52'V), roughly the latitude of Hermosa Beach) the black hole in V404 Cygni passes over you each day. On Christmas Day it will be directly over-





Poems

Submission from Joaquin Dubon '24

Purple and Golden

Cielos de púrpura y oro - Prayer to the Salvadoran Flag

I fell for you in the middle of the Orange, golden sky of your dawns

After a sleepless night full of worries And monsters outside my room's window.

I heard your voice in the matutinal Song bird of Sunday,

On the howling winds of October, and On your crashing waves.

No one can understand your pace Until they had slept on a hammock

By your sea. No one can understand your peace

Until they have been soothed by your

I miss your gifts: a ripe mango Barely hanging on a branch of

A tall tree. The mango so big It almost brings the whole branch down,

And a small, smooth stone in my hand. After tries and tries I get to have

The free delight in my tired hand. How

Tries until I get that mango?

How many tries to get out Of my lonely country?

Now that I am out, now that I am not with you anymore

I wonder if I'll get a reward As sweet as one of your fruits,

Or if that is forever gone, And I have lost your sky

Dear Living Things

I am using this tree as if I were a god. Using it to give genesis to something I have named collective sadness, Named our mourning. This morning

I met a red cardinal.

He told me things — told them like A eulogy — told them like a sorrowful Song — sang them like a requiem mass.

He said he saw, weeks ago, Silhouettes running in the desert Right before the sky had spread Its wings.

These creatures standing High in the moon

-light and then low as snakes in sand.

Fast as river and then still as death.

The blue men caught up to them, surrounding

Them. The cardinal heard the creatures' names

"Aliens" the blue men screamed. "Stop" "Quietos"

The aliens froze and dropped — To the ground. The cardinal followed the

And saw the aliens caged (like birds). They were quiet, as if something Had escaped their dreams.

As if they had drowned in the space Between earth

And the heavens.

Some of them did drown, didn't they?

Yesterday, in the river down south, the

Condolences, The woodpecker

ALSO SEE INSIDE

A re-re-reflection on Ode to Pod Semester A re-re-reflection on HackMIT,

Books, Restaurants, & Musicals



lech's M

By The Tech Sports staff

nain the MLB Postseason. In the Americ ivision Series against Minnesota with ϵ neir opponents, the Texas Rangers, reco

Can you find the typo? (Answer is below) The Tech is looking for copy editors!

Free Skate by Mehek Gosalia '25

Across

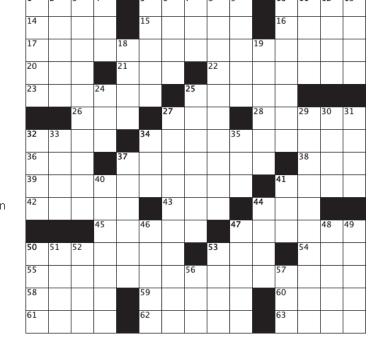
- 01 Lund in Casablanca
- 05 Pastel purple
- 10 Pest controller Simba's queen
- Venue for bowls or
- Inside, to start
- On thin ice, professionally
- "Golly!"
- Found with Os on a grid
- She always serves, piping hot
- Sea hawk
- Malay footballer
- Atlanta based channel
- Stitch 27
- 28 Poet Calvino
- Cultured dairy
- What 55A and 17A want
- 36 Doofenschmirtz's tax status
- Second-person plural pronoun
- What blows the roof off stadiums

- Sleeping on this cover story
- 41 Harsher than truths
- In their
- 43 Hosp. staffer
- 44 Main character sign
- 45 Mexican coin **Cultured Dairy**
- 50 V = IR
- 53 Home of Green Gables, for short
- Musician Issa
- 55 Bewitching teen,
- actress 58 German no
- 59 Smacks
- 60 Agent of antiquity
- 61 60s "Gotcha"
- Bad dreams address 62
- 63 Zeus's wife

Down

- You killed his father, prepare to die
- Doilies and Docs have
- The only two-wheeler missing from college campuses

- Dentist's office conversation starter
- 5 Actress Chabert
- Irritates
- Director Spike 2005 political
- documentary Edna Mode says no
- 10 Recent MIT Hack
- Actress Taylor Joy 11
- Getting this is only fun 12
- at 21 Nemo's friend 13
- They're yoked 18
- 19 Girlies, classily 24
- Go to a BNB for this Former first family 25
- 27 Common in New Mexican buildings
- Advice for young and
- 30 French moon
- 31 Withdraws (out)
- 32 Small drinks
- Using needles for cover 33 Plant or pig, depending
- on the field It's more brutal than honesty



- Echoes through the Alps
- Slipping, in judgement
- Payment, with an arm 44 Hog in your mouth 46 **UF President**
- In your bread, but hopefully not your muffin

48 Said when sending

- back steak
- Tri- plus one Tri- plus some
- Listen
- 51 52 Roman 1052
- 53 Sodas
- You do want this in 56
- your muffin "As if!"