NO CLASSES; CAREER FAIR AND INAUGURATION TODAY!

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The Tech
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Friday, September 21, 2012

WEATHER, p. 2

FRI: 67°F | 55°F
Sunny

SAT: 78°F | 63°F
Chance of showers

SUN: 72°F | 50°F
Chance of showers

A universe of science at the Ig Nobels

Everything from exploding colons to dead fish with brain activity

By Jaya Narain
STAFF REPORTER

If you've ever wondered about exploding colons or the brain activity of dead salmon, you might be interested in the work done by this year's Ig Nobel Laureates The 22nd Ig Nobel Awards, prizes awarded annually for improbable research that "first make people laugh, and then make them think" were awarded yesterday in Sanders Theater at Harvard University. The theme for the 22nd Ig Nobels was "The Universe." Previous themes have spanned topics ranging from "Duct Tape" to "Biodiversity."

A collection of Nobel laureates was on hand at the ceremony to present awards to the winners of the Ig Nobel Prize. Presenters included Dudley Herschbach, the 1986 Nobel laureate in chemistry; Rich Roberts, the winner of the 1993 prize for physiology or medicine; Eric Maskin, the 2007 winner in Economics; and Roy Glauber, who was awarded the Nobel prize for physics in 2005. Several previous winners of Ig Nobel Prizes were also part of the ceremony.

The ceremony was preceded by several concerts, featuring the Boston Squeezebox Ensemble, a "chemi-accordian" ensemble and "KEROMIN", a frog-shaped electronic instrument. Robert Kirshner, a professor in the Harvard-Smithsonian Center for Astrophysics, delivered the keynote address during which he addressed the topic of the universe using demonstrations like inhaling from a helium balloon, and cutting a pumpkin pie.

JAYA NARAIN—THE TECH

Eric Workman, the "Human Aerodrome," is the target of paper planes thrown from audience members at the Ig Nobel Prize Ceremony, held Thursday evening in the Sanders Theater at Harvard. Paper plane throwing is a tradition at the ceremony.

The first award was given to Emmanuel Ben Soussan, a gastroenterologist from Paris, France, who received the Ig Nobel Prize in Medicine for his work showing that if lasers are used for coagulation during a colonoscopy and the patient's bladder is not perfectly clean, the colon will explode.

Soussan said this became apparent after fairly large explosions occurred during the procedures of two separate patients. Soussan did not realize the problem was with laser coagulation after the first operation, but after the explosion repeated itself, he realized that the explosions were caused by the release of methane and hydrogen gases as the laser burned stool residue. Both patients recovered from the incidents, and Soussan said that his discovery has highlighted the

Ig Nobel, Page 6

RLADs get dorm offices

Plans underway for first floor RLAD spaces

By Maiko Kitaoka
STAFF REPORTER

After the end of the first full week of classes, students have moved in and become comfortable in their assigned residence halls. Everyone has stepped into the flow of a new school year, and learned to navigate the halls of the Infinite Corridor as well as their suites. But do students know who else lives with them in their home away from home?

Perhaps they don't. Over the summer, MIT created a new position in the residential halls: the residential life area director, or RLAD. Chancellor Eric Grimson PhD '80 plans to have one RLAD in every residence hall on campus to work with their specific house team and support the residents — each one complete with their own apartment and office. Unfortunately, among the six permanent RLADs, only half of them have an office within the dorm.

All seven RLADs declined interviews with *The Tech* for this article and instead referred *The Tech* to Division of Student Life spokespeople.

According to Henry J. Humphreys, senior associate dean for student life, construction for these offices began a few months ago, but MIT lacked the necessary permits required by the City of Cambridge, slowing down construction. MIT secured the permits last Thursday evening, and construction resumed on Monday. Within the next two weeks, Humphreys plans to have a permanent office for every RLAD in need of one. The offices will be mostly near the lobby area on the first floor near the main desk close to the house manager so that the RLADs can build a working relationship with their house team, Humphreys said.

Only seven residence halls currently house an RLAD – Burton-Conner, Maseeh Hall, McCormick Hall, New House, Next House, and Simmons Hall. MacGregor's RLAD suddenly left the position due to "personal reasons," and Christina Davis, director of Residential Life Programs, is filling in as the temporary RLAD. The search for a permanent MacGregor RLAD is moving quickly — five candidates will be interviewed this week, one per day, for the position. Davis works to make certain that MacGregor House does not slip through the cracks, and she believes that the housing office is watching it even more closely due to the missing RLAD. The other residence halls that currently do not house an RLAD asked the chancellor over the summer for more time to engage and interact with their students when the school year began

RLAD, Page 12

MIT 2030: are the faculty involved or not?

Wednesday's faculty meeting shows disconnect between faculty and admins

By John A. Hawkinson
STAFF REPORTER

Faculty continue to express concern about MIT's execution of the MIT 2030 plan, even as the administration launched a faculty task force to review it and placed MIT 2030 on this week's faculty meeting agenda. The MIT 2030 plan includes both future real estate development as well as renewal of the existing campus buildings, which suffer from over $2 billion of deferred maintenance.

Faculty worries seem to be about commercial development of real estate historically reserved for academic use, and about the lack of housing in the plan. But the MIT 2030 presentation at Wednesday's faculty meeting ignored these issues and focused on capital renewal of the campus. Faculty members re-raised those concerns in open discussion following the renewal presentation.

Update on 2030 task force

The faculty committee on 2030 (membership sidebar, p.13) has been meeting every week since Aug. 7 "with no gaps," said Samuel M. Allen PhD '75 chair of the faculty. The committee has been handed a significant amount of confidential information to help assist them, he said.

The committee, chaired by Prof. Thomas A. Kochan, has as its first priority advising the administration on MIT's proposed changes to Kendall Square zoning; later it

MIT 2030, Page 13

IN SHORT

The final exam schedule is now online. Go to *http://web.mit.edu/registrar/classrooms/exams/finals/index.html* to figure out when you can go home!

Get your Brass Rat serviced today from 10 a.m. to 3 p.m. in the Student Center Lobby.

Minor completion forms are due today for final term seniors. Late forms carry a $50 fine.

Teach for Splash! Register at *http://esp.mit.edu*. The deadline to register is Sept. 28.

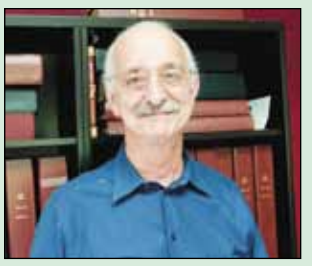
Borrow art! Go to the Media Lab today for your last shot at the loan program.

Pet a farm animal! Visit the courtyard of E55 tomorrow from 10 a.m. until 12 p.m. to see the petting zoo!

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

IN YOUR COMMUNITY

Gracious professionalism first



By Kath Xu
STAFF REPORTER

The Tech recently sat down with retired MIT professor Woodie C. Flowers PhD '73, one of the founders of FIRST (For Inspiration and Recognition of Science and Technology) Robotics Competition and a recipient of many teaching awards while at MIT.

While at FIRST, Flowers coined the term "gracious professionalism." According to the FIRST website, gracious professionalism is "a way of doing things that encourages

Flowers, Page 7

MIT'S LAND GRANT

Going back to the Institute's roots.
OPINION, p. 4

A RESPONSE TO YOST

The actual distinction between Obama and his myth. **OPINION, p. 4**

MORE FOOTBALL

Check our latest predictions.
SPORTS, p. 16

EWWWW, SPIDERS!

Hundreds of arachnids have set up home outside W20.
PHOTO, p. 9

ROBOT AND FRANK

This film about social robotics is a must-see this fall. **ARTS, p. 10**

SECTIONS

Wen chides Europe on arms sale embargo

BRUSSELS — Prime Minister Wen Jiabao said Thursday that China would continue to help the European Union recover from its economic crisis even as he sternly criticized the bloc for maintaining an embargo on weapons sales to his country.

The European Union is the biggest buyer of Chinese exports and China is the second most important trading partner for the EU, after the United States, making the relationship crucial to growth and jobs for both.

Yet there are serious irritants for Beijing, including the EU ban on arms exports to China, in place since the 1989 crackdown on protesters around Tiananmen Square, and the reluctance of Europe to classify China as a modern, open economy, which would clear the way for advantages on tariffs.

"I have to be very frank in saying this," Wen told Herman Van Rompuy, the president of the European Council, and Jose Manuel Barroso, the president of the European Commission. On "the two issues of lifting the arms embargo against China and recognizing China's full market economy status, we have been working hard for 10 years. But the solution has been elusive."

—James Kanter, The New York Times

Japan backs off goal to phase out nuclear power by 2040

TOKYO — In an abrupt turnabout, the Japanese government Wednesday stopped short of formally adopting the momentous goal it announced just last week — to phase out nuclear power by 2040 — after the plan drew intense opposition from business groups and communities whose economies depend on local nuclear power plants.

The Cabinet of Prime Minister Yoshihiko Noda said it would "take into consideration" the 2040 goal but formally endorsed only a vague promise to "engage in debate with local governments and international society and to gain public understanding" in deciding Japan's economic future in the wake of the 2011 nuclear disaster at Fukushima.

Energy policy will be developed "with flexibility, based on tireless verification and re-examination," the cabinet's resolution read.

A day earlier, the chairmen of Japan's most prominent business associations, including the influential Keidanren group, called a rare joint news conference to demand that Noda abandon the 2040 goal. Wednesday, they praised the Cabinet's decision.

—Hiroko Tabuchi, The New York Times

New cracks are forming in coalition leading India

NEW DELHI — The turmoil surrounding India's national government intensified Wednesday, with a growing number of regional partners threatening to withdraw their support from the government and a former ally calling for the prime minister to seek a new electoral mandate.

After the announcement by Mamata Banerjee, the populist chief minister of the state of West Bengal, that her party would formally leave the government Friday, another member of the government, Muthuvel Karunanidhi, said his party would support a nationwide strike on Thursday called by opposition parties to protest economic policy changes announced last week by the governing coalition, the United Progressive Alliance. Karunanidhi controls 18 votes in Parliament, just one fewer than the total controlled by Banerjee.

Meanwhile, Ram Gopal Yadav, a major leader of the Samajwadi Party, which controls 22 votes in Parliament, said his continued support of the governing coalition was no longer assured.

—Jim Yardley and Gardiner Harris, The New York Times

Bill to keep science graduates in US fails

By Julia Preston
THE NEW YORK TIMES

A Republican bill to provide permanent resident visas for foreigners who graduate from U.S. universities with advanced degrees in science and technology failed to pass the House on Thursday, a setback for technology companies that had strongly supported it.

Republican leaders called the vote under a fast-track procedure that limits debate but also requires a two-thirds majority to pass. The final tally was 257-158, with all but a few Republicans joined by 30 Democrats in voting yes.

The bill, sponsored by Rep. Lamar Smith, R-Texas, chairman of the House Judiciary Committee, would have eliminated an annual lottery and instead allocated 55,000 visas for legal permanent residency, known as green cards, each year to foreigners who have completed masters and doctoral degrees from U.S. universities in the so-called STEM fields: science, technology, engineering and mathematics. The lottery now distributes the same number of green cards to foreigners from countries with low rates of immigration to the United States.

While congressional Republicans have taken a hard line on illegal immigration, they said they wanted to show before the November elections that they were ready to pass a measure to fix a widely acknowledged flaw in the legal immigration system.

A fierce fight broke out during the brief floor debate Thursday, with Democrats strongly opposed to ending the lottery. Democratic leaders accused Republicans of partisan posturing by rushing a vote on an immigration issue when, they said, bipartisan accord was within reach.

There is uncommonly broad consensus in Congress on the legislation's underlying goal — keeping talented and highly educated foreign science graduates in the country so they can work and start businesses.

The bill would "help us create jobs, increase our competitiveness and spur our innovation," Smith said after the vote. "Unfortunately, the Democrats voted today to send the best and brightest foreign graduates back home to work for our global competitors."

Democrats had voted "against economic growth and job creation," Smith said.

Democrats were led in their challenge by Rep. Zoe Lofgren of California, whose district includes many Silicon Valley technology companies and who had offered a competing bill last week. While saying "it pains me greatly" to vote no, Lofgren said the Republican proposal had "another, in my opinion, more sinister purpose — to actually reduce legal immigration levels."

Lofgren's proposal would have created 50,000 new green cards for foreign science graduates, without eliminating or reducing the lottery.

Rep. John Conyers of Michigan, the ranking Democrat on the Judiciary Committee, said, "We strongly oppose a zero-sum game that trades one legal immigration program for another."

Ruling lets Murdoch keep British broadcast license

By Amy Chozick and Ravi Somaiya
THE NEW YORK TIMES

More than a year after a phone hacking crisis in Britain engulfed Rupert Murdoch's News Corp., the embattled media company received a clean bill of corporate health on Thursday from a critical British regulator.

Britain's Office of Communications, known as Ofcom, said Thursday that British Sky Broadcasting, 39.1 percent owned by News Corp., was "fit and proper" to hold a broadcast license. The ruling, which was a result of an investigation by the regulators that lasted months, relieves the company from facing an expensive legal fight to maintain its broadcast license.

More important, it helps allay concerns that had spread within the company that an unfavorable Ofcom ruling could have prompted further scrutiny in the U.S. by the Justice Department and the Federal Communications Commission that could have affected News Corp.'s domestic television assets.

There are still many hurdles for News Corp. in Britain: the hacking scandals set off several inquiries into the company's use of phone hacking and its connections to the police, criminal trials for several senior company executives will begin next year, and 174 new civil claims were filed ahead of a court deadline last Friday.

But the relief over the ruling was palpable at corporate headquarters in New York and London. One company official who spoke on the condition of anonymity to reveal internal conversations said executives should not declare victory just yet.

"Only an idiot would say it was over," the official said of the scandal. "But it's not as panicked as it was."

In a sign that the company feels less restrained by British scrutiny, James Murdoch, Murdoch's son and News Corp.'s deputy chief operating officer, is expected to take an expanded role within the company.

James Murdoch was in charge of the company's British holdings when the hacking was revealed, and the Ofcom report was critical of his performance, saying that he "repeatedly fell short" in his response to the illegal activities at the company's News of the World tabloid. In April, he resigned as head of BSkyB, and his future at News Corp. seemed uncertain.

However, a person close to News Corp. confirmed a Financial Times report that James Murdoch's job could be expanded to oversee the Fox Networks Group, a Los Angeles-based unit that includes Fox Broadcasting and Fox's regional sports channels.

WEATHER

Fall arrives tomorrow

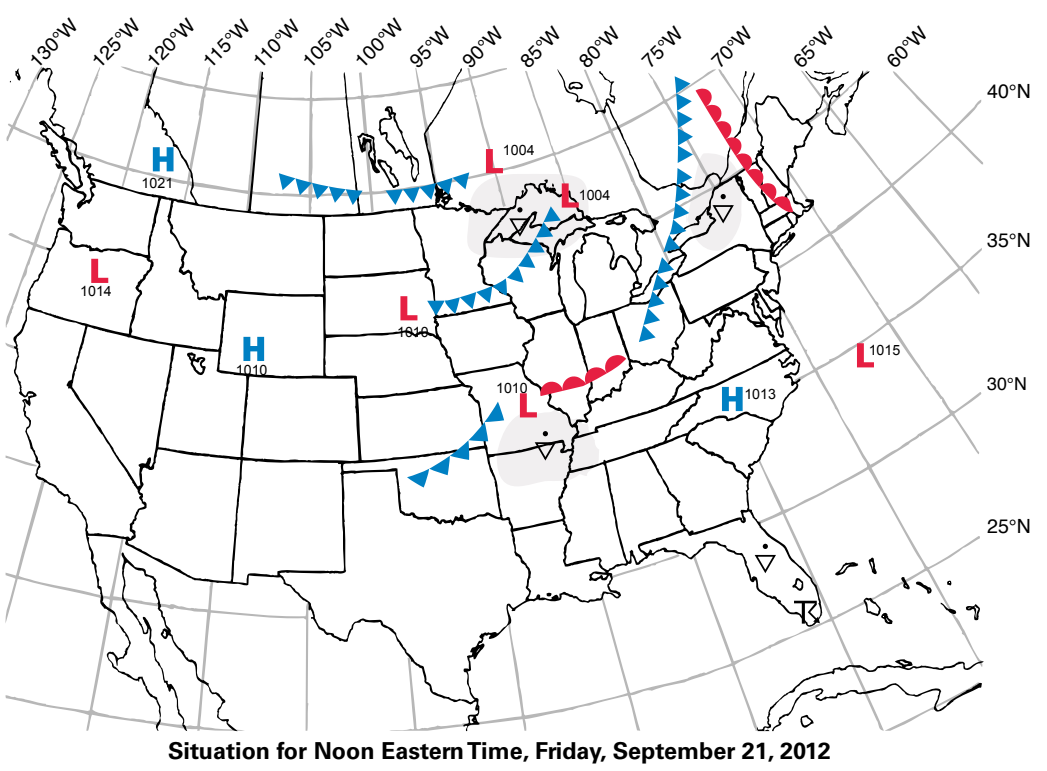
By Vince Agard
STAFF METEOROLOGIST

The autumnal equinox will occur tomorrow morning at 10:49 a.m., marking the official end of summer and the beginning of fall. Meteorologically, the beginning of fall in New England is usually marked by the end of heat waves and thunderstorms, a slow decline in temperatures, and a general increase in windiness. This weekend's weather will be seasonable and pleasant, with sunny skies and temperatures in the 60s and 70s °F.

Sunshine will be abundant this afternoon, but a crisp breeze coming in from the Massachusetts Bay will keep temperatures in the 60s throughout the afternoon. Some showers are expected to pass offshore early tomorrow morning, but southwesterly flow will bring warm air into the area during the day on Saturday. Finally, a cold front will pass through the area on Sunday, bringing with it the possibility of showers, and the return of cooler temperatures for the start of next week.

Extended Forecast

Today: Sunny, high 67°F. Wind E at 5-10 mph.
Tonight: Clear, low 55°F. Wind N at 5-10 mph.
Tomorrow: A chance of morning showers; otherwise mostly sunny, high 78°F. Wind SSW at 10-15 mph.
Sunday: Partly cloudy with a chance of showers. Highs in the low 70s °F.
Monday: Sunny, highs in the mid 60s °F.



Situation for Noon Eastern Time, Friday, September 21, 2012

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*

Spanish leader fails to reach revenue deal with Catalonia

By Raphael Minder
THE NEW YORK TIMES

MADRID — Spain's prime minister, Mariano Rajoy, already under pressure from his European counterparts to clean up Spain's banks and public finances, failed Thursday to ease what has recently turned into his biggest domestic political challenge — a separatist push by the nation's most economically powerful region, Catalonia.

Catalonia's leader, Artur Mas, accused Rajoy of losing a "historic opportunity" to safeguard the relationship between his region and the rest of Spain, after they could not reach agreement on a new tax revenue redistribution plan. Mas warned that Rajoy's refusal to negotiate any tax changes was likely to increase resentment toward the Madrid government among Catalans, especially after hundreds of thousands of them gathered for a giant pro-independence rally in Barcelona on Sept. 11, the anniversary of a Catalan defeat at the hands of Spanish troops in 1714.

"The people and society of Catalonia are on the move, as we have seen on Sept. 11, and not willing to accept that our future will be gray when it could be more brilliant," Mas said at a news conference here.

Just as Rajoy's government finds itself on the front lines of the euro crisis, Catalonia, which accounts for almost a fifth of Spain's economic output, has moved to the fore of Rajoy's domestic challenges.

"The demands from Catalonia have developed a lot faster than anybody expected," said Jordi Alberich, director general of the Cercle d'Economia, a Barcelona business organization. "A difficult crisis situation for Mr. Rajoy has just now got a lot more complex."

Violence over video continues in Pakistan

By Salman Masood
THE NEW YORK TIMES

ISLAMABAD — On the eve of a public holiday to protest an anti-Islam video made in the United States, thousands of demonstrators battled with police officers for hours on Thursday near the capital's diplomatic quarter, and the U.S. Embassy broadcast advertisements on local television stations showing U.S. leaders denouncing the video.

The ads, a public relations effort to tamp down anti-American sentiment, featured clips of President Barack Obama and Secretary of State Hillary Rodham Clinton criticizing the YouTube video, which depicts the Prophet Muhammad as a womanizing buffoon.

The clips, which carried the official seal of the U.S. Embassy in Islamabad, were broadcast in English and subtitled in Urdu, the national language.

The failure of the police to stop demonstrators from assembling near the U.S. Embassy and other diplomatic missions left the government scrambling. Its ministers blamed opposition political parties and banned militant groups for instigating unrest.

The State Department issued a travel warning advising Americans to avoid travel to Pakistan.

Some viewers had a lukewarm response to the American ads.

A security analyst based in Karachi, Pakistan, who spoke on the condition of anonymity, said, "The messages do not matter because all those instigating or supporting the protests benefit from the publicity of the protest."

Rao Zahid, 30, a government employee in Islamabad, said: "The video message is a cover-up. Google did not ban the video in America. No case was registered against the producer. If the American government wanted, it could have done a lot."

In Los Angeles on Thursday, a judge refused to order YouTube — which is owned by Google — to remove the video.

Pro bono work now required to practice law in New York

NEW YORK — The state's chief judge on Wednesday announced the details of a new rule — the first of its kind in the nation — requiring law students to perform 50 hours of unpaid work as a condition of practicing in New York.

The rule requires law students to do pro bono work for the poor, nonprofit or civil rights groups or any of the three branches of government, between the first year of law school and the time they apply for a license.

The work can be performed anywhere in the world, but students must be under the supervision of a practicing lawyer, a judge or a member of a law school faculty. The rule goes into effect for new students in law schools Jan. 1.

When Judge Jonathan Lippman proposed the rule in May, some in the legal community said it might be burdensome for new lawyers in a tough economy. Others voiced concerns about using those new to the profession to fill what Lippman calls the justice gap: the growing number of people who cannot afford legal services.

But an advisory committee that formulated the final version of the rule answered some of those criticisms: Students have three years to complete the work and they must be under the counsel of more experienced lawyers.

—Mosi Secret, The New York Times

British government blocks disclosure of alleged spy links

A slow-moving effort to hold an inquest into the poisoning death of a Russian whistle-blower, Alexander V. Litvinenko, moved ahead Thursday with British authorities insisting in a preliminary hearing that possible contacts between him and the British secret intelligence service MI6 should not be disclosed.

Litvinenko, a former KGB officer and critic of the Russian authorities who had won asylum and citizenship in Britain, died in November 2006 after ingesting a rare radioactive isotope, polonium 210, from a teapot at a meeting with Russian contacts at the Millennium Hotel in Grosvenor Square in London.

Litvinenko's death, coinciding with other strains between London and Moscow, chilled relations between Britain and Russia, leading to tit-for-tat expulsions of diplomats reminiscent of the cold war. Russia's refusal to hand over the man accused of killing Litvinenko has since stymied efforts to restore normal ties.

British prosecutors are seeking the extradition of the suspect, Andrei K. Lugovoi, another former KGB officer who was present at the meeting at the Millennium Hotel, to face murder charges. Lugovoi, who is now a member of the Russian Parliament, has denied any wrongdoing. Russian authorities say their Constitution forbids extradition of their own citizens.

—Alan Cowell, The New York Times

OPINION OPINION OPINION OPINION OPINION OPINION OPINION OPINION

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LETTERS TO THE EDITOR

The distinction between the actual Obama and his myth

This is a response to the opinion piece "Detroit: Obama's economic blueprint for America" published in *The Tech* on Sept. 14, 2012 by Keith Yost. I found a few factual inaccuracies in this article. Another issue with this article is with what is not mentioned, thereby painting an inaccurate picture of the topic at hand. It is also amusing to note how so many commentators still feel, after almost four years of hopelessness and changing promises, that President Obama and the Democrats are not shills to corporate America, all evidence to the contrary.

Mr. Yost first talks about the bailouts to Wall Street. The fact that the U.S. housing bubble and the gambles of Wall Street mainly caused the financial crisis is ignored. Instead, Mr. Yost tells us that with TARP, the U.S. government is helping docile corporations recover from "a global financial crisis." Also, a misleading claim that the TARP is making its money back plus interest is put forth. While the money is being recovered, only a total of $360.94B has been received (including a paltry $2.26B interest), out of a total of $416.98B disbursed. The lifetime cost of TARP to taxpayers is estimated to be $63.49B. These funds are for helping out homeowners, and were not designed to be recovered. A fact left unmentioned is the other corporate handouts made, not under TARP, but through other ways. An analysis by the Bloomberg Market magazine showed that the Federal Reserve had committed $7.77 trillion in March 2009 to bail out the banks. This far exceeds the TARP funds. The frauds committed by bankers with TARP funds are a different story altogether.

Mr. Yost then seeks to contrast the "success" of the Wall Street bailout with the "failure of cosmic proportions" of the bailout of the U.S. auto industry. Putting the blame for the 2008-10 crisis in the automotive industry on the shoulders of the United Auto Workers (UAW) union is a convenient excuse for many. Factors such as high oil prices in 2008, a weak U.S. economy, and high interest rates apparently only affect automotive industries in other countries. In the U.S., however, the UAW is to blame for all the miseries of Detroit. Ignored is the fact that the U.S. auto industry, even after the oil shocks of the 1970s, fails to produce more fuel-efficient vehicles.

Then we come to the question of job additions attributable to the auto industry bailout. The thinking that the factories of GM and Chrysler would not idle during bankruptcy proceedings is flawed. Potential car buyers are unlikely to buy a GM or a Chrysler car if they see that the company is going under the water, because they most reasonably expect to receive no service or parts support in the future. Mr. Yosts's claim about job additions — 4,500 jobs added by GM — is also misleading. According to the U.S. Treasury, the U.S. auto industry as a whole has added more than 230,000 jobs after GM and Chrysler emerged from bankruptcy. It is important to look at the total number of jobs added to the auto industry. If GM had gone bust, many of its suppliers, too, would have gone out of business, which would affect other car makers as well. When GM does well, so do other car makers and industries.

A compelling myth exists that Obama is the savior of the middle class, of the poor, the elderly, and a scourge of Wall Street and the big corporations and their unscrupulous ways. Obama's political favoritism is evident, but his favor extends to pretty much the same corporations and the neoliberal policies, whether domestic or international, that George W. Bush (or Mitt Romney for that matter) espoused. Time and again, Obama has shown that he is the representative not of citizens, but of Monsanto, JP Morgan, Goldman Sachs, Big Pharma, Big Oil, insurance companies and other corporations/industries. The recent strike in Chicago between the teachers' unions and Obama's former White House chief of staff and now Chicago mayor, Rahm Emmanuel, shows Obama's and the Democrat's true attitudes towards unions — a disposable entity except at times of crucial elections.

Sumant Raykar is a graduate student in course 2

GUEST COLUMN

Living up to MIT's land grant commitment

By Addison Killean Stark

150 years ago this summer, the U.S. Congress passed a bill introduced by Vermont representative Justin Morrill, which provided for "the endowment, support and maintenance of colleges of agriculture and mechanic arts." Shortly thereafter, President Abraham Lincoln signed the Morrill Act into law, ushering in the development of one of our nation's greatest achievements — the nation's land-grant colleges and universities, the precursors to today's public higher education system. From the great public institutions of the upper Midwest (think the Big 10 and Big 12) to the University of California system, the Morrill Act called on the states to provide colleges where the "industrial classes" (had Mr. Morrill introduced this bill today he would have likely written "middle class") could pursue a "liberal and practical education" in the agricultural and mechanical arts. The intent is excerpted from the original Morrill Act:

"…The moneys so invested or loaned shall constitute a perpetual fund, the capital of which shall remain forever undiminished, and the interest of which shall be inviolably appropriated, by each State which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts…"

The state legislature of Massachusetts designated two land grant institutions: the University of Massachusetts Amherst, and our academic home, MIT. The imprint of Morrill on our institution can be readily seen in Lobby 7, where it is written: "Established for Advancement and Development of Science its Application to Industry the Arts Agriculture and Commerce."

Unfortunately, MIT is not living up to these goals set forth by the Morrill act, and we as an institution are therefore missing a great opportunity to contribute to one of the great challenges of our age. Take, for example, the sole land grant institution among MIT's self-selected peers, Cornell University. At Cornell, the College of Agriculture and Life Sciences was created in 1874 in accordance with the provisions of the Morrill Act, and the college currently provides 23 degree-granting majors, from Plant Biology and Animal Science to Natural Resources and International Agriculture and Rural Development. These courses of study and research are what the Morrill Act envisioned, and are at the forefront of understanding some of tomorrow's global challenges.

Today, the production of food and other agricultural products constitutes one of, if not the, largest engineered systems in the world. According to the World Bank 37.7 percent of global land area is currently under use for agricultural purposes. And with a growing global population this percentage will necessarily increase. Indeed, the human agriculture system is an engineered system at a planetary scale.

The current global agricultural system constitutes the nexus of biological, chemical, civil, environmental and mechanical engineering. From the development of genetically engineered crops to the diversion of entire rivers to irrigate desert areas, the continued development of our global agricultural system constitutes a multiscale and disciplinary problem with which MIT should engage. It is imperative that our agricultural system grows fast enough to provide food for a growing global population while the trade-offs of land use, water and ethics are addressed. These challenges are large and complex, and perfect for the talented students, faculty, and staff of MIT.

At this time of realignment of our institutional initiatives, it behooves President Reif, Provost Kaiser, and the faculty to consider the addition of a course of study and research in agricultural science and engineering as a way to meet the word of the law and justify MIT's designation as a land grant institution, but more importantly, to begin to engage in this great challenge of our time.

Addison Killean Stark is a graduate student in Course 2

CORRECTIONS

An article published Tuesday about Peer2Peer incorrectly listed Nightline's hours as 8 a.m. to 8 p.m. — it is actually 8 p.m. to 8 a.m.

OPINION POLICY

Editorials are the official opinion of *The Tech*. They are written by the Editorial Board, which consists of Chairman Aislyn Schalck, Editor in Chief Jessica J. Pourian, Managing Editor Connor Kirschbaum, Executive Editor Ethan A. Solomon, and Opinion Editor Andy Liang.

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

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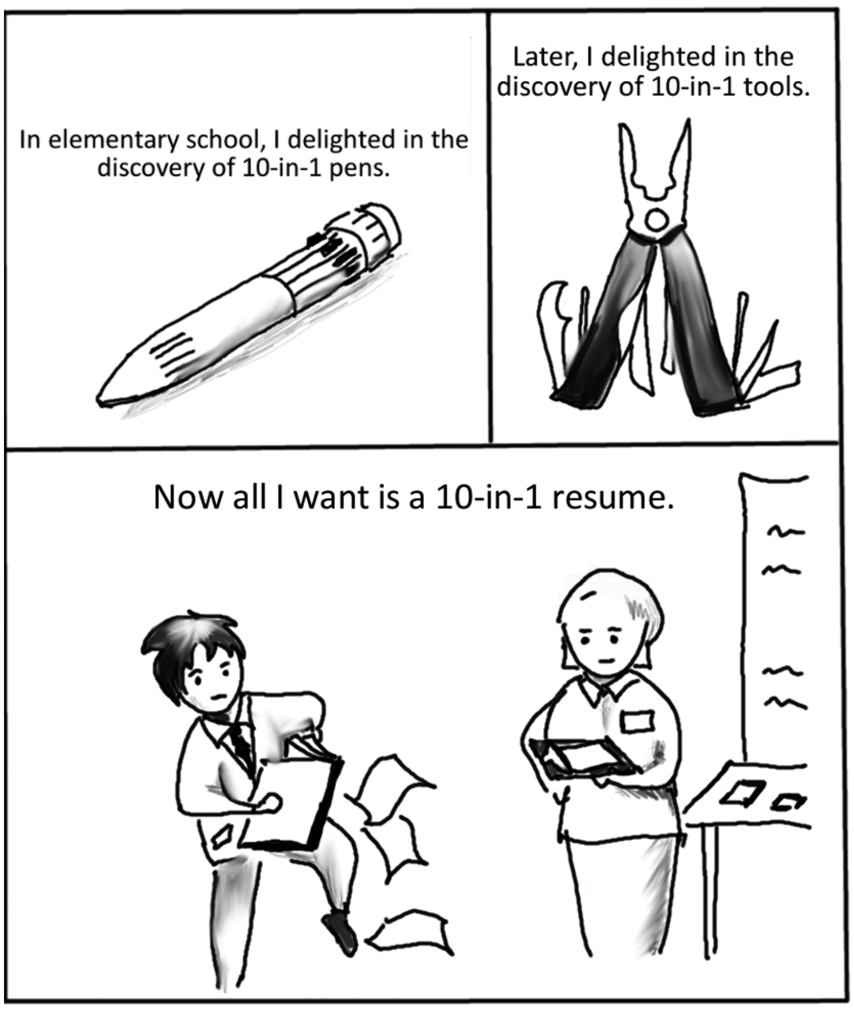
Beaver Tails by Ranbell Sun

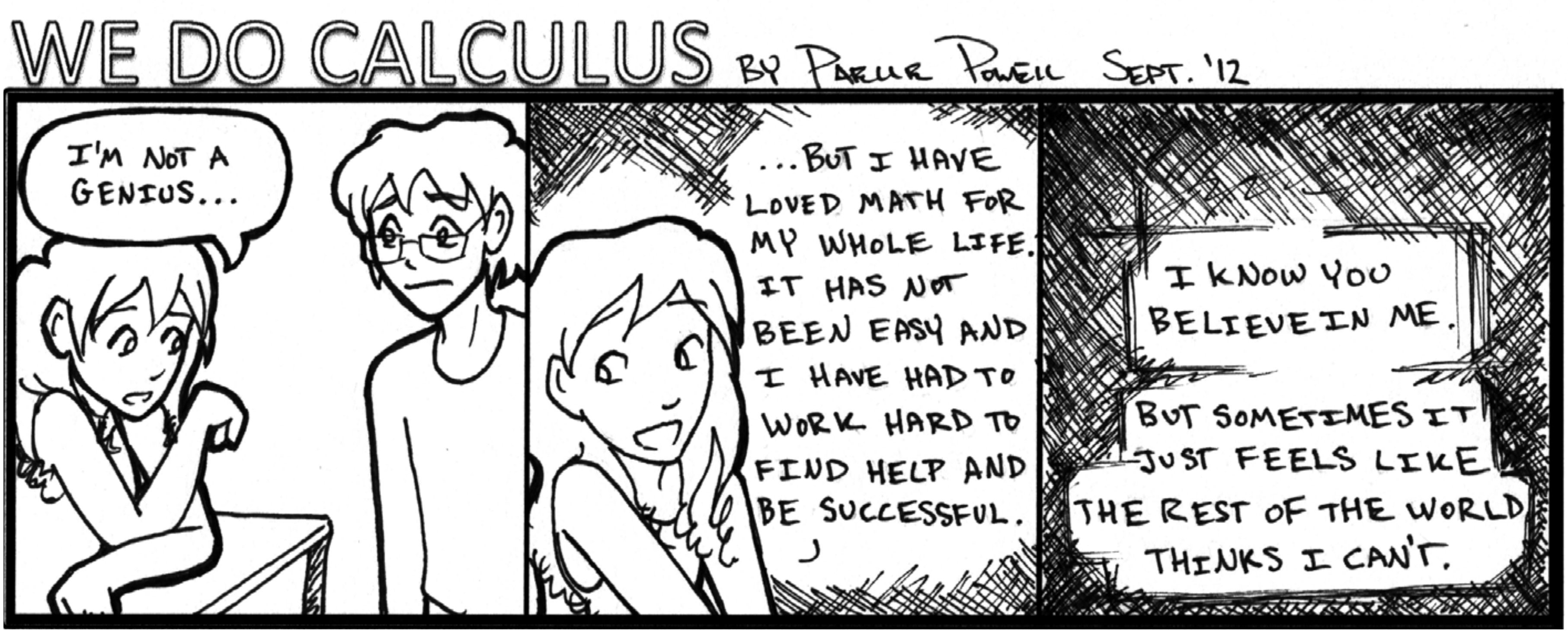


Sudoku

Solution, page 12

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

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.

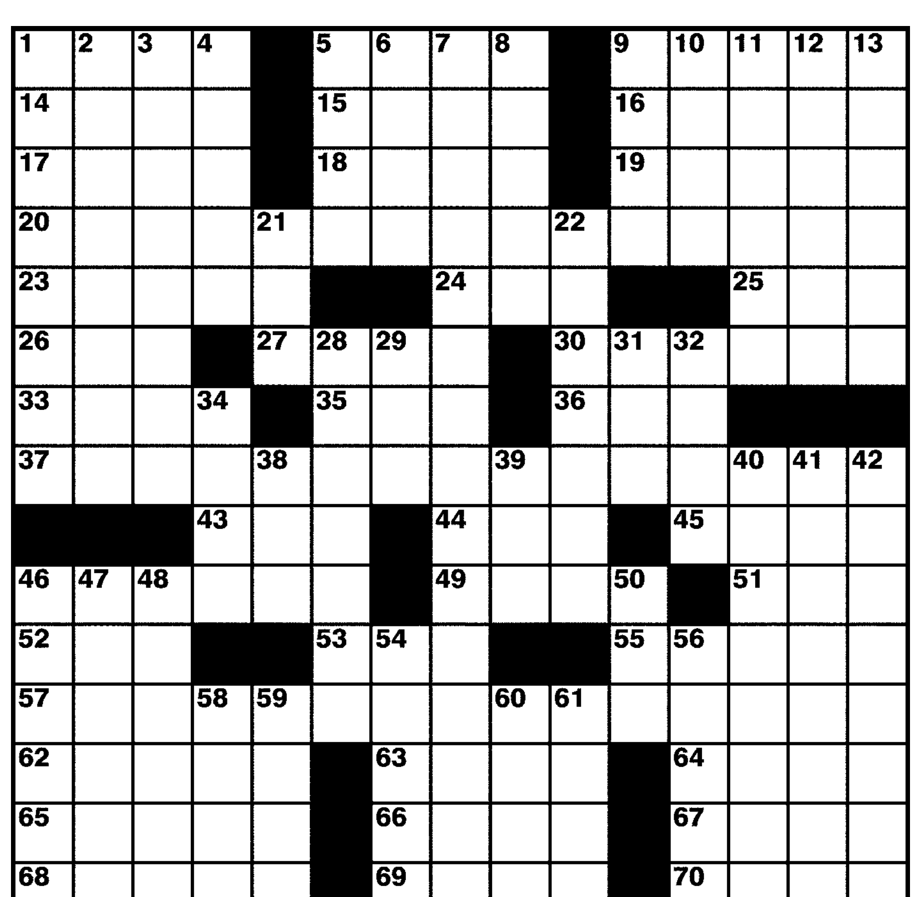


Shifting Sands by S.N.

Solution, page 12

ACROSS
1 Military rounds
5 Chocolate shape
9 Family members
14 Rhinelander's refusal
15 Foot part
16 Cricket sound
17 Castaway's home
18 Lawn-Boy rival
19 Copy room supply
20 Biblical epic film of 1959
23 Slate, for one
24 Three-way pipe connector
25 Aladdin prince
26 Very long time
27 Soft mineral
30 Bizet opera
33 What you eat
35 NASCAR stat
36 Tumult
37 Watches one's pennies
43 Antagonist
44 Eleanor Roosevelt, __ Roosevelt
45 Tomato type
46 Select
49 Prescribed amount
51 Sort of record book
52 Cry of contempt
53 Printer's widths
55 Photo finish
57 Overexertion
62 End of a kindergarten tune
63 Barrel of laughs
64 Computer accessories
65 Tie-up
66 "__ hollers, let . . ."
67 Cupid alias
68 Overly full
69 Miles away
70 Cozy places

DOWN
1 Sambuca ingredient
2 Era when dinosaurs were dominant
3 Hat designer
4 Two-run homer requirement
5 Green Hornet's aide
6 Nutritive mineral
7 Microfragrance technology
8 Was brilliant
9 Variety performances
10 "The party's over!"
11 Frequent day-shift start
12 High-pitched
13 Ankle mishap
21 Ran into
22 Very long time
28 Current measures
29 DJ's inventory
31 Paid notices
32 Surf sound
34 Spat
38 Speak with a Jersey accent?
39 It means "recent"
40 Candide author
41 Virtual face
42 Wisdom
46 Dwell (on)
47 Antique coating, perhaps
48 Ultimatum
50 Paramedic, for short
54 Sound of Music heroine
56 Not "clean"
58 Word on Irish euros
59 Auctioneer's last word
60 Capital of Qatar
61 Occupational suffix



Ig Nobel awards for ponytails and coffee spills

That weird feeling of the Eiffel Tower looks smaller if you lean to the left, explained!

Ig Nobel, from Page 1

need for proper surgery preparation for colonoscopies.

Rousal Krechetrikov won the Ig Nobel Prize for Fluid Dynamics for his work on why people spill coffee. He said he was inspired watching his colleagues attempt to return to their seats with coffee while at a conference. Krechetrikov found that the natural frequencies of the oscillations of coffee are on the same order as the frequency of a step.

The Ig Nobel Prize in Physics was awarded to two projects. The first project was led by Ray Goldstein, a professor of Applied Mathematics and Theoretical Physics at Cambridge University; Robin Ball, a Professor of physics at the University of Warwick; and Patrick Warren, an employee at the company Unilever. They were awarded the prize for solving the mathematical problem of the physics of the ponytail, drawing upon principles from condensed matter physics and fluid mechanics. Goldstein said that by using variables such as elasticity and linear mass density, they were able to model the ponytail by a differential equation, the solutions of which provided insight into what was going on inside the hair. The group said that their model for bundles is somewhat analogous to the Navier-Stokes model for fluids.

The other award-winning physics project was led by Joseph Keller, a professor emeritus of mathematics and mechanical engineering at Stanford University, with his work on the motion of ponytails. Keller said he was inspired by noticing that the ponytails of joggers on campus swung back and forth despite the fact that their heads were bobbing up and down. He found that if the frequency of the ponytail was around half of the frequency of the jogger's steps, the side to side motion would occur.

A group of four scientists shared the Ig Nobel Prize for Neuroscience. Abigail Baird, a professor of Psychology at Vassar College; Craig Bennett, a postdoctoral research at the University of California – Santa Barbara (UCSB); Michael Miller, professor of Psychology at UCSB; and George Wolford, a professor of Psychological and Brain Sciences at Dartmouth University, received the award for imaging work they accomplished while working collaboratively at Dartmouth. While working on a research project about adolescent emotional processing, Bennett said they inadvertently noticed brain activity in the fMRI of a dead salmon. Bennett said that he and Baird were involved in a "one-upsmanship" competition to use more and more obscure objects as a reference for the machine. They did not actually look at the images until years later when Baird wanted to use the results — which she expected to show no signals — to show the strengths of fMRI processing. Instead, the pictures showed they found brain activity as a result of a lack of strong corrections. After running the proper corrections, the activity disappeared.

Other winners included Frans de Waal, a biologist at Emory University and Jennifer Pokorny a researcher at Emory, who won the Ig Nobel in Anatomy for his work showing that chimps can match the behinds of other familiar chimps to their faces. The two were trying to determine whether chimpanzees can interpret gender from appearance. Rouslan Krechetnikov and Hans Mayer received the award in Fluid Dynamics for their work analyzing why coffee spills using theories of periodic and statistical citations.

> **Earland and Zwaan — the only winners not in attendance — could not come to the ceremony because of their upcoming wedding later this weekend.**

Anita Eerland, Rolf A. Zwaan, and Tulio M. Guadalupe received the Ig Nobel in Psychology for their work showing that the Eiffel Tower looks smaller if you lean to the left. Earland and Zwaan — the only winners not in attendance — could not come to the ceremony because of their upcoming wedding later this weekend.

While some of the projects recognized in the ceremony may seem initially frivolous, they often have broader applications to the scientific field. For instance, Krechetnikov said that he hoped his work with coffee would help him develop models for actuated boundary layer flow systems. Bennett and his colleagues said that their research highlighted the importance of corrections in imaging in their field and will help increase the accuracy of data.

The winners said that they were generally pleased to be recognized for their work. Keller said, "It's great fun. It's nice that people recognize this type of work." He added that their project had broader applications and that he hoped it would help stimulate interest in the sciences.

Wolford said that the Ig Nobel award was a "capstone experience" and he joked that it was a "good thing to retire on." Soussan said that he enjoyed the event because it was both serious and funny.

Another highlight of the ceremony was a series of 24/7 Lectures, in which distinguished speakers were allowed 24 seconds to provide the audience with a clear description of their field and then present a seven-word summary. Scientist Erika Ebbel Angle summarized mass spectrometry as "It weights the bits in your gunk" and Nobel Laureate Rich Roberts used his seven words on arsenic-based life to say that "Only assholes believe arsenic can support life."

The ceremony also included an opera about the universe, two grand airplane deluges, a "win a date with a Nobel Laureate" bit, and several Moments of Science.

The winners recognized at the ceremony will talk about their work and answer questions during the Ig Informal Lectures on Saturday, Sept. 22 at 1:00 PM in 10-250. The event is free and open to the public.

Woodie reminisces

Gracious professionalism in 2.70

Flowers, from Page 1

high-quality work, emphasizes the value of others, and respects individuals and the community."

Woodie has seen cases in which teams pitch in to help other teams in times of need, even though these teams could be competing against each other in future matches.

"The satisfaction from lending tools to a team is one thing," said FIRST participant James MacArthur in a written account of his experiences of the 2012 Orlando regional competition. "However, actually helping out a fellow team impressed many people, mentors, volunteers, and students."

Each year, over 50,000 high school students participate in FIRST. Even more staggering is the statistic that 10 percent of each MIT freshman class participated in the competition when they were in high school. Teams must build a robot using a set number of supplies to perform a task determined by FIRST that changes every year. Last year, competitors needed to build a robot that could score the most basketballs in a two minute and fifteen second match.

FIRST is not the only place where Flowers has seen gracious professionalism. The 2.70 Introduction to Design class that he taught for more than two decades (now 2.007) also gave students the chance to express their camaraderie and willingness to help each other. At the end of the course, the class had a culminating competition — an event so popular that the alumni jokingly called it MIT's version of homecoming.

In its 150-year celebration of the Institute's history, the MIT Museum named 2.70 as MIT's most famous class, partially because of this competition. Over the years, Flowers has seen ingenuity, failures, and above all, graciousness.

"In 2.70, I had asked the students to act as if all that they did in the course would be seen by their grandmothers in a nationally-televised documentary," said Flowers. "They got it and did exactly that. They did engage in trash talk and teased one another, but the overall tone was to help each other and teach others everything they learned."

Although Flowers recently retired as a professor at MIT, he still involves himself in MIT affairs. He cares deeply about students, and doesn't hesitate to give advice.

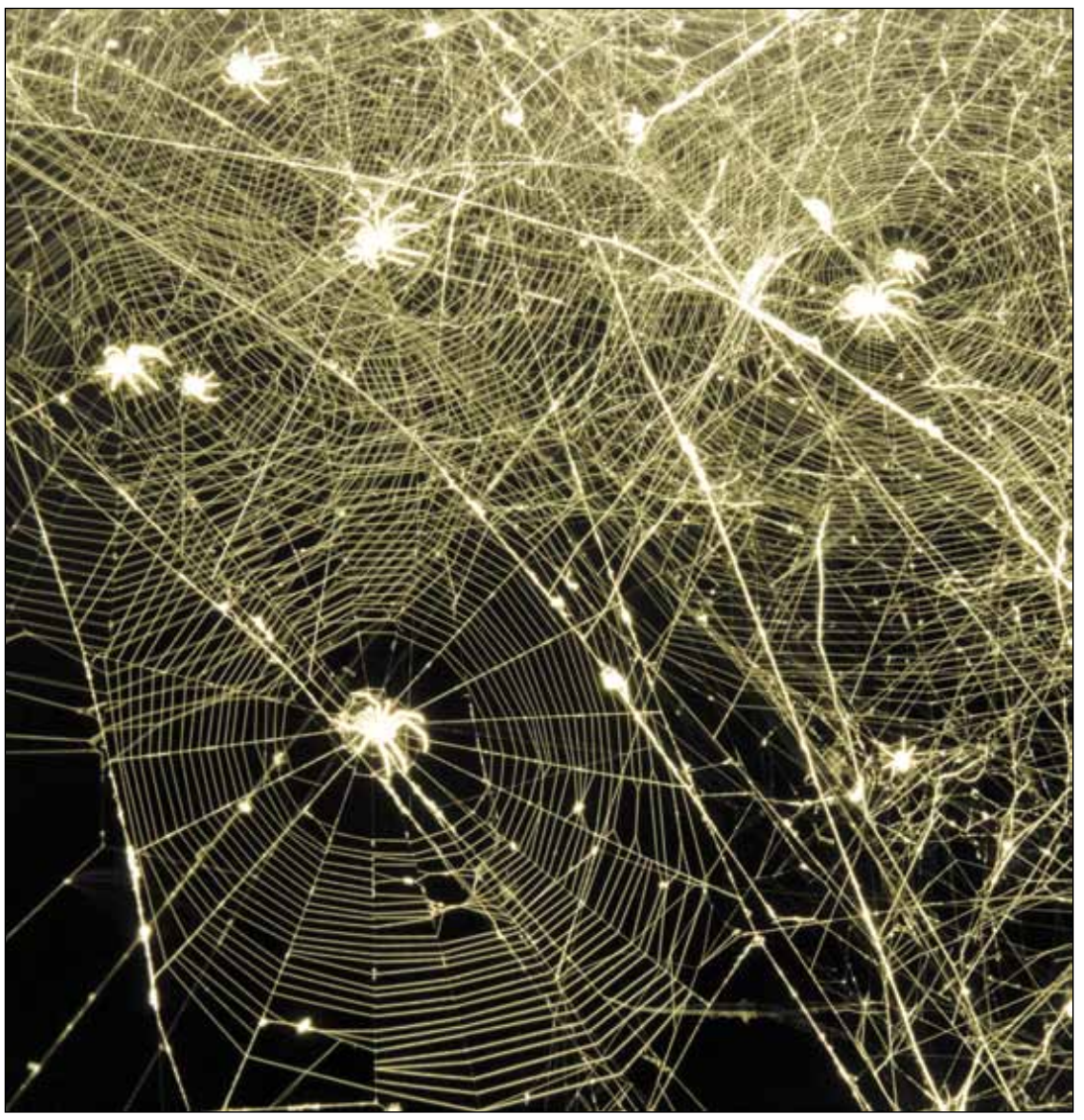
"MIT is a reasonably gracious meritocracy. Sometimes, it is a very tough meritocracy," said Flowers. "I knew when I walked into the room with you that you're smart, and ambitious and multi-layered and interesting. And when you're with a group of your colleagues ... that's true with them too — cherish that diversity."

Flowers often likes to compare MIT to steamrollers and candy stores; he believes that students choose what their experience in college will be like. It can be either four years of hard, relentless stress, or four years of interesting, rewarding work, depending on the student's mindset.

"While you're here, an essential part of the candy store is the other people that are shopping. You must pay attention to them and what's in their market basket too," said Flowers. "Talk about what they've paid [for]."

It seems like MIT is as good of a place as any to learn from peers, be it gracious professionalism or something else.

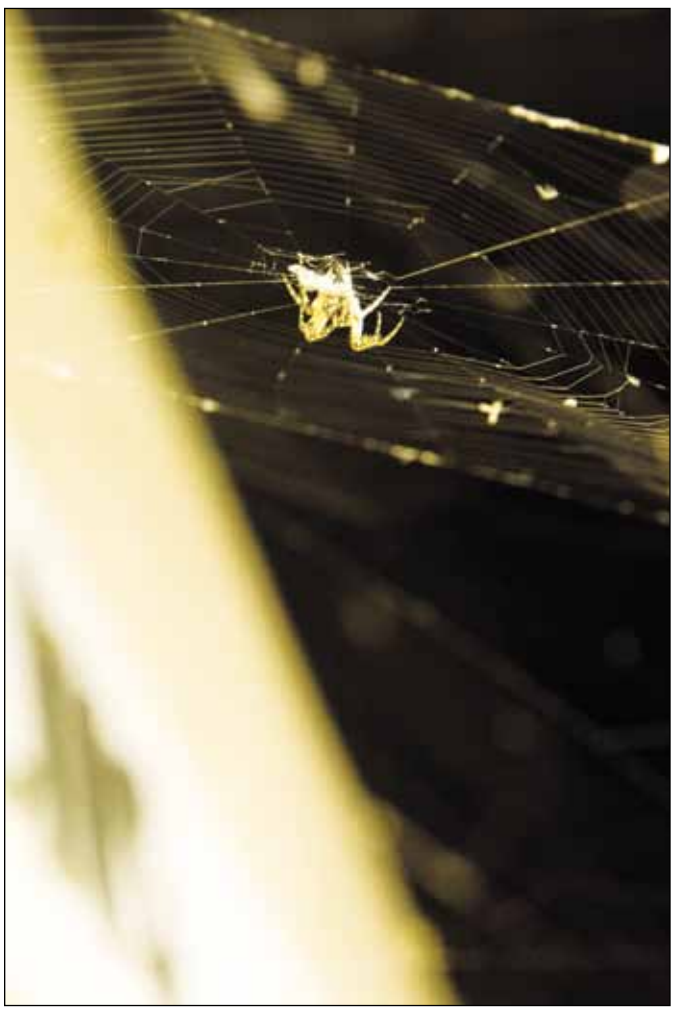
Institute Double Takes



By David Da He

While Tim Berners-Lee may have created the World Wide Web, dozens of spiders have been busy making their own webs under the lamp that illuminates the MIT Stratton Student Center sign.

Aperture: *f*/18
Exposure Time: 2 sec.
Sensitivity: ISO 800
35mm Equivalent Focal Length: 160mm



By Arthur Petron

Spiders have taken over the east side of W20. The spiders create their webs near the lights in order to catch the bugs that are attracted to them.

Aperture: *f*/6.3
Exposure Time: 1/50 sec.
Sensitivity: ISO 2500
35mm Equivalent Focal Length: 66mm

At fac. meeting, Slocum compares Reif to Wife

AS TRANSCRIBED BY JOHN A. HAWKINSON:

Avast Ye Tech Geekies
Let's show the world we are not just mental freakies

Let's earn and show our worth
By thinking *really* big,
Helping to save the planet Earth

It starts with centuries ago, the Charters of Freedom* were written
So all citizens of a new country could be free to think and speak and not be smitten

These documents have infinite potential power
With them true freedom can flower

But they are also very fragile
For they are useless if they are kept hidden and the citizens are in denial

For the documents of freedom
With our minds, my students and I designed environmental encasements
And then with our hands
(mens et manus)
we made them and installed these documents in special emplacements

These great original documents
(we did the originals)
are now on display for all to see
so people can learn how to be truly free

The same can be said for MIT
As it is the supposed place for great thinkers to be

For anything that affects how we work and live
True leaders must not take, but give

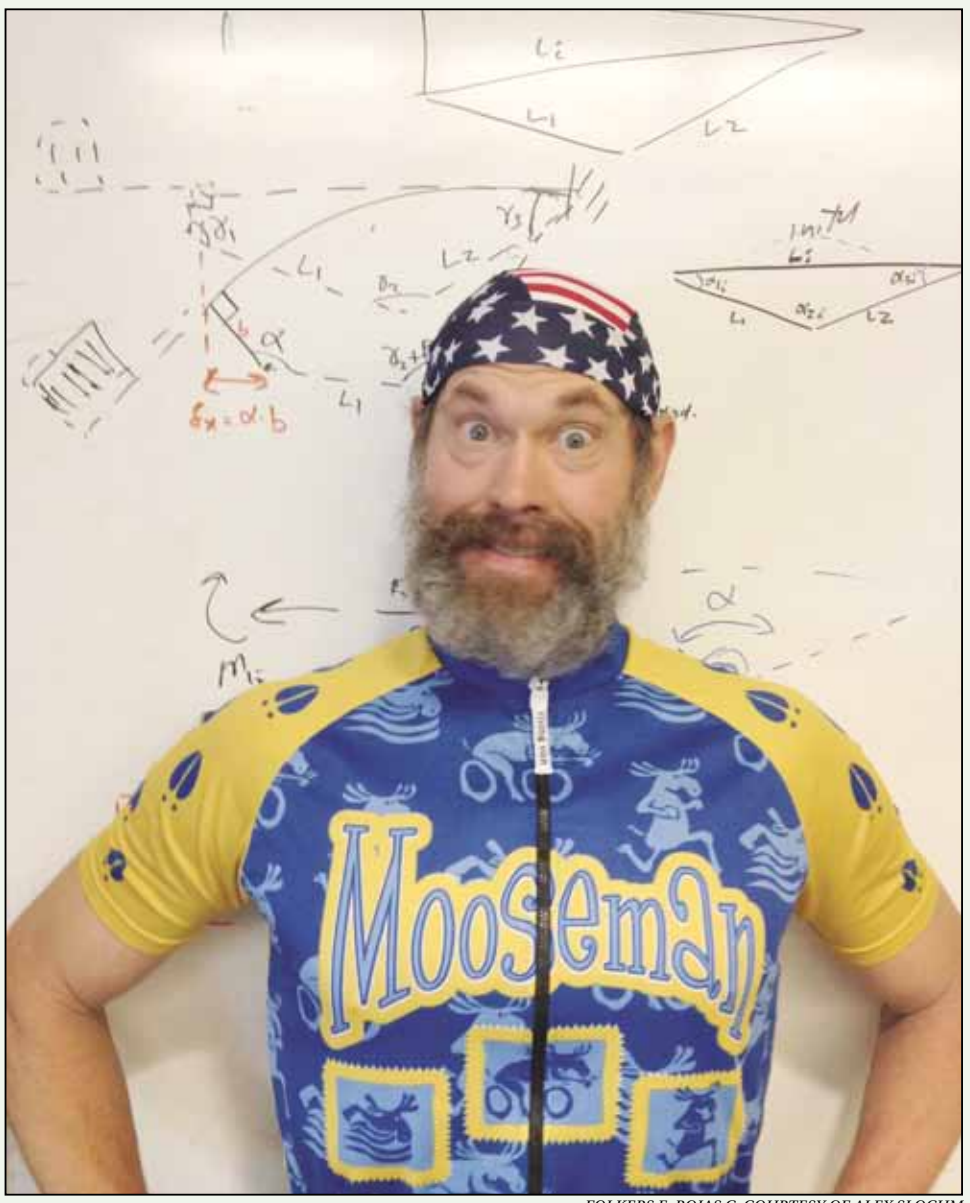
Complete openness and debate must happen a priori
Our leaders, who come from us, must not rule by decree

Open debate, and welcoming of questioning, is not enough
It takes vision, compassion, and humility to be truly tough

So here's to our new fearless leader Rafael Reif!
Whose wisdom and power and goodness is almost as great as that of my spouse
(wife)

They both *(I hope)* understand the depth of my love for MIT
For I have forever betrothed myself to thee
(so just let me know what you need to do
to help out, dudes)

* See *http://www.archives.gov/exhibits/charters/* and *http://www.sec.state.ma.us/mus/museum/index.htm* and *http://dspace.mit.edu/handle/1721.1/65279* (PhD thesis on the design of the encasements).



FOLKERS E. ROJAS G, COURTESY OF ALEX SLOCUM

Prof. Alex H. Slocum '82 poses in his American flag do-rag. Slocum read this poem at the close of Wednesday's faculty meeting, in honor of International Talk Like a Pirate Day and the first faculty meeting of the Reif/Kaiser administration. Slocum calls this his "super-excited positive thoughts for a new administration (and MIT) to infinity and beyond."

MOVIE REVIEW

Finding friends in robots

Amid laughs, *Robot & Frank* provokes discussion about the future of social robotics

By Zahra Hirji

Robot & Frank is not your standard science fiction flick. It doesn't ooze with dramatic futuristic visions or sexualized characters — instead, it is a stunning masterwork of subtlety. Set in a small town in the near future, the charming and conniving retired cat burglar Frank (Frank Langella) is struggling with dementia. Left to his own devices, his house and his memory are in complete chaos. Confronted by the gravity of the situation, Frank's concerned son Hunter (James Marsden) buys him a live-at-home health care aid robot (voiced by Peter Sarsgaard) to assist Frank.

Frank is enraged by the idea of having a robot nanny; a particularly hilarious scene in the movie is full of cursing and dramatic quips about killing robots. To be clear, this movie is not *The Terminator* or *I, Robot*, where robots gain artificial intelligence and revolt against their human makers. Rather, *Robot & Frank* follows the arc of the friendship between Frank and the robot — if you can even call it friendship at all, since technically the robot cannot feel — and the heart of this movie is about a family's difficulty identifying and responding to an aging parent. The film's main conflict, similar to other Sundance Film Festival winners, is rooted in human folly.

> **The heart of this movie is about a family's difficulty identifying and responding to an aging parent.**

At first, the walking, talking, cooking and cleaning robot shines as a live-in caretaker. But, successes in improving Frank's diet and memory capabilities notwithstanding, the robot has stark limitations in its understanding. For example, when Frank asks about stealing, it responds that it has no thoughts on the matter. Frank immediately starts to take advantage of the situation, and the power roles reverse. Rather than take up gardening or cooking, Franks turns his attention to heist-planning and training the robot as his devious sidekick. With a human caretaker, such power play would have been far less likely. This pivotal event begs the question: How much do we really gain — or give up — by outsourcing tasks to a robot?

Frank's daughter Madison (Liv Tyler) obliquely touches upon this point during her preposterous tirade against "machine enslavement." However, the entire plot is a missed opportunity for the director to dive further into the subject, and Tyler's lackluster performance only makes matters worse.

A more riveting performance comes in the form of Frank's love interest Jennifer (Susan Sarandon). Jennifer is the town's librarian and has her own helper robot, which she nicknames Mr. Darcy. Though the town's library is due to close since the owners believe its unnecessary considering all books are available online, Jennifer offers a thoughtful, calm perspective on the matter.

Robot & Frank never takes sides on the ethical and moral issues of social robots; instead, the film offers a suite of situations that provoke the audience to fully contemplate the issue. Amidst a colorful backstory of jewelry theft, love, and family conflict, the magical on-screen chemistry between Frank and the robot provides the meat of the movie's humor and wisdom. Disarmingly charming, this movie is a must-see this fall.

★★★★☆

Robot & Frank

Directed by Jake Schreier

Starring Peter Sarsgaard, Frank Langella and Susan Sarandon

Rated PG-13

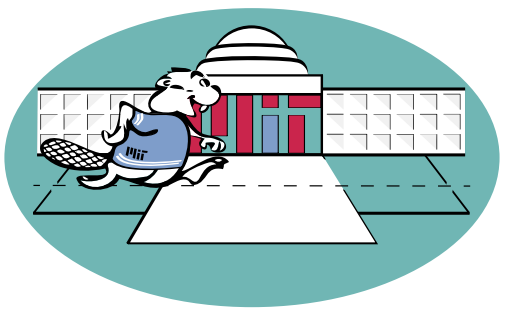
Now Playing

ONE COMMUNITY ■ TOGETHER IN SERVICE

INAUGURATION 2012
COMMUNITY FESTIVAL

SATURDAY, SEPTEMBER 22

Faculty, staff, students, MIT families and friends
All are invited to join the fun!



10 AM

BEAVER DASH

5k and a few smoots to benefit Habitat for Humanity

11:30 AM

AROUND THE DOME CAMPUS QUEST

A scavenger hunt to tackle fun questions and challenges

1 PM

GLOBAL BARBECUE

Food, live music, children's games and activities in Killian Court. All ages welcome!

Registration and full details for the Beaver Dash and Campus Quest:
web.mit.edu/inauguration/events.html

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

RLADs settling in

Permanent offices are being built

RLAD, from Page 1

in September. For example, Baker's housemasters are on sabbatical at the moment, so they wanted to wait until they returned to campus and talked with their students before establishing an RLAD. In the meantime, Baker has acting housemasters watching over the dorm, and the Residential Life and Dining office is supporting their efforts.

Davis was very clear on the role of the RLADs in the residence halls — "It's an extra avenue of support for each building," she explains. "They work collaboratively with residential life programs, but also with housemasters, house managers, graduate resident tutors (GRTs), and resident associate advisors (for those that have them)." The housemasters for several residence halls agree with Davis. Simmons Housemaster John M. Essigmann PhD '76 praises the Simmons RLAD for "easing the burdens of the housemaster." Similarly, Kathryn Hess '95, McCormick's housemaster, calls the RLAD "a huge asset for us, for McCormick, and for MIT."

In McCormick Hall, over the summer, one of the extra rooms next to the dance studio was converted into an office for the RLAD, Lauren Piontkoski. Davis and Humphreys described this office as being in "a prime location" since it was on the first floor, next the very popular dance studio, but also "out of the beaten path," making it both accessible and private when necessary, an important aspect in choosing the ideal location for an RLAD office. However, Davis also said that the offices will need more signs for easier access. New House, on the other hand, needs to build an office from the ground up, so the RLAD, James Reed, currently works in his apartment off-campus. Burton Conner's RLAD currently works in W59, the Residential Life and Dining Office. The new BC housemaster, Professor Anne McCants, believes the RLAD "will be much more visible once the office is moved, and that visibility seems likely to contribute to her capacity to manage issues on a regular basis."

The other RLADs have temporary offices that are meant to be as accessible to students as possible; but. Simmons Hall seems to be experiencing trouble, as the RLAD's office is located directly behind the front desk, next to the mailroom. "While the RLAD's office seems as though it is 'out of the way,' it actually isn't," Essigmann explains. "It was originally designed as the house manager's office and was architecturally designed to allow easy access and confidentiality." However, in previous years, this room was used largely as a storage room for carts and movies. The desk worker accessed the mailroom through this locked storage room. However, since the storage room has been converted into the RLAD office, desk workers are not allowed to walk through the office. Instead, they must use the outer door — previously locked at all times — to the mailroom rather than slipping through the storage room into the mailroom to pick up packages. Since the mailroom now remains unlocked, this could allow anyone to walk in and take packages. Essigmann plans to correct this lapse in security, and also explains that "the plan is to do renovations on the east wall of the mailbox lounge, [to] allow easier access to the RLAD's office," adding that "MIT did not have a lot of time to prepare for the RLAD offices, and I think they are doing a good job dealing with a tough situation."

Very few students seem to know about the new position.

Apart from the ongoing work on the offices, Humphreys and Davis are continuing to work with the RLADs and helping them adjust. "I think the RLADs are going above and beyond in getting involved with the community," Davis said when asked about the current RLAD efforts.

However, while RLADs might be putting on programs, organizing community events, and even eating with students in the dining hall, very few students seem to know about the new position. The majority of freshmen interviewed by *The Tech* — over 20 — either did not know who their RLAD was at all or only received an introductory e-mail at the beginning of the semester, which quickly got lost amid messages from student organizations and calls for clickers and textbooks. Fanqi Gao '16, who lives in Simmons Hall, said, "The RLAD sent out an email during orientation introducing himself, but I never see him around and I don't really know much about where he is and what he does."

When asked about her knowledge of McCormick's RLAD and office, resident Larisa L. Pachuta '15 exclaimed, "I have no idea!" but also expressed an interest in finding out more about the RLAD's role. Yuta Kato '15, a resident of Next House, explained how he knew about the RLAD, but only through his work with the RLAD during REX events, adding, "I don't think I would know who she was without the REX work."

Solution to Crossword

from page 5

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

Solution to Sudoku

from page 5

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

Faculty meeting discusses campus renewal

With $4B of deferred maintenance, MIT increases yearly spending from $20M to $160M

MIT 2030, from Page 1

will look at long-range planning, Allen said.

The committee started out meeting with Provost Chris A. Kaiser PhD '87, Associate Provost for Space Prof. Martin A. Schmidt PhD '88 and Vice President and Treasurer Israel Ruiz SM '01.

It then met with a marathon series of stakeholders: members of the MIT Investment Management Corporation; Prof. Jonathan A. King (Biology), who has been a vocal critic of faculty non-involvement; MIT Corporation Chairman John S. Reed '61 and member Lawrence K. Fish, former chairman CEO of Citizens' Financial; Cambridge City Manager Robert W. Healy; Tim Rowe, CEO of the Cambridge Innovation Center; and, on Tuesday of this week, representatives of the Undergraduate Association and the Graduate Student Council.

GSC representatives expressed concerns about the lack of housing in the plan, and are deeply concerned with the cost of rent. They are also concerned with the lack of transportation to off-campus housing. Even on-campus rents are high enough to cause problems, they said. See the article from five grad dorm presidents in this month's *Faculty Newsletter:* "Concerns over affordability of on-campus housing."

The UA's concerns were focused on the lack of retail options in Kendall that appeal to students.

As of Monday, Sept. 10, the committee was expected to report to the Provost by late September, according to MIT President L. Rafael Reif. But no mention was made this week of that deadline.

Who sees the report?

Whether the report comes out on time or not, there is some question about who will see the report of the Kochan committee. Jonathan King requested at the meeting that the faculty see an interim report from the committee giving its status and expected timeline.

Kaiser, the provost, responded tentatively: "I'm not sure."

In words not calculated to soothe the feathers of ruffled faculty, Kaiser said the purpose of the committee was "advisory" and "I'm not sure what the reaction from the faculty will add."

Some faculty members observed that there would be no way the administration could judge their feedback without receiving it. The meeting moved on.

Academic priority?

During question and answer, Prof. Edmund Bertshchinger, head of the Department of Physics, asked how the administration would coordinate future use of academic space in future construction, not just in renewal.

Schmidt's answer avoided discussing the balance between academic and commercial use of the Kendall space. Instead, he pointed out that the two new buildings MIT is looking at are both on main campus, not in Kendall. They are a new nanofabrication facility replacing Building 12, and an expansion of the Central Utilities Plant replacing Building 41.

Real estate and housing

At the May meeting, King and eight other faculty requested time on the September agenda for a discussion of commercial space priorities (versus academic space) and housing. (Curiously, the minutes of that meeting mentioned only housing, not the space priority issue.)

That was not the topic of the prepared presentation. Instead, Schmidt and Ruiz discussed MIT's deferred maintenance problem. This is an important issue and of keen interest to the faculty, but it is not the issue that the faculty asked about.

"Accelerated capital renewal"

Schmidt, who is responsible for space allocation on campus, gave a detailed presentation on the Institute's deferred maintenance problems. Even recent buildings from the past decade like the Stata Center (Bldg. 32) and Bldg. 46 (Brain and Cognitive Science) need more money for maintenance than the Institute currently allocates, and it is falling behind on maintenance which will only be more costly later. Currently MIT spends $20 million per year on maintenance of buildings, Schmidt said.

Schmidt said that the Institute would now be spending $160 million per year on that kind of maintenance, but even then it would be $85 million per year short. The new funding comes from MIT's recent $750 million century bond issue. Schmidt estimated MIT's capital renewal needs at $2.4 billion.

Schmidt, along with Ruiz, presented a categorization of campus buildings and how problematic they are. Each campus building was rated on a five-point scale with labels like "crisis management" (for those buildings with critical problems), "managed care" and "comprehensive stewardship" (a level where buildings are in good shape and expected to stay that way).

In addition to the cost of renovations, Schmidt also expressed that MIT did not really know how to execute many of them, and so much of these expenditures would be exploratory, as MIT learned how to handle the issues. For instance, Building 2 is currently being renovated and is being used to learn how to renovate the main group of buildings.

Schmidt also gave examples of feasibility studies underway which he is using to assess costs: special issues with residential high-rises (Eastgate and Tang), issues with buildings in the northwest quadrant of campus, similar concerns in the buildings facing Vassar Street in main campus (the 30s), and a special issue with Chemical Engineering's Building 66.

The feasibility studies are expected to be complete by the end of the calendar year, Schmidt said.

Schmidt was traveling Thursday and not able to provide his slides to *The Tech*.

Other goings-on — Pirate Day

Allen, the chair, announced several changes to faculty meetings this year. Agendas would be more detailed, and the "off-the-record" question-answer section with the senior administration has been eliminated in favor of allocating more time for discussion on each item.

Historically, faculty meetings have been in 10-250, where the empty seats made a regular mockery of the faculty governance process. In order to provide a more intimate setting, the meeting relocated to 32-155, which seats 90. The room was full, with a small number of people standing in the back.

At the end of the meeting, Prof. Alex H. Slocum '82 acknowledged Wednesday was International Talk Like a Pirate Day, and, wearing an American Flag do-rag over his head, offered a dramatic reading of his latest work, "Avast Ye Tech Geekies!" See sidebar, p. 9.

Task Force on Community Engagement in 2030 Planning

On Thursday, Aug. 9, 2012, Provost Chris A. Kaiser PhD '87 announced to the faculty that he had appointed a "Task Force on Community Engagement in 2030 Planning."

The committee is charged with advising the provost about "decisions related specifically to the development of MIT property in Kendall Square" as well as figuring out how to engage the MIT community in the MIT 2030 decision process.

Membership:

Thomas A. Kochan, Management, *committee chair*
Samuel M. Allen PhD '75, Materials Science
Xavier de Souza Briggs, Urban Studies and Planning
Peter H. Fisher, Physics
Dennis M. Frenchman MCP '76, Urban Studies and Planning
Lorna J. Gibson, Materials Science
William C. Wheaton, Economics, Center for Real Estate
Patrick Henry Winston '65, Electrical Engineering and Computer Science

SPORTSSPORTSSPORTSSPORTSSPORTS

National Football League predictions: week three

Steelers over Raiders (27-13), tight win expected from Patriots over Ravens (20-17)

NFL, from Page 16

Prediction: 30–24 Redskins

St. Louis Rams @ Chicago Bears

Sunday, Sept. 23 1:00 p.m.

St. Louis has been turning some heads this season. Picked by some to win the weak NFC West, they came one drive away from beating a very talented Detroit team and actually did beat the Washington Redskins last week. Chicago, however, will be their toughest test yet. Jay Cutler looked out of it last week against the Packers. In a game that received much hype, Cutler and star WR (wide receiver) Brandon Marshall never showed up, and the Bears were dominated on both sides of the ball. Look for them to right the ship this week.

Prediction: 27–17 Bears

Chicago, however, will be the Rams' toughest test yet.

San Francisco 49ers @ Minnesota Vikings

Sunday, Sept. 23 1:00 p.m.

San Francisco is the real deal. They thoroughly handled Green Bay, and one week later they held one of the best offenses in the league to just 19 points. The 49ers have been cruising through the season on the backs of their defense and outstanding coaching staff, and this week will be no different. Minnesota was disappointing last week, as Adrian Peterson never got himself going, only amassing 60 yards. It won't get any easier when San Fran comes to town. The 49ers should win big.

Prediction: 23–6 49ers

Detroit Lions @ Tennessee Titans

Sunday, Sept. 23 1:00 p.m.

Detroit played a fairly good game last week, but they just happened to be playing against San Francisco. They were dominated in the ground game, allowing 148 rush yards, but don't expect a similar performance this week. Tennessee is not nearly the rushing team that the 49ers are. Chris Johnson has been a complete non-factor thus far this year, racking up a measly 21 yards in his first two games. Detroit should dominate this game.

Prediction: 34-14 Lions

Atlanta Falcons @ San Diego Chargers

Sunday, Sept. 23 4:05 p.m.

Have the Chargers finally figured out the beginning of the season? A team notorious for their bad starts to seasons, San Diego has come out firing, starting out 2–0 for the first time since Norv Turner has been coach. Their success has been mostly due to their suffocating run defense that has allowed only 40 yards per game so far. Atlanta is a tough team, however, especially with Matt Ryan at the helm, and with the dangerous duo of Roddy White and Julio Jones.

Prediction: 30–17 Falcons

Philadelphia Eagles @ Arizona Cardinals

Sunday, Sept. 23 4:05 p.m.

The Eagles pulled out another turnover-stricken nail-biter win Sunday against the Ravens. They will have to play less sloppily at some point if they want to win consistently, as they've already turned the ball over nine times in two games. Although the Cardinals shocked the Patriots and put together a great defensive effort, the Eagles should be able to pick Arizona apart with all of their offensive weapons, and QB (quarterback) Kevin Kolb will face off against his old team for the first time since getting traded.

Prediction: 31–14 Eagles

Pittsburgh Steelers @ Oakland Raiders

Sunday, Sept. 23 4:25 p.m.

The Steelers played a typical Steelers football game against the Jets, with Ben Roethlisberger managing the game and controlling the football, throwing two touchdowns and no interceptions. They also had a strong defense against an impressive Jets offense that set a week one points record the week before. Oakland has been disappointing, to say the least. They were dominated by Miami and allowed 263 rushing yards, including a career high 172 to Reggie Bush. If they have the same defensive play this week against Pittsburgh, Jonathan Dwyer will run wild.

Prediction: 27–13 Steelers

Houston Texans @ Denver Broncos

Sunday, Sept. 23 4:25 p.m.

Although they haven't played against the strongest competition, Houston has looked sharp in this young season. They are getting a lot of production from both of their RBs, Arian Foster and Ben Tate. That's a dangerous sign for the rest of the AFC. Picking Peyton Manning to win a prime-time game used to be a sure thing, but after his career-threatening neck injury last season, that doesn't seem to be the case anymore. Manning threw three interceptions against Atlanta, which greatly contributed to their loss.

Prediction: 24–14 Texans

New England Patriots @ Baltimore Ravens

Sunday, Sept. 23 8:20 p.m.

This could be an AFC Championship preview, as two of the most talented teams in the conference face off in prime time. Both teams lost in the waning minutes of their games Sunday, so they will both look to avenge those defeats. For the Patriots, the bad news is that after one of their worst offensive performances in recent memory against a decent Cardinals defense, they must face off against one of, if not the best, defenses

Atlanta is a tough team, especially with Matt Ryan at the helm and with the dangerous duo of Roddy White and Julio Jones.

in the NFL. The good news is that since the dawning of the Brady/Belichick era, New England has lost back-to-back games only twice.

Prediction: 20–17 Patriots

Green Bay Packers @ Seattle Seahawks

Monday, Sept. 24 8:30 p.m.

This game may be closer than most think. The Packers got back on track against Chicago last week, mostly due to their defense. Their offense, however, still looked week. Seattle throttled Dallas last week as Marshawn Lynch rushed for over 100 yards. They will definitely bring their physical style of play to this game, and they should give the Packers a run for their money as long as Russell Wilson is ready to take Seattle to the next level.

Prediction: 24–20 Packers

Olympic gold medalist dedicates self to coaching

Petrenko focuses 'outwardly' — values training newest generation, improving the sport

Figure skating, from Page 16

Olympic athlete and consummate showman on the ice seems to melt into the wallpaper when talking about his accomplishments.

"That's how it is," he adds smiling softly. Later on he does mention, though, that as a professional skater, he has gone through "every single step (of the ladder), from the letter A to the last letter of the alphabet right to the pedestal."

So considering what it is usually expected to take to survive cutthroat competition and "make it to the top" (in any field), Petrenko is a puzzle.

Mentally reviewing what I had read about the wildly successful but pushy, super-purposeful, crush-everyone-on-his/her path "Type A" personalities, I cannot help but wonder how such a modest, mild-mannered and famously generous person could have pushed through the treacherous frozen waters of world competitive figure skating right to Olympic triumph. Hard work and evident determination aside (he told me he spent much of his childhood practicing and going to skating camps, spending little time with his family), he shows no signs of the transformative effects that reaching the giddy heights of success can have on one's personality, and which in some people transpire as inflated selves and misdirected pride.

He shows no signs of the transformative effects that reaching the giddy heights of success can have on one's personality.

Rather, Petrenko's attention is fully focused "outwardly," on his students, and anyone he feels he can help.

Of course, in elite training, each student's skills and needs are different. Weir's biggest challenge? The indispensable quad (a spinning jump of four revolutions). "For him I think the most important are the technical elements, like the quadruple jump. The rest is the turns, the style, the (other) jumps. He has mastered all of this, now it's a question of time for everything to fall into place," Petrenko said, acknowledging that the sport is becoming more difficult.

On the "interpretation" front, the Russia-loving Weir may well have found his Ukrainian coaches to be a source of inspiration to skate with "dusha" (with soul), as is commonly said in Russian to describe heartfelt artistic rendition.

"At such high level, each student has his strong and not so strong sides, his preferred style, you have to look at this on an individual basis. I personally like to skate at high-speed, when you cover the whole surface of the rink, 'skating large,'" Petrenko adds.

As for the children he teaches, they still have a long way to go, he said, referring to the heights of competition, but they are starting at the right age. "Start early ... and look at how the skaters of previous years were skating. The top place always went to those who mastered their skates, who did wide, steep arcs, clean turns, ... what figure skating really should be like," he recommended.

Petrenko says he can easily spot talent and competitive potential just by looking at how athletes are skating.

Petrenko says he can easily spot talent and competitive potential just by looking at how athletes are skating their elements, and even to which "skating school" they ascribe themselves (American, Russian or other style). With his students he lets nothing pass, save for his daughter whom he admits he lets get away with turning some elements into her preferred variations — "It's harder to train your own child," he admits with a smile. Deploring the decrepit conditions of his original rink in Odessa that had a famed Skating School in earlier times, he says those skaters who could come to Hackensack to train are seeing much better results.

Curious to experience such dedicated instruction and see how a pair of Olympian eyes would assess my progress on the ice so far, I asked him for a short lesson. "For you?" he laughed. But sure enough, at 4:30 p.m. sharp, he was waiting for me before rink No. 2, having added that time to his day's schedule.

Mortified by my irregular steps and turns and other skating missteps, I listened intently. A few inside and outside half circles of forward edges later, the verdict: "Not bad." I definitely need to bend more and correct my posture by pulling in my stomach and everything else. His recommendation for a boots and blades upgrade seems to suggest that he does see some hope for improvement in my nascent skills.

But it is not just with his time

Figure skating, Page 15

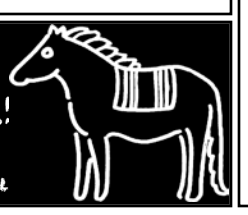


Figure skater reaches out to youth, helps charity

Raised over $300,000 for neo-natal clinic in Odessa, Ukraine with benefit performance

Figure skating, from Page 14

that Petrenko is generous. It is a mindset that reaches many in his orbit.

His role in helping Oksana Baiul reach her own 1993 World and 1994 Olympic successes, when he convinced Zmievskaya to coach the orphan girl in Odessa and financed her training himself, is legendary, but not confined to this one act of brotherly care.

Petrenko helped American pair figure skater Katie Wood recover when she suffered a head injury from a fall during a show in Odessa in 1990, and he brought to her hospital much-needed medical supplies from his own home pharmacy. In addition to these efforts in his immediate circles, Petrenko has also used his celebrity and influence to raise funds and assist international charitable causes. Concerned about the long-term impact of the 1986 Chernobyl nuclear plant disaster in Ukraine, he established relations with the New Jersey-based Children of Chornobyl Relief and Development Fund. In 2001 and 2003 organized two Viktory for Kids ice shows in Connecticut with his figure skating friends to raise awareness and funds for the thousands of children still suffering from the effects of elevated radiation.

Petrenko is more concerned with helping young athletes improve their skills.

"I invited my friends, my colleagues such as Brian Boitano, Sasha Cohen, Tatyana Navka and Roman Kostomarov, and many others, I can't cite them all, but I will always be grateful to them," Petrenko said. In all, about $300,000 were raised, he said, which were used to buy state-of-the art medical equipment and carry out repair in a neo-natal clinic in Odessa, which now bears his name and is still operational today.

The altruistic athlete recounts how when he and his friends arrived at the opening reception of The Viktor Petrenko Neonatal Intensive Care Unit, the chief doctor told him he had just received a call from a neighboring hospital where a sick child fighting for his life could not be saved because they lacked the technology for the needed procedures: "'We have a child here who is dying and we can't save him. But we know that you [have] this new apparatus, so there may be some hope,' the doctor said. So we brought it over to them, and the next day he told us everything was already back to normal (with the child's health)," Petrenko said. "This is something I am proud of, such moments in life ..." he added.

While many skaters have chosen to go into fields such as in the show business and creative media industries (and with unquestionably well-deserved success), Petrenko is clearly more concerned with helping young athletes improve their skills through his expertise. He is not the only professional skater to have gone into coaching, but his decision to devote his time to identifying and shaping new talent and passing on his expertise to the next generation shows he deeply cares for others and for the future of the sport.

When I asked about his own plans, hopes and dreams, his thoughts are once again not self-centered: "My plan is to help my daughter." The teenager has decided not to pursue figure skating — "thank god!" he laughs, and go into professional tennis instead, which allows the attentive father some emotional distance since in his own words, "he doesn't understand anything in the sport."

"It was her choice, that was important," he said.

Next comes cultivating his passion for figure skating, an activity he chose himself, even if it is his parents who first brought him to a local rink. Admitting that, like many little boys, he dreamed of becoming a footballer, he then "realized that this skating, the movements on the ice, the landing of jumps on one foot, all of this I liked very much, there is something really interesting happening, in the course of the jumps, you gather speed, then take off ... and even when you fall, it's still interesting."

These latter words of wisdom from a dedicated learner will surely resonate with the students and researchers at MIT, where "mistakes" are often a source of fascination and potential discoveries (not to speak of all those who work steadfastly to reach their academic and research goals through trials and errors).

Perhaps for Petrenko this is what it's all about, the work, the sweat, the aches, and long hours of personal practice and patient coaching in freezing spaces over all these years: about preparing the way for those who will follow in his steps (or rather his skate marks on the ice), passing on his passion, and giving back to the sport and international community of figure skaters.

May all those at MIT and beyond who are working hard to reach new heights in their academic endeavors be inspired by this exemplary combination of striving for excellence while caring for current and future communities of learners and colleagues. I know this is a beloved approach at the Institute.

And now on to sharpening my skates, right on time for the MIT Figure Skating Club's seasonal opening in just a few weeks. After all, I have been assigned an exercise to practice by an Olympic Champion — no more excuses!

A chat with Viktor Petrenko, figure skating legend

How disciplined practice and community-minded humility got him to the top

By Florence Gallez
TEAM REPRESENTATIVE

After two decades of personal academic labors that included a B.A. degree, two masters, the relative mastery of the Russian language, and lessons for "Adult Beginners" at the MIT Figure Skating Club, and after 25 years of long-distance admiration, last month on Aug. 17 I finally got an in-person interview with my figure skating hero, 1992 World and Olympic Champion Viktor Petrenko at his home ice rink.

Ever since I first laid eyes on his smooth, graceful skating in the 1987-88 competitive season, where he won the bronze medal in the European and World Championships and Olympic Winter Games, I developed a deep-seated desire to take up the sport — a plan I finally fulfilled at MIT in parallel to my program in Comparative Media Studies.

In the early 1990s, I watched on my family TV as the young Ukrainian emerged on the international figure skating scene as one of the best male single skaters in the world. The height and power of his triple jumps, elegant layback spins and ballet-like artistry caught my eyes — and many others'. The classical-styled finesse of his original and freestyle programs in amateur competitions and his hilarious interactions with the audience in his comedic numbers in gala shows (that included inviting people to dance with him on the ice and kissing little old ladies in the front rows) had made him a hugely popular skater, even in the U.S.

Whether as a Ukrainian rapper trip-hopping in a bright red baggy sweater, or the male partner in the "Mambo No.5" "pair number" performed with a life-sized doll strapped around his waist, or the accomplished dancer in the energetic "Do You Love Me" piece sporting a Hawaiian shirt and knee-length shorts that revealed his skating socks and 10 inches of hairy legs, his appearances were all famous for making the ice melt under his feet. But it was his soulful rendition of Schubert's "Ave Maria" for the 1987-88 season exhibition shows that swept me off my feet.

> **But it was his soulful rendition of Schubert's 'Ave Maria' for the 1987-88 season exhibition shows that swept me off my feet.**

These accomplishments and the long hours of on- and off-ice practice under the guidance of his only coach since he was 10 — the famously perfectionist Galina Zmievskaya — have to this day brought inspiration to my own shaky endeavors on the ice, and my first solo number at the MIT FSC's show earlier this year.

With Zmievskaya's ultra-strict instruction, the youngster (who had started skating at age 5 in his native city of Odessa) flourished into a major figure skating talent, mastering his first triple jump at 11, and going on to win the first place at the 1984 World Junior Championships.

Countless competitions and numerous medals later, after World and Olympic triumphs in Oakland (CA) and Albertville (France), 20 years of touring professionally with the U.S. company Champions on Ice, and a relocation with his loved ones to the U.S. in 1994, after reaching the pinnacle of international competition, we find Petrenko in a skating paradise: the four-rink complex of The Ice House in Hackensack, NJ.

Now a busy elite figure skating coach, as well as an International Skating Union (ISU) technical specialist, he trains, alongside Zmievskaya and wife Nina (Zmievskaya's daughter), emerging talent, and Olympic potential of all nationalities. His current students include 2011 Skate America and 2010 Czech national champion Michal Brezina, two-time Ukrainian national champion Natalia Popova, and American figure skater and three-time U.S. national champion Johnny Weir, who earlier this year announced his comeback to competition in the 2012-13 season. Weir has also declared his interest in competing in the 2014 Winter Olympics in Sochi (Russia), a goal he is working on with Zmievskaya and Petrenko.

"I'm only helping," are Petrenko's first words to me (in Russian), in reference to Weir's training, as we sat down for the morning interview in the Ice House's second floor lounge.

While technically true — Weir's website cites Zmievskaya as his "coach;" and Petrenko as "assistant coach" — the World/

Figure skating, Page 14

AKIMITSU HOGGE—THE TECH

Emily Kuo '13 dribbles the ball in the women's soccer game against Roger Williams University on Tuesday. MIT won 1-0.

UPCOMING HOME EVENTS

Friday, Sept. 21

Men's Water Polo vs. Harvard University — *8 p.m., Zesiger Center*

Saturday, Sept. 22

Women's Tennis vs. Mount Holyoke College — *1 p.m., duPont Tennis Courts*

Field Hockey vs. Clark University — *2 p.m., Jack Barry Field*

Men's Water Polo vs. Iona College — *3 p.m., Zesiger Center*

Men's Water Polo vs. Fordham University — *7 p.m., Zesiger Center*

Week three in NFL predictions

Jets likely to overtake Dolphins, Bills and Browns a close call

By J. Austin Osborne
SPORTS STAFF

Tampa Bay Buccaneers @ Dallas Cowboys

Sunday, Sept. 23 1:00 p.m.

After allowing over 500 yards passing to Eli Manning, Tampa Bay has some work to do in their secondary, especially with Dallas' receiving weapons coming into town. That is, if Dallas actually comes to play. Last week, they looked disorganized and confused against Seattle. If they have a similar performance, they will lose to the inferior Buccaneers team. Usually for teams of Dallas' caliber though, games like that do not happen twice in a row. Tony Romo should have a field day.

Prediction: 34–17 Cowboys

Jacksonville Jaguars @ Indianapolis Colts

Sunday, Sept. 23 1:00 p.m.

Blaine Gabbert looked like his old self last Sunday and failed to build on his good start in week one against the Vikings. He threw for just 53 yards and completed less than 50 percent of his passes. Andrew Luck, on the other hand, had a great game in the Colts' victory over the Vikings, throwing for over 200 yards and two touchdowns. If Indianapolis can contain Maurice Jones-Drew (which is a big if), they should earn their second straight victory.

Prediction: 17–10 Colts

Buffalo Bills @ Cleveland Browns

Sunday, Sept. 23 1:00 p.m.

Buffalo was clicking on all cylinders last week against Kansas City. CJ Spiller did an admirable job of filling in for normal starter Fred Jackson, racking up two touchdowns and over 100 yards. Cleveland's offense improved drastically from their Week 1 performance, as rookies Brandon Weeden and Trent Richardson showed why they were such high draft picks. Weeden and Richardson also scored their first NFL touchdowns. The Browns will look to keep improving over the coming weeks, but they still have a lot of work to do.

Prediction: 24–20 Bills

New York Jets @ Miami Dolphins

Sunday, Sept. 23 1:00 p.m.

When the Jets scored in the first quarter against Pittsburgh, it appeared that they might be on their way to another impressive offensive showing. That touchdown proved to be the only one of the game however, as the Jets looked flat for the majority of the game. Their running game was nonexistent and Mark Sanchez only completed 37 percent of his passes. Ryan Tannehill managed the game well, throwing no interceptions, and at the same time allowing Reggie Bush to completely dominate the Raiders' defense with 172 rushing yards and two touchdowns. The Jets defense will pose more of a challenge than the Raiders.

Prediction: 20–14 Jets

Kansas City Chiefs @ New Orleans Saints

Sunday, Sept. 23 1:00 p.m.

New Orleans is in unfamiliar territory. They are 0–2 for the first time since 2007. Although Drew Brees hasn't exactly been his usual unstoppable self, the Saints have been hurt severely by their awful defensive play. They've given up almost 1000 yards over the past two games. Brees should be able to take advantage of Kansas City's fairly porous secondary, especially if CB (center back) Brandon Flowers is feeling some lingering effects of his foot injury. This should be a shootout, especially on the speedy turf of the Superdome.

Prediction: 41–31 Saints

Cincinnati Bengals @ Washington Redskins

Sunday, Sept. 23 1:00 p.m.

Although Andy Dalton was terrific for the Bengals, there is real cause for concern with Cincinnati's defense. They are 29th in the league in pass defense, allowing over 300 yards per game. They will need to figure out some way to slow down Robert Griffin, or they could be in for a long game against Washington. Luckily for the Bengals, however, Washington is one of only two teams that are worse in pass defense. This game will be won through the air, and Washington's offense is simply more explosive.

NFL, Page 14