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The Tech

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Friday, November 22, 2013

WEATHER, p. 2

FRI: 47°F | 37°F Cloudy with showers

SAT: 46°F | 25°F Sunny and breezy

SUN: 30°F | 20°F Cold and windy

JEREMY E. DEGUZMAN

Senior House is one of two dorms that is piloting MIT's gender-inclusive housing program. There are plans to expand beyond Senior House and Random Hall this coming Spring.

Gender-inclusive policies expanding

Collaborative efforts on campus-wide policy to begin in the Spring

By Alexandra Delmore
STAFF REPORTER

MIT Residential Life & Dining is planning to initiate gender-inclusive housing policies across campus, expanding upon the implementation of such a policy in Random Hall and Senior House. Students opting for gender-inclusive housing would be able to room with people of different genders and gender identities, which would be ideal for students who have preferences about the gender identities of their roommates.

Prior to the introduction of gender-inclusive housing in Senior and Random, MIT was among the few private institutions that did not offer this housing option.

Though specific policies vary among institutions, all Ivy League schools as well as Stanford have gender-inclusive housing options for upperclassmen; Cornell, Dartmouth, Harvard, and University of Pennsylvania have gender-inclusive housing available for freshmen as well. Most schools prohibit romantic couples from taking advantage of gender-inclusive housing, while Brown, Columbia, UPenn, and Yale don't ask questions, though it is generally discouraged. Most institutions require students opting for gender-inclusive housing to choose their

Housing, Page 10

Task force releases new report on MIT education

Future of MIT's academics, edX, & finances

By Anthony Yu
STAFF REPORTER

In an email to the MIT community yesterday, President L. Rafael Reif released the preliminary report of the Institute-wide Task Force on the Future of MIT Education. Last February, Reif charged the Task Force to explore "bold" possibilities of the future of MIT education both on campus and for those around the world, in addition to evaluating MIT's financial model and pricing structures. The work was split among three working groups, focused on the future of the MIT education and facilities, the global implications of edX, and a new financial model for education.

The future MIT graduate

The future MIT graduate needs good communication skills, the report emphasized. In particular, it cited that MIT students' communication skills lag behind those of their peers. The task force suggests that, in addition to encouraging smaller class sizes, MIT should motivate faculty to engage with students outside of their field of expertise. Additionally, building on the success of UROP (Undergraduate Research Opportunities Program), piloting an Undergraduate Teaching Opportunities Program and Undergraduate Service Opportunities Program would further enhance the communication skills of future MIT students.

More flexibility

The task force also considered the possibility of a more flexible curriculum. "Now really seem to be a time for us to think about introducing flexibility into education," said Karen E. Willcox PhD '00, a co-chair of the task force and a professor and associate department head in the Department of Aeronautics and Astronautics Currently, some ideas under suggestion include expanding SB/MEng programs, offering credit for taking MITx classes, and more modularity with the GIRs. However, that flexibility must dealt with carefully: "The challenge is how do we put a structure in place

Education, Page 11

Sparse attendance plagues faculty meetings

In a first for this semester, the November faculty meeting reached quorum on Wednesday when more than 30 faculty members showed up. MIT has about 1,000 faculty members.

A third of the way through the meeting in 32-123, as professors finished trickling in, President L. Rafael Reif asked professor Steven R. Hall '80, the faculty chair, for a recount. Spotting 32 raised hands, Hall gave the green light for the gathered body to approve meeting minutes from May, September, and October.

At the meeting in October, Professor Susan S. Silbey, the faculty secretary, had given a presentation on various ideas for using electronic voting to improve participation.

"If this were my class, I would ask you to come closer," Silbey told those seated farther back in the room at the beginning of her presentation.

Wednesday's turnout did not allay worries that something was amiss with faculty governance. Professor Diana Henderson, a former faculty officer, said that the issues today were as important as those discussed in what she recalled as times of livelier faculty participation.

What drew in those who showed up on Wednesday, Henderson said, was a proposal to establish a new campus planning committee, which proponents said would give faculty a voice in campus planning projects. The proposal comes in the midst of the design phase of a major redevelopment of the eastern part of campus near the Kendall T stop.

After the presentation of that proposal, the faculty heard the preliminary findings of the Task Force on the Future of MIT Education, charged with answering a sweeping set of questions about online learning, MIT's financial model, and innovation in education.

The faculty at the meeting also unanimously approved a motion from September to allow people outside MIT to bring complaints of student misconduct to the Committee on Discipline.

Though important changes require a vote at a faculty meeting, Silbey said earlier this month that the issues MIT faces are really figured out in committees.

Meeting, Page 11

IN SHORT

The deadline to apply for the MIT $100K Accelerate Contest is Nov. 25. Register online at *http://mit100kaccelerate2013.istart.org/*.

The Chancellor Search Advisory Cabinet seeks your input on the selection of MIT's next Chancellor. Email *chancellor-search@mit.edu* with your thoughts, or fill out the form at *http://tinyurl.com/chancellorsearch* by Friday, Nov. 22.

MIT Mocha Moves' Ring the Alarm "Livin' La Vida Mocha" dance competition will take place today from 8 p.m. to 11 p.m. in Lobdell in the Student Center.

Send news information and tips to *news@tech.mit.edu*.

NEWS BRIEFS

Official Cambridge City Council, School Committee results; recount to be held

The official results of the Cambridge Municipality Council and School Committee elections show no changes in the winners from the previous unofficial results, simply the order of the candidates elected. Four new city councillors: Dennis Benzan, Marc C. McGovern, Dennis J. Carlone, and Nadeem A. Mazen '06 were elected, while two incumbents: Ken E. Reeves and Minka Y. vanBeuzekom were defeated. Two city council seats will be filled by MIT alumni: Mazen is also MIT's head squash coach, and Leland Cheung MBA '12 was reelected.

Cambridge will hold a recount for the election, as vanBeuzekom petitioned for another tally on Monday, having fell short of re-election by 13 votes, behind Carlone. (vanBeuzekom also finished 14 votes behind Mazen.) The recount must begin within 10 days of Wednesday, when the petition was certified by the Cambridge Board of Election Commissioners.

The School Committee maintained the elected members: Patricia M. Nolan, Alfred B. Fantini, Richard Harding Jr., Kathleen M. Kelly, Fran A. Cronin, and Mervan F. Osborne. The seventh member is the mayor, who is elected from and by the City Council members. The City Council sets policy for the Cambridge municipality while the School Committee determines overall School Department policy and budget, according to its website.

Marc Kastner nominated to head of DOE Office of Science

Marc A. Kastner, the Donner Professor of Science and dean of MIT's School of Science, was recently nominated to lead the Department of Energy's (DOE) Office of Science. President Barack Obama tapped Kastner to lead this DOE program, which is one of the largest supporters of basic research The DOE Office of Science is responsible for, among others things, 10 of the 17 DOE national laboratories, and managed a $4.9 billion budget in 2010. Kastner is a professor in the Department of Physics and researches condensed matter. He served as head of MIT's Department of Physics before becoming the Dean of the School of Science in 2007.

—Tushar Kamath

FORGOTTEN BUT NOT FORGIVEN

The Armstrong Lie is a masterful documentary of Lance Armstrong's career. **ARTS, p. 7**

I CAN DO THIS, I SWEAR

Q.E.D.: The little moments in life when your brain forsakes you. **FUN, p. 9**

WHEN IS OUR GROUP MEETING?

Uppercut: We're available at never o'clock. Have fun scheduling. **FUN, p. 8**

***CATCHING FIRE* IS ON FIRE**

The second installment of *The Hunger Games* films does not disappoint. **ARTS, p. 6**

EDUCATING MIT ABOUT ETHICS

President L. Rafael Reif writes about ethics education at the Institute. **LETTERS, p. 4**

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Frederick Sanger, two-time Nobel winner, dies at 95

Frederick Sanger, a British biochemist whose discoveries about the chemistry of life led to the decoding of the human genome and to the development of new drugs like human growth hormone, earning him two Nobel Prizes, a distinction held by only three other scientists, died Tuesday in Cambridge, England. He was 95.

Sanger won his first Nobel Prize, in chemistry, in 1958 for showing how amino acids link together to form insulin. The discovery gave scientists the tools to analyze any protein in the body.

In 1980 he received his second Nobel, also in chemistry, for inventing a method of "reading" the molecular letters that make up the genetic code. This discovery was crucial to the development of biotechnology drugs and provided the basic tool kit for decoding the entire human genome two decades later.

—Denise Gellene, The New York Times

Congressman in cocaine case will take a leave of absence

WASHINGTON — Rep. Trey Radel, R-Fla., announced late Wednesday that he would take a leave of absence from office after pleading guilty earlier in the day to a misdemeanor charge stemming from his purchase of cocaine here last month.

He was sentenced to one year of probation.

Radel said his "team" in Washington and in his southwest Florida district would take care of his congressional business while he received what he called "intensive in-patient treatment."

"I want to be a better man for southwest Florida," Radel said in a 10:30 p.m. news conference in Florida. He added that he would donate his salary to charity while he was away.

—Michael S. Schmidt, The New York Times

British citizens said to be killed while fighting in Syria

LONDON — As evidence mounts that dozens of Americans have traveled or sought to travel to Syria to join rebel forces, the British Foreign Office said Thursday that it was investigating reports that several Britons had died there while fighting on the side of Islamic militants opposed to President Bashar Assad.

Asked to comment on the reports of casualties among them, a British official, speaking in return for anonymity under departmental rules, said authorities here had urged citizens to avoid all travel to Syria because of the "extreme risk" and believed that "moderate Syrians have been explicit that they want aid, not foreign fighters."

The official said a report in *The Times of London* on Thursday that four Britons had been killed was being investigated.

—Alan Cowell, The New York Times

Vote fraud is claimed by Maoists in Nepal

NEW DELHI — In the face of an apparent electoral drubbing, the leader of Nepal's largest Maoist party demanded a halt to the nation's vote counting Thursday because of what he called widespread vote fraud.

"Serious national and international forces are behind this, and we demand a suspension to vote counting," said the Maoist leader, Pushpa Kamal Dahal, the head of the United Communist Party of Nepal (Maoist).

Dahal said that election workers had smashed ballot boxes and accepted false ballots. He called for an independent investigation and warned that his party might rejoin hard-line Maoists and refuse to participate in the Constituent Assembly if his demands were not met.

—Gardiner Harris, The New York Times

Karzai says security pact with US should be signed next year

By Azam Ahmed
THE NEW YORK TIMES

KABUL, Afghanistan — President Hamid Karzai stood before thousands of Afghan leaders on Thursday in a watershed moment for his tumultuous rule. Having just come to agreement with U.S. leaders on a security deal that would commit the two countries to a lasting military alliance — and would surely define his legacy — he convened the assembly that would decide the deal's fate.

And then, in what has become a signature move, he hit the brakes.

After a speech in which he bluntly described his relationship with the U.S. as one of mutual distrust, he told the gathering, known as a loya jirga, that even if it approved the deal, he would wait until after the April presidential elections to sign it.

The declaration, which surprised both U.S. and Afghan officials, instantly put at risk a U.S. deadline to have an agreement signed by year's end. And it served notice that even with his leadership set to expire next year, Karzai intended for the United States to continue working through him at every turn until then.

The ploy is not without danger for Karzai. As U.S. officials' exasperation with him has intensified, they have increasingly noted the possibility that no U.S. troops — and by extension, no international funding — would be left after 2014.

They did so again Thursday. In a White House background briefing, administration officials said they were seeking a clarification of Karzai's intent, and suggested that leaving the deal's completion until next spring would make it impossible to keep any U.S. forces there.

The officials also emphasized that Karzai had agreed to a one-year timetable when the two countries began negotiating the security agreement last November.

Karzai's brinkmanship is also creating anxiety within his own government. The military and police establishments, in particular, have urgently pushed to finalize the deal because it would ensure training and heavy international funding for the Afghan security forces.

Still, officials noted on Thursday that there was nothing to keep Karzai from changing his mind again if the loya jirga were to approve the security agreement by its close on Sunday. And if anything, Karzai's statements seemed of a piece with a series of negotiation moves that seemed calculated to squeeze every last U.S. concession out of the process — though each usually ended in Afghan compliance.

Earlier this month, the issue of U.S. soldiers being granted immunity from prosecution in Afghan courts was highlighted by Afghan officials as a potential deal breaker — until it was not. On Sunday, the Afghans drew a line in the sand about U.S. forces searching Afghan homes, a demand that also largely fell by the wayside. And a public statement Tuesday from a Karzai spokesman saying that the Americans were prepared to essentially apologize for past mistakes during the war turned into an embarrassment for the Karzai administration when two senior administration officials denied that there was an apology in the works.

China's highest court seeks to curtail abuses of justice

By Chris Buckley
THE NEW YORK TIMES

HONG KONG — China's highest court issued demands Thursday that judges bar confessions obtained through torture and avoid applying the death penalty when the evidence is shaky. The directive was unlikely on its own to curb such abuses but reflected a growing official recognition of the need to stop gross injustices, experts said.

The Supreme People's Court of China published the "opinion" seeking to curtail abuses a week after China's Communist Party leadership published a set of proposed reforms, including a commitment to end "re-education through labor," a form of imprisonment without trial or effective judicial overview.

The court document listed many of the problems that lawyers and human rights groups have said plague China's criminal legal system, including torture by the police, concocted evidence, faulty forensic investigations and a tendency for judges to be swayed by official pressure or inflamed public opinion.

"A defendant cannot be determined as guilty based solely on testimony from the defendant with no other evidence," said the court's instructions, which were dated Oct. 9 but published on the official national court website Thursday.

"Testimony of the defendant acquired through torture, freezing, starvation, baking in the sun, roasting, exhaustion and other illegal collection methods shall be excluded," the instructions said.

The demands mostly repeated previous rules and pronouncements, and the document did not prescribe penalties for violating them. But it demonstrated some official effort to end gross miscarriages of justice, which have battered public confidence in courts, said Nicholas Bequelin, a senior researcher for Human Rights Watch, an advocacy group.

"It reads like a catalog of the defects of China's criminal justice system," Bequelin said. "It's generally a reiteration, but it reflects some level of the commitment by the leadership to actually curb the most glaring defects of the criminal justice system."

In a statement accompanying the opinion, an unidentified supreme court official said, "Only if the defendant's human rights are given legal protection during the judicial process can we truly avoid the occurrence of false and unjust cases."

China's courts, however, come under the control of the Communist Party and are usually deferential to the police and prosecutors, especially in politically sensitive cases

WEATHER

Chilly weather ahead

By Casey Hilgenbrink

Temperatures cooled down this week, with highs in the 40s°F and lows near 30°F, thanks to a high pressure system influencing the region over the last few days. Although it's been dry for most of the week, that will likely change today — as a low pressure moves into Quebec, its associated warm front will likely bring us some light rain this morning. Otherwise, temperatures should be mild today, with a high of around 47°F (8°C).

Looking toward the weekend, Saturday looks to be a pleasant day, with a high of 46°F (8°C) and sunny skies. This all changes Saturday evening, though, as a cold front pushes through and a cold Arctic air mass settles in behind it. Sunday will be very cold and windy, with a high temperature around freezing (low 30s°F/low single digits °C). Finally, a few snowflakes can't be ruled out Saturday night/Sunday as the front passes.

Extended Forecast

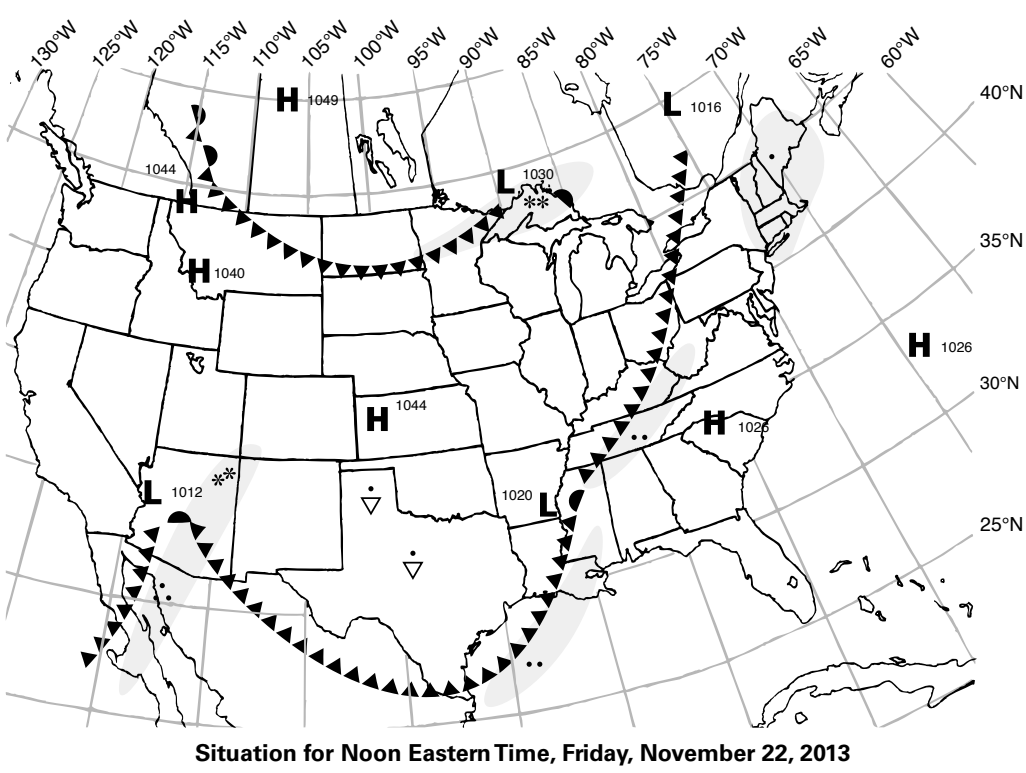
Today: Cloudy, with light showers likely in the morning/early afternoon. High of 47°F (8°C) with winds from the south changing to from the east at around 5 mph.

Tonight: Partly cloudy, with a low of 37°F (3°C.) Easterly winds at 5–10 mph

Tomorrow: Sunny and breezy, with a high of 46°F (8°C) and westerly winds at 10–15 mph, with gusts up to 25 mph.

Sunday: Cold and windy, with a high in the low 30s°F (around 0°C). Slight chance of snow.

Monday: Mostly sunny, with a high in the mid 30s°F (low single digits °C).



Situation for Noon Eastern Time, Friday, November 22, 2013

Weather Systems	Weather Fronts	Precipitation Symbols			Other Symbols
			Snow	Rain	
H High Pressure	Trough	Showers	* ▽	• ▽	Fog
L Low Pressure	Warm Front	Light	*	•	Thunderstorm
§ Hurricane	Cold Front	Moderate	**	••	Haze
	Stationary Front	Heavy	***	•••	Compiled by MIT Meteorology Staff and *The Tech*

Landmark Senate vote weakens the filibuster

By Jeremy W. Peters
THE NEW YORK TIMES

WASHINGTON — The Senate voted Thursday to eliminate the use of the filibuster against most presidential nominees, a move that will break the Republican blockade of President Barack Obama's picks to Cabinet posts and the federal judiciary. The change is the most fundamental shift in the way the Senate functions in more than a generation.

The vote was one that members of both parties had threatened for the better part of a decade but had always stopped short of carrying out. This time, with little left of the bipartisan spirit that helped seal compromises on filibuster rule changes in the past, there was no last-minute deal to be struck.

The vote was 52-48.

Mitch McConnell, the Republican leader, denounced Democrats for trying to "break the rules to change the rules" as a way to distract the public from the president's political problems over his health care law.

"You think this is in the best interest of the United States Senate and the American people?" McConnell asked, sounding incredulous. "I say to my friends on the other side of the aisle, you'll regret this. And you may regret it a lot sooner than you think."

The gravity of the situation was reflected in a highly unusual scene on the Senate floor: Nearly all 100 senators were in their seats, rapt as their two leaders debated. Tensions between the two parties have reached a boiling point in the last few weeks as Republicans repeatedly filibustered Obama's picks to the country's most important appeals court, the U.S. Court of Appeals for the District of Columbia Circuit. The Senate has voted on three nominees to the court in the last month. Republicans have blocked them all, saying they would allow the president no more appointments to that court.

Democrats, who filibustered their own share of Republican judicial nominees before they took control of the Senate, have said that what the minority party has done is to effectively rewrite the law by requiring a 60-vote supermajority threshold for high-level presidential appointments. Once rare, filibusters of high-level nominees are now routin

France may be returning to recession, new data shows

By Jack Ewing
THE NEW YORK TIMES

FRANKFURT, Germany — Hopes that the eurozone could be emerging from years of torpor suffered another setback Thursday when an indicator of economic activity in the region slipped unexpectedly and suggested that France could be sliding back into recession.

The indicator, a survey of purchasing managers published by the research firm Markit, fell to 51.5 in November from 51.9 in October, according to preliminary data, as the decline in France offset further improvement in Germany. Economists had expected the composite index for the eurozone, which tracks both manufacturing and service sectors, to rise to 52, according to Barclays.

A reading above 50 is considered a sign that the eurozone economy is growing. But the index for France fell to 48.5 in November from 50.5 in October, the latest sign of shrinkage in the French economy, the second-largest in the eurozone behind Germany's. It would be difficult for the eurozone to grow with any vigor if France were in recession.

Overall, the survey data suggested that, even though the eurozone as a whole pulled out of recession in the second quarter of this year, the recovery lacks momentum and is vulnerable to shocks, such as a sag in demand from China and other emerging markets.

"Any improvements were largely confined to Germany," said Chris Williamson, chief economist at Markit. "France, on the other hand, showed further signs of being the 'sick man of Europe.'"

WORLD &NATION WORLD &NATION WORLD &NA

Drone strikes a seminary outside Pakistan's tribal region

PESHAWAR, Pakistan — Missiles believed to have been fired by a U.S. drone struck an Islamic seminary in northern Pakistan on Thursday, in a rare strike outside the country's volatile tribal regions.

The attack, in the Hangu District of Khyber-Pakhtunkhwa province, killed six people and wounded five, including several members of the Haqqani militant network, according to a senior Pakistani security official. The attack came as Pakistani officials and politicians from across the political spectrum have intensified criticism of the U.S. drone attacks, particularly after a strike on Nov. 1 killed Hakimullah Mehsud, leader of the Pakistani Taliban, and disrupted the government's plan to open peace negotiations with the militants.

The drone fired missiles into the seminary, near the border with Afghanistan, around 4:30 a.m. Thursday, Iftikhar Ahmad, a local police officer, said in a telephone interview. Local officials said drones had been flying over the area since Monday.

"The bodies have been mutilated and burned beyond recognition," he said. "We are investigating the matter."

—Ismail Khan, The New York Times

Working around Keystone XL, Suncor steps up oil production

Suncor Energy, Canada's top petroleum producer, announced Thursday that it would expand its oil production in 2014 by 10 percent in another sign that the Obama administration's delay in approving the Keystone XL pipeline extension is not holding back growth in the western Canadian oil sands fields.

"We're set for a strong year of continued production," Suncor's chief executive, Steven W. Williams, said. The company announced a capital spending program of $7.45 billion for 2014, $477 million more than it had forecast earlier this year.

—Clifford Krauss, The New York Times

Jury adds $290 million to what Samsung owes Apple

SAN JOSE, Calif. — A jury on Thursday said that Samsung Electronics would have to pay Apple $290 million more in damages for violating patents, putting an end to one chapter in the long-running patent struggle between the two tech companies.

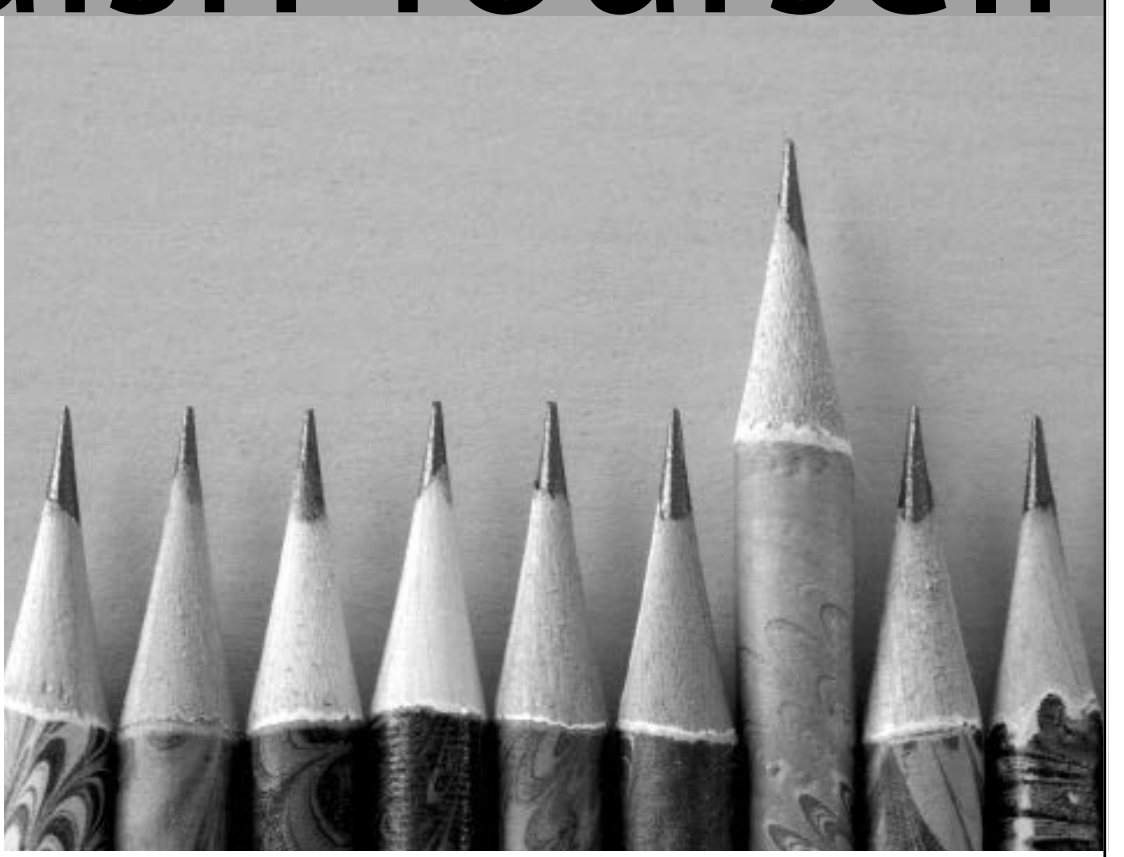
The six-woman, two-man jury calculated the damages based on 13 products that infringed Apple's patents. They determined that two smartphones incurred the heftiest damages: Samsung's Infuse 4G, at about $100 million, and the Droid Charge, at $60 million.

While the price tag will not significantly affect either company's pocketbooks, the ruling did give Apple another victory in the companies' continuing legal fight.

—Brian X. Chen, The New York Times

Distinguish Yourself

as a Burchard Scholar



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OPINION

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LETTERS TO THE EDITOR

Ethics education at the Institute

In his letter to *The Tech* last Friday, Gregory Kravit '15 presents our community with a profound challenge. He describes with gratitude hearing an MIT professor take a principled stance on financial ethics in research. But Gregory goes on to explain that his own education at MIT has not given him clear ways to think about the moral, ethical and societal context of the advanced technical work MIT is preparing him to do.

He then offers this challenge:

"As MIT seeks to reach beyond the residential campus and teach 'the next billion people,' the Institute cannot lose sight of its responsibility to provide a framework and context for the knowledge it provides to the world. Initiatives like edX provide the Institute with enormous power to lead and define this decade and the 21st century as it did in the 20th. But with this power comes the responsibility to provide a solid ethical framework for all the members of the MIT community."

Gregory's thoughts resonate with the research findings of the preliminary report of the Institute-Wide Task Force on the Future of MIT Education, released yesterday. In offering a possible future vision of MIT education, the Task Force authors argue that.

"Finally, there is a need to better develop our students' ethical skills. This encompasses ethical behavior and academic honesty as it relates to their conduct in education and research — an even more pressing issue with online classes — as well as the broader ethical issues arising in their technical disciplines. A greater emphasis on contextualizing the technical education is one possible way to address this issue." [p. 27]

In every School at MIT, there are many good, significant ongoing efforts to help our students develop their personal and professional ethics. Do these efforts go far enough? We owe it to our students — and the world we send them out to serve — to provide a deep, effective ethical education. Can we really say we are teaching problem solving, if we leave ethics out of the question? Surely right and wrong should be among the explicit boundary conditions in solving any important problem. If we aim to give our students the intellectual tools to solve real-world problems, we must also give them the ethical tools to understand the real-world consequences of their choices — and the moral tools to do the right thing.

Last June at Commencement, I shared one of my ambitions with our graduating class: that I want MIT to be famous not only for its scientific and technical achievements, but also for how we treat people — famous for sympathy, humility, decency, respect and kindness. In that spirit, I believe we should strive to make our community one where — as with the example of the MIT professor Gregory described in his letter — all of us instinctively operate with the highest integrity and ethics, too. As an institution, MIT has a notable history of taking the high road, and we must teach our students, and remind each other, why that is important and how it is done.

Like Gregory, I am not yet certain what path we should follow to enhance the ethical awareness of our community and the ethics education of our students. But I am certain that we must work together to find that path. This task will be an important responsibility of MIT's next Chancellor. I also welcome reflections and ideas from anyone in the community on the best way to get this done.

Sincerely,
L. Rafael Reif
MIT President

GUEST COLUMN

MIT should divest from fossil fuels

Our chance to take the lead against climate change

By Patrick Brown

4,000: The number of people confirmed killed by Typhoon Haiyan, perhaps the most powerful storm ever to make landfall.

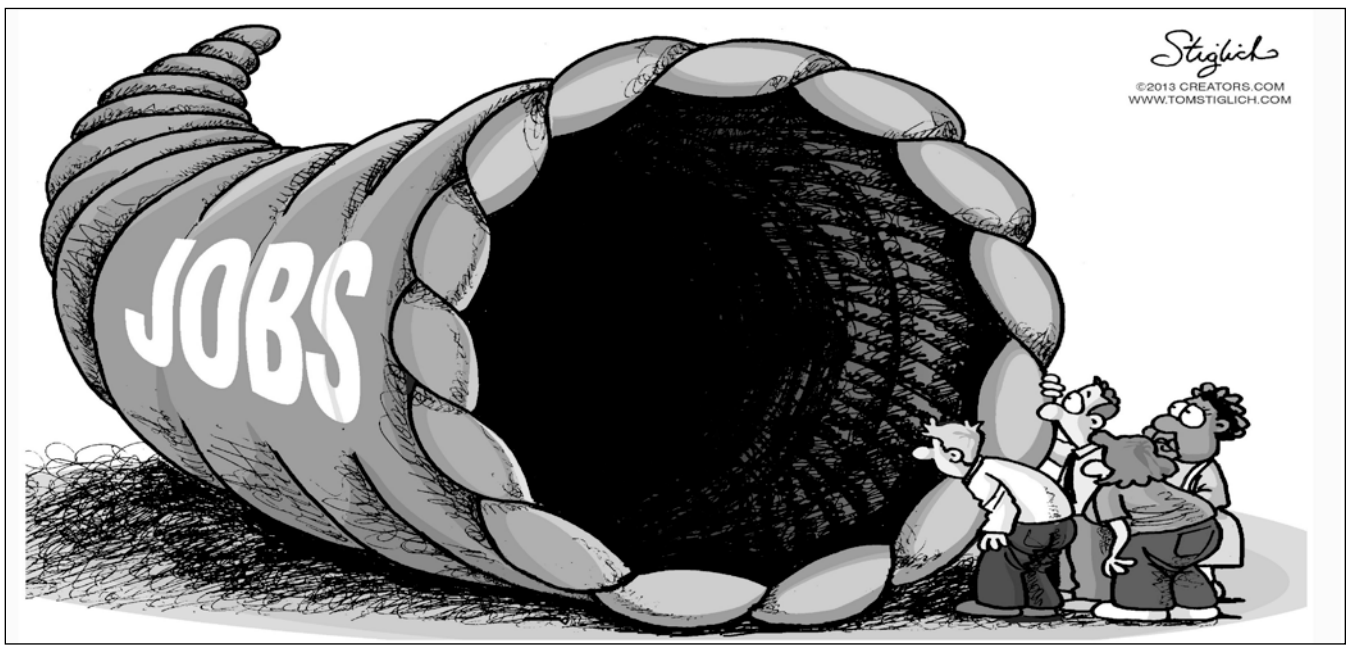
$110 billion: The estimated combined damage to the U.S. in 2012 from weather and climate disasters.

1/3: The fraction of coal, oil, and gas currently contained in proven fossil fuel reserves that humanity is allowed to burn if we desire a 50 percentchance of staying below 2°C temperature rise, the globally-agreed-upon "acceptable limit" to human-caused global warming.

I believe that most members of the MIT community understand the climate crisis on some level, and that we agree that something must be done. But what is MIT's role in addressing this crisis? We already do groundbreaking research in solar cells, batteries, and climate science. Is that enough? What is one of the most powerful steps MIT could take in this race against time to avert an obvious, predictable global catastrophe?

It's simple. MIT should divest from fossil fuels.

Fossil fuels, Page 5



CORRECTIONS

An article in Tuesday's issue on MIT's Athena clusters misstated the title of Jonathan D. Reed '02 and neglected to include his middle initial and class year. He is the IS&T Special Liaison to the Students. The same article also listed the incorrect room number for an Athena cluster (37-332 is a cluster, not 36-332). Additionally, the Building 37 clusters have already closed permanently.

OPINION POLICY

Editorials are the official opinion of *The Tech*. They are written by the Editorial Board, which consists of Chairman Sarah Ritter, Editor in Chief Anne Cai, Managing Editor Ian M. Gorodisher, Executive Editor Deborah Chen, and Opinion Editor Jacob London.

Dissents are the signed opinions of editorial board members choosing to publish their disagreement with the editorial.

Letters to the editor, **columns**, and **editorial cartoons** are written by individuals and represent the opinion of the author, not necessarily that of the newspaper. Electronic submissions are encouraged and should be sent to *letters@tech.mit.edu*. Hard copy submissions should be addressed to *The Tech*, P.O. Box 397029, Cambridge, Mass. 02139-7029, or sent by interdepartmental mail to Room W20-483. All submissions are due by 4:30 p.m. two days before the date of publication.

Letters, columns, and cartoons must bear the authors' signatures, addresses, and phone numbers. Unsigned letters will not be accepted. *The Tech* reserves the right to edit or condense letters; shorter letters will be given higher priority. Once submitted, all letters become property of *The Tech*, and will not be returned. Letters, columns, and cartoons may also be posted on *The Tech*'s Web site and/or printed or published in any other format or medium now known or later that becomes known. *The Tech* makes no commitment to publish all the letters received.

Guest columns are opinion articles submitted by members of the MIT or local community.

TO REACH US

The Tech's telephone number is (617) 253-1541. Email is the easiest way to reach any member of our staff. If you are unsure whom to contact, send mail to *general@tech.mit.edu*, and it will be directed to the appropriate person. You can reach the editor in chief by emailing *eic@tech.mit.edu*. Please send press releases, requests for coverage, and information about errors that call for correction to *news@tech.mit.edu*. Letters to the editor should be sent to *letters@tech.mit.edu*. *The Tech* can be found on the World Wide Web at *http://tech.mit.edu*.

Divestment will fulfill our social responsibility

Fossil fuels, from Page 4

Study after study — from the International Energy Agency to the London School of Economics to the Intergovernmental Panel on Climate Change — has made one simple fact clear: the stated business plan of the fossil fuel industry is incompatible with a safe, stable climate. Look closely at that "1/3" above: if we burn all of the proven reserves of fossil fuels, we would likely put oursehlves on a path to more than 5°C of temperature rise. Yet this industry keeps looking for more carbon to burn — and MIT keeps investing in it as part of our endowment.

Every day that we stay invested in fossil fuels, we lend our implicit support to an industry that has a vested interest in delaying the systemic changes our society must make to avert global warming. Any action taken to address climate change — action supported by Americans across the political spectrum — would result in a direct reduction in the profitability of this industry. In the absence of laws restricting such activity, why wouldn't the fossil fuel industry choose to undermine our democracy and block climate action by buying politicians and spreading doubt about the scientific reality of climate change?

The barriers to climate change mitigation that we now face are political, not technological, and loosening te grip of the fossil fuel industry on our democracy is a prerequisite to effective political action on climate. Divestment strikes at the very root of this issue, removing the social license that the fossil fuel industry depends upon to operate.

A proven tactic, divestment acts on the belief that if MIT will stand up and lead, the world will follow.

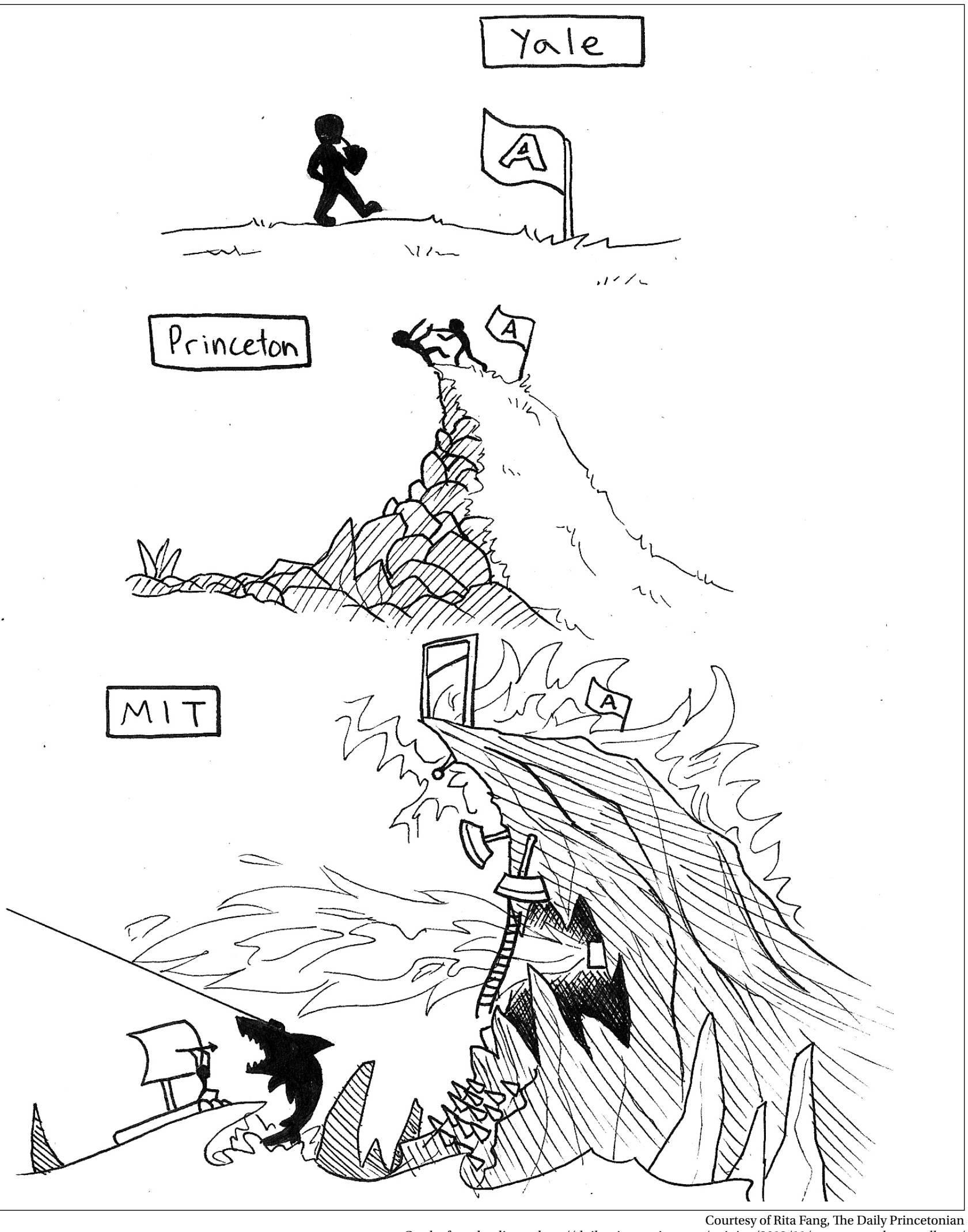
Divestment is not a new idea — it is a proven tactic with a well-defined theory of change. In the 1980s, many universities divested from companies profiting from the Apartheid regime in South Africa, putting international pressure on the South African government. In the 1990s, after reports of disinformation by tobacco companies and widespread divestment, most politicians stopped accepting campaign contributions from tobacco companies. In the 2000s, MIT itself divested from the Sudanese government during the Darfur crisis. Now, in 2013, as the magnitude and injustice of climate change become impossible to ignore, our mandate is clear: MIT must divest from the fossil fuel industry.

Divestment is not just about the pride that would come from being part of a globally recognized Institute that lives up to its own stated values — though it would certainly generate that pride. It is not just about protecting our endowment from a "carbon bubble" that would decimate the value of fossil fuel companies if the world decides to make the necessary transition away from fossil fuels — though it would certainly lead to an endowment with more long-term stability. Divestment is not just about protecting our campus from the three feet of water that MIT would be under in 2050 if a Sandy-strength storm were to hit again, thanks to sea level rise — though it would certainly put MIT on a safer path.

Despite these benefits to us and to our Institute, in the end, divestment is about justice. It is about the idea that no one should have to die for us to fund our education. It is about the idea, expressed by Albert Einstein, that those who have the privilege to know have the duty to act. It is about the idea that all generations and all communities, not just our own, should have a voice in deciding whether the next thousand years look like the ones in which human civilization developed, or whether we should rush headlong into a dramatically more unstable future when our top scientists and scientific organizations are saying, "Stop."

Divestment acts on the belief that if MIT chooses to stand up and lead, the world will follow. Over 1700 MIT students, faculty, staff, and alumni have signed a petition saying they believe MIT should make that choice. Have you?

Patrick Brown is a graduate student in the Department of Physics and is a member of Fossil Free MIT.



Courtesy of Rita Fang, The Daily Princetonian
Can be found online at *http://dailyprincetonian.com/opinion/2013/11/cartoon-grades-at-colleges/*

OPINIONOPINIONOPINIONO

MOVIE REVIEW

This movie's on fire

Sequel to *The Hunger Games* film surpasses the original

By Chennah Heroor
Staff Writer

Catching Fire — the sequel to the 2012 film *The Hunger Games*, based on the second book in Suzanne Collins's *Mockingjay* trilogy — is simply amazing.

Set in the apocalyptic Panem, Katniss Everdeen (Jennifer Lawrence) is just trying to get back to normal at home in District 12. Or as normal as you can get after being forced to fight 22 other children in a televised fight to the death in the Hunger Games for the "Capitol," the ruling district.

Unfortunately, she's drawn the ire of President Snow, the leader of Panem. Katniss won the games with a last-minute trick, making herself and her pretend boyfriend Peeta Mellark (Josh Hutcherson) co-champions, but this trick looks like an act of defiance to the people of Panem, giving them hope that they can revolt.

So, Snow insists, Katniss must convince the people that she defied the Capitol only because she was in love with Peeta. But the citizens still begin to revolt, inspired by Katniss. The retaliatory viciousness of the Peacekeepers combined with the starkness of the districts makes every riot seem terrifyingly real. When citizens are killed, Katniss' anguish reminds us that this isn't a game.

Snow's solution is to send Katniss, and all previous victors to an even bigger Hunger Games — the Quarter Quell — hoping to finish off Katniss's troublemaking for good.

After the success of *The Hunger Games*, *Catching Fire* received a bigger budget, and the movie clearly put the money to good use. The new arena for the games is filled with amazing gadgets, horrific beasts, and beautiful colors, highlighting the difference between the poor districts and the unbelievably wealthy Capitol.

The movie also benefits from the reduction in exposition. You'll definitely need to see the *Hunger Games* or read the books to catch all the references, but this movie doesn't have to waste time setting up the story. Plus, *Catching Fire* smooths over heavy-handed allegories about society's materialism to make more time for action.

This is really Jennifer Lawrence's movie though — she shines in every scene. While eulogizing a friend who died in the previous Hunger Games, her shaky voice and tearful face convey the consequences of so much death, even though the movie seems to rush over the impact at times. As a result, other characters seem mundane by comparison. The dictatorial President Snow seems as harmless as a butterfly when making death threats, yet Lawrence's terrified face makes us feel real fear.

Even with the widening scope of *Catching Fire*, Jennifer Lawrence makes the movie a thrilling ride. It's certainly an amazing movie, better than the first *Hunger Games* movie, and possibly even better than the book.

MURRAY CLOSE
Peeta Mellark (Josh Hutcherson) and Katniss Everdeen (Jennifer Lawrence) in *Catching Fire,* the second installment in The Hunger Games series.

★★★★★

The Hunger Games: Catching Fire

Directed by Francis Lawrence

Starring Jennifer Lawrence, Josh Hutcherson, and Liam Hemsworth

Rated PG-13

Now Playing

MOVIE REVIEW

Through the eyes of Death and a child

A historical drama about a German family harboring a Jew during WWII

By Karleigh Moore
Staff Writer

You know you are in for an interesting movie when it is narrated by Death himself. Death first sees our main character Liesel on a train, when he comes to take the soul of her sick and dying younger brother. He is intrigued by her for some reason he cannot place, and follows her life story as it progresses.

After that tragic train ride and a hasty funeral, Liesel finally arrives at the home of her new foster parents, the Hubermanns. They take in young Liesel because her mother can no longer care for her — it is Germany during the Third Reich, and we discover that her mother was a communist. Though the story is set in such a dark time and place, the movie is surprisingly light at times. Liesel develops a close relationship with her new father Hans, played by Geoffrey Rush, who teaches her to read, and lets her write the new words she has learned on the walls in their basement. Leisel's first friend in town is a young boy with quite a sense of humor, named Rudy. Rudy develops a crush on Liesel, and this leads to several adorable scenes where he tries to win a kiss from her.

Both Liesel and Rudy attend school wearing military-like uniforms with swastika insignia, learning to praise the Führer without question. We see that Liesel doesn't really understand what is happening in Germany until one day when a Jewish teenager, Max, seeks refuge in her new home. Max stays hidden in the family's basement, and Liesel spends many hours reading to him and bringing him news from the outside. Their friendship is heartwarming, and adds a relatable dose of emotion to the story.

The movie definitely has its moments of suspense, as would be expected for a story about a family in mid-WWII Germany harboring a Jewish man in their basement. It also has several heartbreaking and tear-jerking scenes, but I have to say I left the theater with a sense of hope. I came to the same conclusion that Death did, that humans are horrible but beautiful creatures, always with a trick up their sleeves and the capacity for kindness and love.

Overall, *The Book Thief* is definitely worth seeing. The movie is by no means a Nazi-focused film, rather a narrative of a child trying to make sense of life during a horrific time. The casting, the plot, the characters and their interactions — all are amazing. You won't be disappointed, though perhaps a little teary eyed, so I would recommend tissues.

★★★★☆

The Book Thief

Directed by Brian Percival

Starring Sophie Nélisse, Geoffrey Rush, and Emily Watson

Rated PG-13

Now playing

JULES HEATH, COURTESY OF TWENTIETH CENTURY FOX FILM CORPORATION
In *The Book Thief,* Liesel (Sophie Nélisse) sneaks into a neighbor's well-stocked library to pursue her love of reading.

JULES HEATH, COURTESY OF TWENTIETH CENTURY FOX FILM CORPORATION
Liesel (Sophie Nélisse, center), her friend Rudy (Nico Liersch), and her foster mother Rosa (Emily Watson) await news in a bomb shelter in *The Book Thief..*

ARTS EVENTS
NOV. 22 – NOV. 28

FRIDAY

(9:00 a.m. – 6:00 p.m.) Landing Studio presents 99 Marginal: 9 Strategies for Landing Industry in the City. Open through Sunday — 7-408

(9:15 a.m. – 7:00 p.m.) Architecture/Computation/ Media Lab Symposium Day 2: Futures Past - Design and the Machine. Open to the public — E14, 6th Floor

(12:00 p.m. – 1:30 p.m.) "Conservative Internationalism: Armed Diplomacy under Jefferson, Polk, Truman, and Reagan" Book talk and discussion with Henry R. Nau and Steve Van Evera — E40-496, Lucian Pye Conference Room

(1:30 p.m. – 2:30 p.m.) MIT Water Club presents Sea Level Rise on Coastal Urban Design — 66-168

(4:00 p.m. – 6:00 p.m.) Fossil Free MIT presents *Chasing Ice*: Free Film Screening + Ice Cream — 35-225

(5:00 p.m. & 8:00 p.m.) LSC presents *Despicable Me 2* — 26-100

(8:00 p.m. – 10:00 p.m.) MIT Guest Artist Series presents: the Jupiter Quartet in the first concert of complete Beethoven String Quartet Cycle performances at MIT — Kresge Auditorium

(8:00 p.m. – 10:30 p.m.) The Musical Theatre Guild Presents Mel Brooks' Young Frankenstein — W20-202

(8:00 p.m. – 11:00 p.m.) Mocha Moves Dance Squad hosts dance competition Ring the Alarm 2013 — W20

SATURDAY

(10:00 a.m. - 8:30 p.m.) Architecture/Computation/ Media Lab Symposium Day 3: Futures Past - Design and the Machine. Open to the public — E14-6th Floor

(5:00 p.m. & 8:00 p.m.) LSC presents *Despicable Me 2* — 26-100

(8:00 p.m. – 10:00 p.m.) MIT Festival Jazz Ensemble directed by Frederick Harris, Jr. — Kresge Auditorium

(8:00 p.m. – 10:30 p.m.) The Musical Theatre Guild Presents Mel Brooks' Young Frankenstein — W20-202

SUNDAY

(4:00 p.m. – 6:00 p.m.) MIT Gospel Choir Fall Concert — 6-120

(8:00 p.m. – 11:00 p.m.) MIT Folk Dance Club presents International Folk Dancing — W20-491

MONDAY

(7:00 p.m. – 9:00 p.m.) ACT Lecture: Tarek Elhaik: The Incurable-Image — E15-001

(7:30 p.m.) It's Alive: A series of staged play readings featuring students, professional actors, and faculty directed by Anna Kohler — Killian Hall

TUESDAY

(5:30 p.m. – 7:30 p.m.) Architecture/HTC Lecture: Ruben Gallo, "Radioscapes: Acoustic Modernities" — 7-429

Send your arts events to *arts@tech.mit.edu*.

MOVIE REVIEW

Forgotten but not forgiven

A brilliant epitaph for Lance Armstrong's career

By Kristen Sunter
STAFF WRITER

Oscar-winning director Alex Gibney began filming a documentary about Lance Armstrong's comeback at the 2009 Tour de France, four years after his last win in 2005. But after the infamous 2013 interview with Oprah, Gibney realized that Armstrong had just been using his documentary to bolster his already crumbling story. Gibney was ultimately able to weave the damning footage of his previous interviews into a story of betrayal to deliver a play-by-play of one of the farthest falls from grace in the history of sports.

Although none of the previous allegations against him had stuck, in 2009, Armstrong said he wanted prove once and for all that he could compete without doping. At least, that was the story that Gibney was expecting to tell when he followed him on the three-week Tour de France. Armstrong said he thought another victory would somehow silence his critics, but his surprising performance actually made them dig deeper, and Gibney weaves the tale of the tightening noose around Armstrong's legend with the suspense of a crime novel.

This documentary is not just a story of an athlete or even a glimpse into the world of cycling; the filmmaker tells his own story of being duped by Armstrong in the voiceovers. After the Oprah interview, Gibney tells Armstrong that he owes him at least an interview in explanation, which is woven with previous footage and interviews of Armstrong insisting that he never doped.

In retrospect, Armstrong doth protest too much: he certainly looks like a liar when the camera zooms in on him, though one wonders if those shots were originally framed to show his look-you-in-the-eyes honesty. The interview after Oprah is perhaps more emotional, but he still looks like he's lying, or at least trying to win sympathy by claiming he was forced to defend his story as it grew out of proportion, as though he had gotten backed into a corner.

Armstrong said at one point that his comeback wasn't about proving himself to his critics, but here his assertions aren't even lies anymore, but sports clichés lived large.

> **It will be a shame if Gibney's masterful documentary does not receive the attention it deserves.**

Armstrong is not vindicated, but we can begin to see the outlines of his dark path. As Betsy Andreu, the wife of one of his former teammates, said, it wasn't just the doping or even the lies, it was the abuse of power. Armstrong says that " [I] like to win, but I can't stand losing because that equals death". One question the documentary asks repeatedly is why he bothered with the comeback. If he had simply retired, no more questions would have been asked. But several people interviewed, including former teammates and friends, suggest that he didn't want to just win, he wanted to dominate.

Gibney does not let him dominate this documentary, though. He lets Frankie and Betsy Andreu speak of how Armstrong bullied them and how his associates and supporters did as well, including one exceptionally vicious answering machine message from a woman who worked for one of Armstrong's sponsors. He tells the story of the massive alleged cover-up headed by Hein Verbruggen, then president of the body that governs sports cycling. Children with cancer were told that not only could they beat the disease, but like Lance, they could become better than they were, which shows an especially poignant facet of the lie. Gibney obtained the rare permission to interview the doctor who was helping Armstrong cheat by getting information from sources in antidoping labs so he could stay ahead of the curve — the doctor who continued to work with Armstrong surreptitiously even after he was convicted. Each of these sets of interviews becomes a riveting subplot of its own.

Armstrong says in one interview segment that people will "either forgive and forget and move on or they won't." It will be a shame if Gibney's masterful documentary does not receive the attention it deserves because Armstrong has been forgotten but not forgiven, and the sports world long ago moved on.

★★★★☆

The Armstrong Lie

Directed by Alex Gibney

Rated R

Now playing

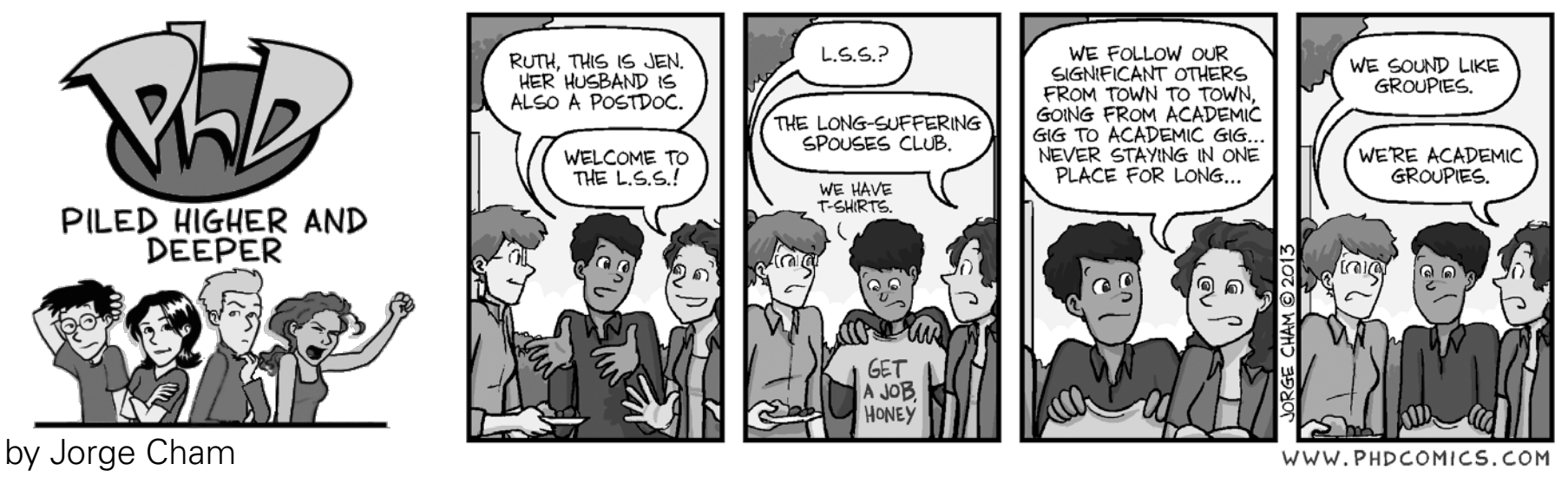
FRANK MARSHALL

Lance Armstrong in *The Armstrong Lie,* a documentary about the rise and fall of the cycling legend.

FUN

Somewhere on the Search for Meaning by Letitia Li

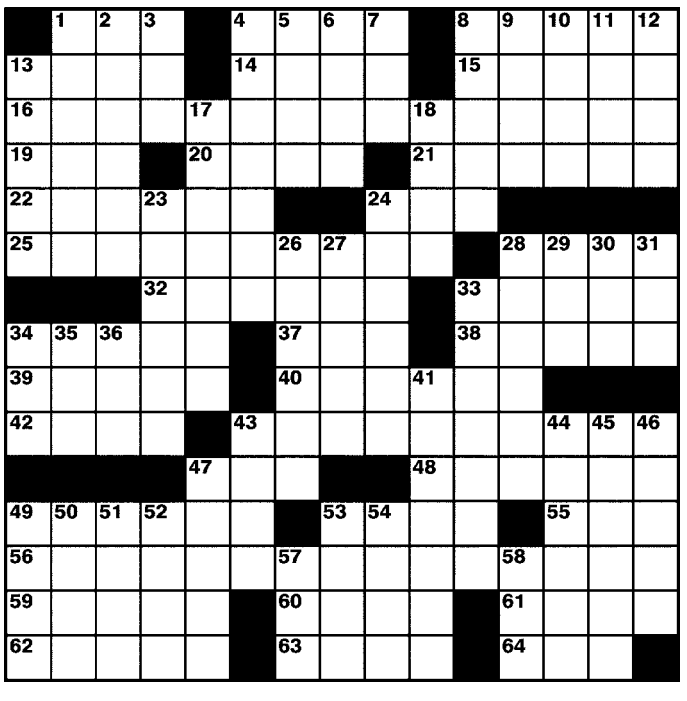
UPPERCUT by Steve Sullivan



by Jorge Cham

To Your Health by S.N.

Solution, page 11

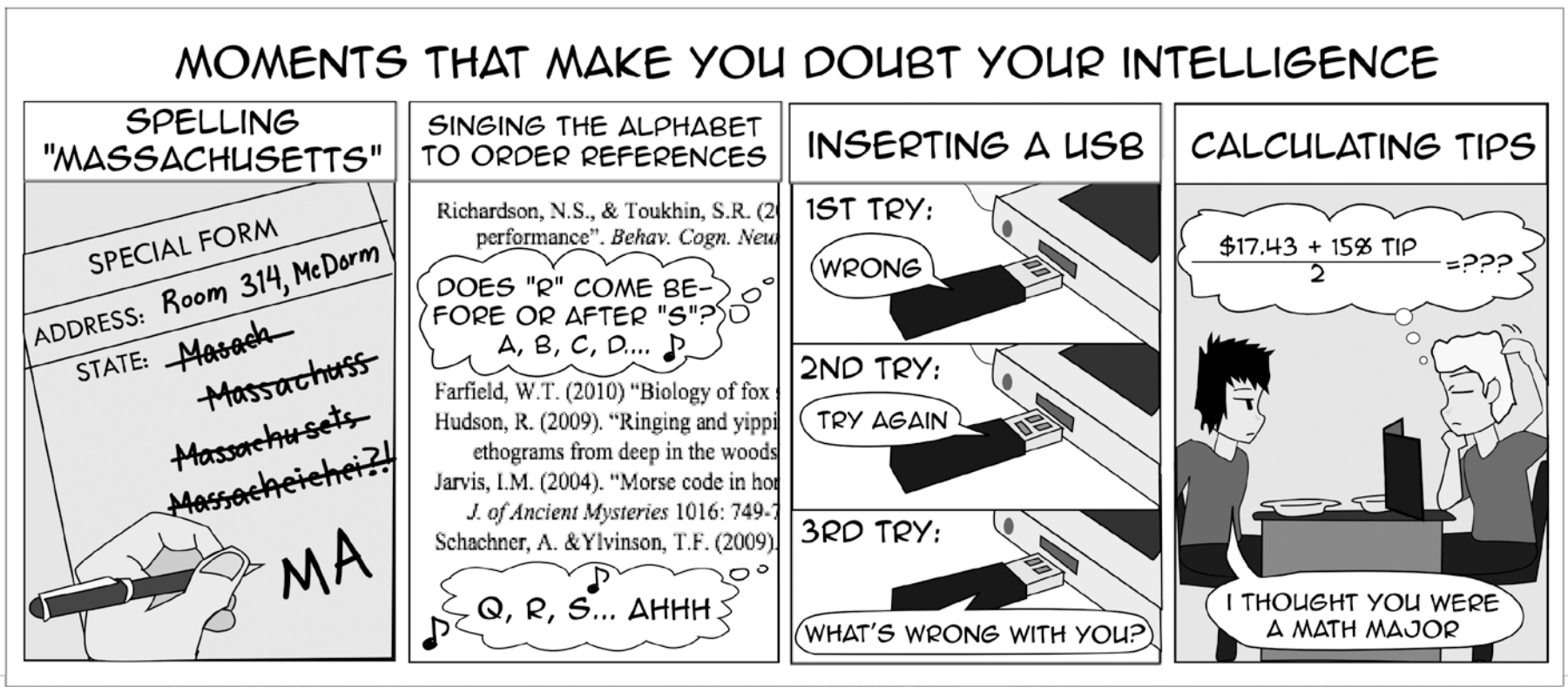


ACROSS
1 Quick-wink connection
4 Money in Argentina
8 Plot surprise
13 Mega celebrity
14 Filly's foot
15 Southeast Asian capital
16 Highly moral one
19 PR person
20 Downtime
21 Whichever
22 Dakota's language family
24 Food-additive letters
25 Tendons, skin, etc.
28 Sci-fi staples
32 Work for witches
33 Violinist Rieu
34 Chocolate source
37 Chase game
38 Suit fabric
39 Nutmeg State school
40 Afternoon snooze
42 Penchant
43 Tropical timber tree
47 Isle in the Irish Sea
48 Mideast capital
49 Tile art
53 One logging in
55 Muumuu accessory
56 What the last word of the long answers all sound like
59 Perform OK
60 Savings acct. protector
61 "Really?"
62 Opinion piece
63 Wood strip
64 Bench-press muscle

DOWN
1 Slow tempo
2 Not exactly
3 Taking after
4 Most populous state capital
5 Basically forever
6 Toner ingredient
7 Not up to par
8 Doodad
9 On guard
10 Fascinated by
11 Music genre
12 Got even with
13 "None for me, thanks"
17 Rankle
18 Porcelain product
23 '60s UN leader
24 Made silly faces
26 Substitutes
27 Slow mover
28 Apprehensive
29 10-cent portrait
30 www.aspca.__
31 Consult with
33 "Night and Day" introducer
34 Little leopard
35 Crackerjack
36 Pro's opponent
41 Brake sound
43 Chisholm Trail city
44 Rock salt
45 Blissful
46 Presidents Taylor and Fillmore
47 Teary-eyed
49 Commencement ceremonial club
50 Latin word for "work"
51 Puts into place
52 Song from Salome
53 Grain inspection agcy.
54 Cranky mood
57 Focus of many ESPN programs
58 Go fast

Q.E.D. (Quite Easily Done)

By Erika Trent



Sudoku I

Solution, page 11

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

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Techdoku I

Solution, page 11

18×		18+		10×	
2				8×	
72×			6×	1–	
30×					6×
1–			15×		
	240×				3

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

Sudoku II

Solution, page 11

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

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

Techdoku II

Solution, page 11

12×		3–			5
6÷		3×	60×		12×
20×				12×	
12×		20×	7+		4
1				45×	
240×					1

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

FUNFUNFUNF

Gender neutral housing policies:

- (B) Brown
- (C) Columbia
- (R) Cornell
- (D) Dartmouth
- (H) Harvard
- (M) MIT
- (P) Princeton
- (S) Stanford
- (U) UPenn
- (Y) Yale

Have gender neutral housing available for all class years (B C M P S U)	Only offer gender neutral housing for upperclassmen (R P S Y)
Gender neutral housing in all co-ed residences (C R U Y)	Only offer gender neutral housing in certain residences (B D H M P S)
Allow romantic couples to live together (B C M U Y)	Do not allow romantic couples to live together (R D H P S)
Option to be assigned a gender neutral roomate (D M U Y)	Students must specify a gender neutral roomate (B C R H P S)

INFOGRAPHIC BY WILL CONWAY, XIN HE, AND KRITHIKA SWAMINATHAN

Opt-in policy will be developed in-house

Housing to work with leadership in dorms on community policies

Housing, from Page 1

roommates beforehand, which is why the option is typically not available to freshmen, but some schools allow random-assignment among students who opt for gender-inclusive housing.

Other schools' policies are being taken into consideration by Residential Life & Dining while devising MIT's unique version of gender-inclusive housing policies.

Henry J. Humphreys, senior associate dean of Residential Life & Dining, believes that the implementation of gender-inclusive housing should be a collaborative effort within the MIT community. "It's important for MIT to develop a system for all students to feel comfortable in housing," said Humphreys. "The housing office will have to work with the housemasters and rooming chairs in each community." Humphreys will include the Housing Strategy Group (HSG) — consisting of faculty, graduate students, undergraduate students, and staff — in the discussion about gender-inclusive housing options as well.

Humphreys and the Dormitory Council (DormCon) both agree that gender-inclusive housing will require an opt-in — no student will be assigned to room with someone of the opposite gender or of a different gender identity without consent. "Gender-inclusive housing will not be forced upon anyone," said Eli H. Ross '14, DormCon president. Ross also adds that conflicts between roommates in gender-inclusive living spaces could be handled in the same manner as any other roommate conflict would be handled within that community.

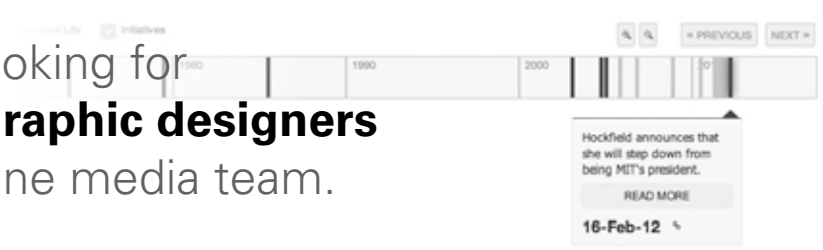
Cory D. Hernandez '14 was one of the main advocates for initiating gender-inclusive housing at Senior House. Hernandez conducted a survey that showed that among the 63 percent of Senior House residents who participated, 96 percent voted that gender-inclusive housing should be an option for all residents.

At Senior House, adding the gender-inclusive housing option was as simple as two additional questions on the room assignment survey. The rooming surveys now ask students to name their gender identity and the preferred gender identity of their roommate.

Gender-inclusive housing policies will vary by dorm. "It's important to establish what communities' policies are," said Humphreys. One of the issues he looks to overcome is introducing gender-inclusive housing options in a way that can be confidential for students opting in. "I think that one of the biggest issues is how to help students find this housing without having to out themselves," said Humphreys.

Humphreys intends to move forward with collaborative efforts regarding gender-inclusive housing at the beginning of the spring semester.

The Tech is looking for **interactive graphic designers** to join its online media team.



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Meeting, from Page 1

"Most of the governance takes place in the committees. That's not unusual in a representative democracy," Silbey said. "That's why we have in each of our committees one from each of the five schools, why we have representation of students on the committees."

Designing a government is no trivial task, she added. "You can't have meetings of 1,000 people."

Sympathizing with faculty who do not attend the meetings, Silbey said that if she were not a faculty officer, she would probably attend weekly seminars on economic sociology instead of the faculty meetings, though she also said she did not think she would necessarily attend more faculty meetings if the seminars were moved to Mondays.

"I got a lot of things to do," Silbey said.

Still, she and others at the meeting agreed afterwards that struggling to achieve a three-percent turnout was nothing to be proud of. It was a state of affairs then-Chancellor Eric Grimson PhD '80 called "a little embarrassing" in October.

"They're afraid that the oligarchy has gotten too narrow," Silbey said.

—Leon Lin

Report gives glimpse of MIT's future

Education, from Page 1

here at MIT that permits that kind of flexibility, but holds true to our principles and values that, at the end of the day, MIT graduates would be proud of," said Willcox.

More collaborative spaces

In addition to academic changes, the preliminary report addresses campus environment. To deal with the increased ability for students to skip lecture by simply watching them online, the future campus environment may well be in the form of "academic villages" and "maker spaces." Academic villages would comprise of classrooms, breakout spaces, study spaces, labs, and faculty offices, among other types of academic and study spaces. According to the report, these villages would "promote serendipitous interactions between students and faculty members, inviting and attracting students and faculty to link and work in the academic areas of campus rather than withdrawing to their more distant living spaces." Maker spaces would be more intended to promote creativity, similar to the existing Hobby Shop or Edgerton Shop. Such maker spaces are also a focus in the Innovation Initiative, the vision for which included spaces for students to "create products" and "spin off companies."

Implications of edX

The report also highlighted opportunities that edX could bring to the table. Not only is it a vehicle of disseminating knowledge to the world, it also introduces MIT to people who otherwise would not have, vise versa. For example, the task force cited a recent admit from Mongolia, who used edX extensively and received mentorship from MIT alumni. According to Sanjay Sarma, a co-chair of the Task Force and Director of Digital Learning, edX allows one to "rebuild the university around the individual."

"Just as you can make a playlist out of songs from different albums, they can take this class and that class, and they can go to a local university and maybe do a lab there, and maybe find a member that becomes their equivalent of a professor there," said Sarma, highlighting the possibilities for the edX student.

According to the report, MIT students can benefit from this unbundling by participating in teaching worldwide or engaging in more extensive fieldwork while taking classes from MITx. Willcox suggested that students may be able to spend a semester interning at a company, all while completing MIT classes online.

Future financial model

The sustainability of the Institute's existing financial model cannot be ignored in light of all of the proposed academic possibilities. The preliminary report highlights that the existing financial model of MIT has been extremely successful. It cites that the value of an MIT education remains high, with the average starting salary generally exceeding the median U.S. family income.

However, the report cites significant challenges with the future sustainability of its current revenue mix, with constrained federal research dollars, an endowment subject to volatile market conditions, growing campus size, and the need of recruiting top talent.

Currently, MIT receives about $2.2 billion in campus revenues, which excludes $891 million in revenue received from research at the Lincoln Laboratory. The majority is from research and endowment investments, which together account for $1.25 billion or 56 percent of total operating revenues. Tuition payments from all schools account for 14 percent of yearly revenues, totaling $310 million.

The third working group suggested many solutions to future risks. Some potential revenue opportunities cited are expanding summer programs and executive education, and potentially monetizing edX. In addition, there is the potential to expand in technological licensing activities. However, many of these opportunities also are "fraught with potential conflicts of interest." Therefore, according to the report, "this risk must be carefully weighed against any benefits from entrepreneurship."

"What I would expect is that we can keep investing back in even more generous financial aid," said Israel Ruiz SM '01, a co-chair of the Task Force and Executive Vice President and Treasurer of MIT.

The final report by the Institute-wide Task Force on the Future of MIT Education is expected to be released at the end of the academic year in June 2014.

Leon Lin contributed reporting.

Solution to Sudoku I

from page 9

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

Solution to Sudoku II

from page 9

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

Solution to Techdoku I

from page 9

3	1	6	4	2	5
2	6	5	3	1	4
6	4	3	1	5	2
5	3	2	6	4	1
4	2	1	5	3	6
1	5	4	2	6	3

Solution to Techdoku II

from page 9

3	4	6	2	1	5
6	1	3	5	4	2
4	5	1	3	2	6
2	3	5	1	6	4
1	2	4	6	5	3
5	6	2	4	3	1

Solution to Crossword

from page 8

■	A	S	A	■	P	E	S	O	■	T	W	I	S	T
I	D	O	L	■	H	O	O	F	■	H	A	N	O	I
P	A	R	A	G	O	N	O	F	V	I	R	T	U	E
A	G	T	■	R	E	S	T	■	A	N	Y	O	L	D
S	I	O	U	A	N	■	■	M	S	G	■	■	■	■
S	O	F	T	T	I	S	S	U	E	■	U	F	O	S
■	■	■	H	E	X	I	N	G	■	A	N	D	R	E
C	A	C	A	O	■	T	A	G	■	S	E	R	G	E
U	C	O	N	N	■	S	I	E	S	T	A	■	■	■
B	E	N	T	■	W	I	L	D	C	A	S	H	E	W
■	■	■	■	M	A	N	■	■	R	I	Y	A	D	H
M	O	S	A	I	C	■	U	S	E	R	■	L	E	I
A	P	E	R	S	O	N	S	N	E	E	Z	I	N	G
C	U	T	I	T	■	F	D	I	C	■	I	T	I	S
E	S	S	A	Y	■	L	A	T	H	■	P	E	C	■

Fall Deadline:

Friday December 6th

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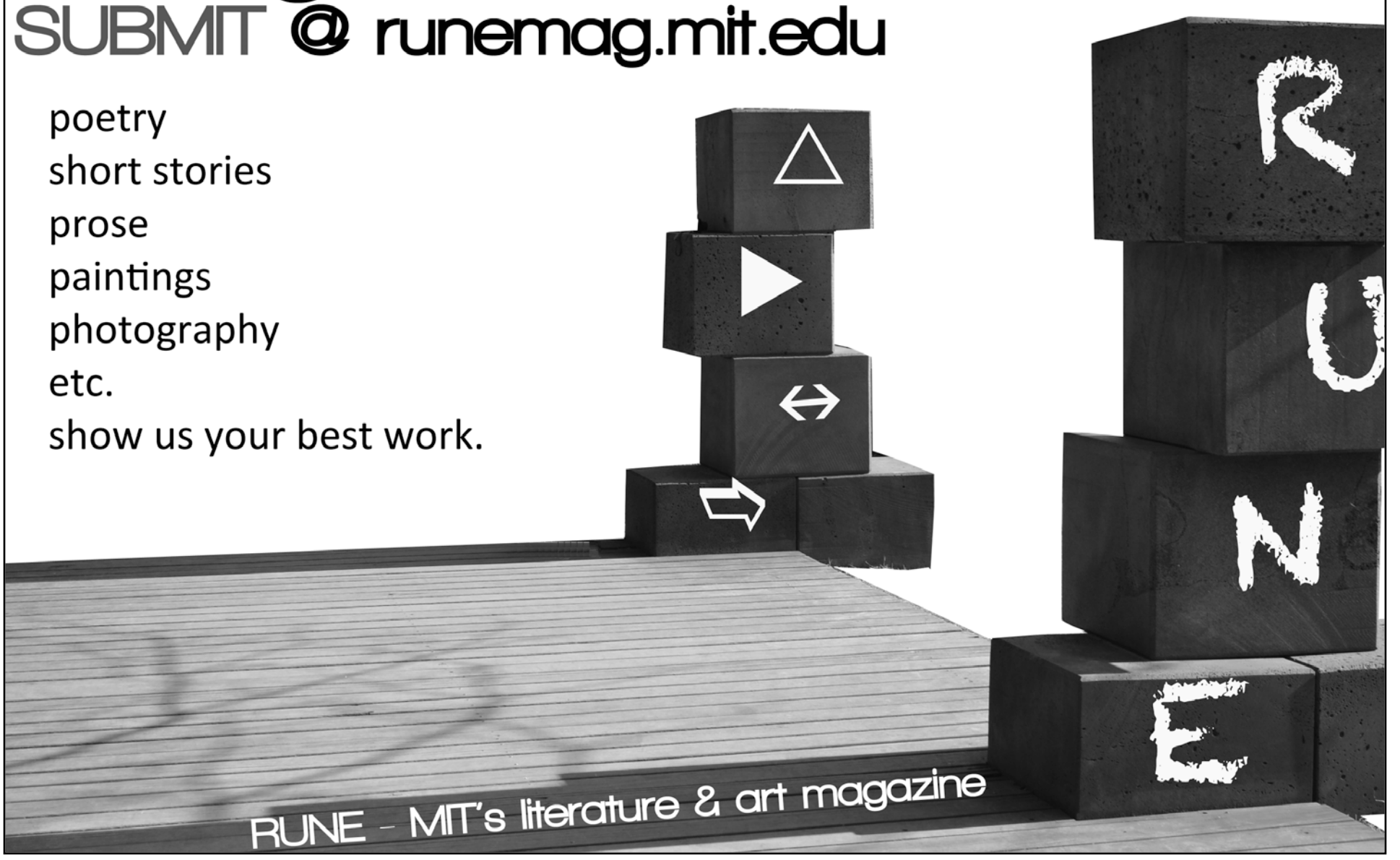


RUNE – MIT's literature & art magazine

Senior competes at worlds

Taekwondo athlete competed in Bali on Oct. 31

By Adrian Jiminez-Galindo
TEAM REPRESENTATIVE

MIT has many notable students walking down the Infinite: people who excel in their own fields as scientists, engineers, and even athletes. This is the case of Michelle W. Chen, '14 (known as "Machine" to teammates), who competed with Carissa Fu from Boston University and Miyako Yerick from the University of Texas at Austin on Oct. 31 in the eighth World Taekwondo Poomsae Championships in Bali, Indonesia.

Poomsae is Korean for forms: a very precise set of prearranged kicks and stances that require considerable amounts of strength, flexibility and precision. Each form has a particular meaning, and can be executed in teams, thus increasing the difficulty by adding the factor of synchronization.

Chen and her teammates had already won first place this past April at the U.S. National Collegiate Competition, and repeated that feat in July at the U.S. Team Trials, being therefore selected as representatives of the U.S. National Poomsae team for the Female Team Under 29 category. The world championships consisted of four intensive days of poomsae. Seven judges score the performances of the poomsae based on accuracy of moves and presentation (speed and power). For team performances, there is an additional judging criteria in presentation for how synchronized the three competitors are in performing the poomsae. There are 25 different divisions for competition based on gender and age.

Over 600 athletes from 50 different countries competed for 25 medals at the championships and Chen, Fu, and Yerick advanced to the finals after competing against 17 other teams. They trained under the direction of Master Dan Chuang, who had previously competed as an U.S. National Poomsae Team member himself and was selected as one of the five coaches for this year's team. Together, they managed to beat top caliber teams from countries including Spain, the Netherlands and Brazil, and finished eighth overall. This ranking is the second highest that the U.S. has ever received under this category.

"From this competition, I have experienced what it is like to compete at an international level as well as to meet athletes who all love and train in Taekwondo," said Chen. "It's been amazing to be able to represent the MIT Sport Taekwondo Club, MIT and the USA at the eighth World Championships. It's time to train harder for the next competition." Chen is a Course 6 major at MIT.

MUHAMMAD CHISHTI

Michelle W. Chen '14, Carissa Fu (Boston University), and Miyako Yerick (University of Texas at Austin) compete in the Eighth World Taekwondo Poomsae Championships held on October 31 in Bali, Indonesia. The three athletes represented the U.S. Female Under 29 team, and placed eighth out of 17 teams at the prestigious competition.

MIT basketball team beats Gordon, 67-48

Dawson leads men's team to victory

By Phil Hess
DAPER STAFF

MIT used an 8-2 run to close out the first half, breaking open a close game to help them to a 67-48 victory over Gordon College in men's basketball action Tuesday night in Rockwell Cage. Paul E. Dawson '15 set new personal highs with 17 points and eight assists to lead MIT. Hans Miersma led the Fighting Scots with 18 points and 13 rebounds.

MIT (2-0) took an early 6-2 advantage three minutes in on a put-back by Andrew M. Acker '15. Gordon (0-3) then held the Engineers scoreless for four minutes and took its first lead of the game when James Ek '15 drilled a three pointer at the 14:42 mark to make it 7-6. A layup by Miersma gave the Fighting Scots a three-point lead, but MIT came back with a 7-0 run over the next four minutes, highlighted by a trey from Russell L. Johnson '16 that put the Engineers back in front.

The contest remained close over the next several minutes, but Gordon would never retake the lead. MIT pushed its advantage up to six twice, but each time Gordon came back to shave the lead in half. Miersma cut the Engineers advantage to 23-20 with 2:53 left in the half, but Justin M. Pedley '16 answered with a jump shot and MIT finished the half outscoring Gordon 8-2, with Dawson's lay in with two seconds left giving the Engineers a 31-22 lead at the break.

Taylor Bajema put back a missed shot 30 seconds into the second half to bring Gordon back to within eight, but MIT answered with a run that put the game away early for the Engineers. Dawson drained a three-point shot that started a stretch that saw MIT hit seven of their next nine field goal attempts while holding Gordon to just four shots. The result was a 17-5 run that saw the Engineers expanded their lead to 20 points at 49-29 on a three pointer from Dennis R. Levene '15 five minutes into the half.

The contest remained close over the next several minutes, but Gordon would never retake the lead.

MIT pushed its lead all the way to 25 on a trey from Pedley at the 12:58 mark and the Engineers held their lead over 20 points for the next six minutes. A lay up by Bajema brought the MIT lead back under 20 points at 60-42, but with just 6:46 left the Fighting Scots could not mount a charge as they could get no closer than 16 points the rest of the way.

Acker recorded a double-double for MIT with 12 points and 11 rebounds, with Matthew M. Redfield '15 also reaching double figures in the scoring column for the Engineers with 14 points. Bajema also reached double figures for Gordon, finishing with 11 points. MIT shot 47 percent from the floor while holding Gordon to 38 percent shooting. The Engineers also out rebounded the Fighting Scots, 36-31.

AKIMITSU HOGGE—THE TECH

Nikhil N. Punwaney '17 plays in MIT's first squash game at home against Connecticut College last Sunday. Punwaney fell to his opponent two games to three.

UPCOMING HOME EVENTS

Saturday, November 23

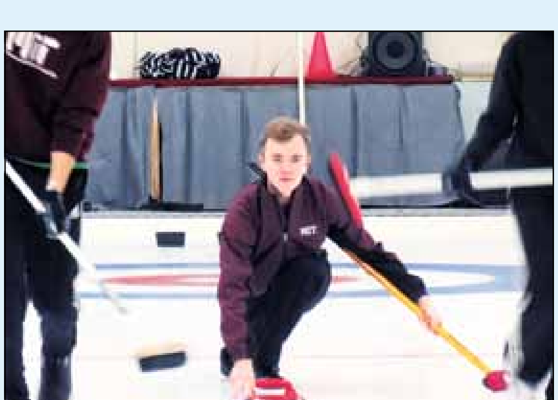
Men's lightweight crew vs. Foot of the Charles	*7 a.m., Charles River*
Men's heavyweight crew vs. Foot of the Charles	*8:30 a.m., Charles River*
Squash vs. Bowdoin College	*2 p.m., Zesiger Center Squash Courts*
Women's basketball vs. Springfield College	*2 p.m., Rockwell Cage*
Squash vs. Wesleyan University	*7:30 p.m., Zesiger Center Squash Courts*

Sunday, November 24

Squash vs. Colby College	*6 p.m., Zesiger Center Squash Courts*

SPORTS SHORT

MIT Curling beats Villanova in tournament finals



DOUG BURCHESKY

Phillip Nadeau G delivers a stone at New England's first curling tournament of the season. The MIT Curling Team was victorious, beating Villanova 10-2 in the final match.

The MIT Curling Club Team emerged victorious at New England's first curling tournament of the season. The team's win gives them 8 merit points towards qualification for this season's National competition in Blaine, MN in March 2014. The tournament featured 14 teams from the Northeast and was hosted by Boston University at the Broomstones Curling Club in Wayland, MA on Nov. 9 and 10.

Skip Phillip Nadeau G, vice Sean E. Burchesky '17, second Andrea Dubin G, and lead Gregory A. Dooley G, curled their way through a couple of tense early round matches, narrowly defeating RPI and Colgate University, and following up with a semi-final victory against Villanova University. With momentum on their side, MIT met a second Villanova team in the finals and captured the title with a decisive 10-2 win.

—Andrea Dubin

Graduate student wins Powerlifting Competition

This past Sunday, Elena Nulvesu G competed at the Raw Collegiate Cup of Powerlifting held at Northeastern University. Elena, who is a visiting student from the University of Sassari in Italy, was the only competitor from MIT, and she won the competition by lifting 125 kg in Squat, 75 kg in Bench Press and 150 kg in Dead Lift, for a total of 350 kg (which is her personal best). There were 18 total women participating in the competition: 16 from Northeastern University, 1 from Boston University, and Nulvesu from MIT.

Nulvesu is a graduate student in the Philosophy and Linguistics department, and is originally from Sardinia, Italy. She started powerlifting back in Italy in March 2012 under her town's coach, Allesandro Loi. She currently trains by herself, but keeps in touch and follows the advice of the Sardegna Powerlifting team back in Italy. She hopes to compete in the next Massachusetts State Powerlifting Championships.

—Sarah Weir