



LAUREL DREHER  
NEXT HOUSE



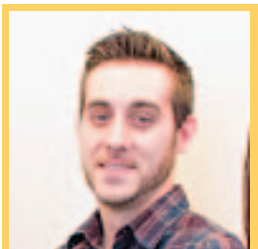
JOSHUA GONZALES  
SIMMONS HALL



REBECCA KJAERBYE  
MASEEH HALL



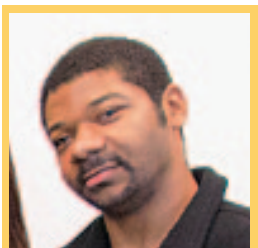
MICHELLE LESSLY  
BURTON-CONNER



MICHAEL ZAKARIAN  
MACGREGOR HOUSE



LAUREN PIONTKOSKI  
MCCORMICK HALL



JAMES REED  
NEW HOUSE

FEATURE INTERVIEW

# Meet the RLADs

*The day-to-day lives  
of the west campus  
residential life ADs*

By Stan Gill  
NEWS EDITOR

When the Residential Life Area Director (RLAD) position was announced via a leak from one “Tim Beaver” this summer, students and GRTs alike were up in arms about the impending addition of an administrator to the dorms without prior notification. The RLAD of each dorm is meant to work as both an administrative assistant to the housemaster as well as a source of support for students and GRT. The seven RLADs, two of whom were previously Residential Life Associates (RLAs), started their new jobs in August and moved into the spaces created for them in their respective west campus dorms.

Now that the RLADs have had a chance to work and adjust for a semester, *The Tech* sat down with them to discuss their day-to-day lives and thoughts about the position.

*TT:* How did you adjust to role when you came to campus?

*Joshua Gonzales (Simmons):* When I first got here, there was so much uncertainty about what the Area Director position was going to be. One of the first things I focused my attention on was building a foundation, building a trust with the students of Simmons Hall, figuring out who I am as a person, what this position will look like for the students, how this position will go, and having those conversations with my housemasters and GRTs. They were a great, honest conversations about where we are now, where we want to go, and how can we get there.

*TT:* What’s your relationship like with the housemasters?

*JG:* In Simmons, collaboration and teamwork is the big thing. I joke around and say, “Teamwork makes the dream work.” I see my housemasters everyday. Monday through Friday we’ll have a meal together or have a conversation some point in the day via email or in person. I love it because it’s a true partnership. We see and respect each other, and at the end of the day, it’s about making sure the students know they matter and making sure they succeed here as a student, as a person, and in what they do globally and at MIT. It’s making sure we’re giving them the platform to do those wonderful things. Sometimes the students don’t need me as an Area Director; I just want to make sure that the rest of the campus knows how well they’re doing as a house and as individual students.

*TT:* How do you provide support to students?

*JG:* I like to say I’m a one-stop-shop for all student needs, much like a clearinghouse for students’ ideas. We are there for what the students need, and for working with the house team, the hall government members in where they want to go.

*TT:* What is your relationship like with the GRTs?

*Rebecca Kjaerbye (Maseeh):* It’s very collaborative. I try to create a space where they can come ask me questions or for advice on student issues or concerns. I talk out a lot of things

RLADs, Page 7

# Chisholm granted high honor

*National Medal of Science to biology oceanographer*

By Anne Cai  
NEWS EDITOR

MIT’s Sallie W. (Penny) Chisholm has been awarded the National Medal of Science, one of 12 recipients in 2012, the White House announced in December. The National Medal of Science is annually given to individuals “deserving of special recognition by reason of their outstanding contributions to knowledge in the physical, biological, mathematical, or engineering sciences,” according to the National Science Foundation. In a White House ceremony this Thursday,

President Barack Obama will present the award to Chisholm — the Lee and Geraldine Martin Professor of Environmental Studies in the Department of Civil and Environmental engineering, and the 48th MIT scientist to win the honor — for her research in microbial oceanography.

“I was incredibly surprised,” said Chisholm on her reaction upon being notified of her selection. “I’m excited that the committee is recognizing my field. The honor doesn’t often to go people in my field, so that’s an exciting recognition of microbial oceanography.”

Her interest in biological oceanography started with her undergraduate senior thesis project. “The project involved lakes. That was the first time I looked at phytoplankton under the microscope — I was intrigued,” said Chisholm.

She now studies *Prochlorococcus*, the smallest and most abundant photosynthetic cell on the planet. “Pythoplankton are responsible for half of the photosynthesis on earth. They’re very unappreciated and under-noticed, despite being the base of the foodweb in the

Chisholm, Page 9

## MIT Mystery Hunt 2013



Check out *The Tech’s* multimedia Mystery Hunt feature online at <http://bit.ly/mysteryhunt2013>.



DMYTRO YEROSHKIN

### IN SHORT

**First day of classes** for the spring semester is Tuesday, Feb. 5!

**Feb. 8 is the application deadline for June SB degrees.** Submit the application online on Websis.

**Registration Day is Monday, Feb. 4.** Online registration is now open at <https://registration.mit.edu>.

**The TBP Career Fair** is Tuesday, Feb. 5, 10 a.m. to 3 p.m. in Rockwell Cage.

**Techfair 2013** is Monday, Feb. 4, 10 a.m. to 3p.m. in Rockwell Cage.

**PE registration for Quarter 3** opens today at 8 a.m. and closes next Wednesday at 1 p.m. for undergraduates at [mitpe.com](http://mitpe.com). Graduate student PE registration will open Monday, Feb. 4 at 8 a.m.

**LaVerde’s returns to regular semester hours** (open 24 hours) on Friday.

Send news information and tips to [news@tech.mit.edu](mailto:news@tech.mit.edu).

### REPORTER’S NOTEBOOK

# An inside tour of the MassDOT Ventilation tunnels and MBTA ‘secrets’

By Janelle Mansfield  
ASSOCIATE NEWS EDITOR

MIT students frequently use the T and other MassDOT transit systems; since 2010, our IDs even come with a built-in Charlie Card chip. But most students are unfamiliar with the inner workings of the transit system. I was excited to take advantage of one of the opportunities offered this IAP and take a tour of several MassDOT (Massachusetts Department of Transportation) facilities, including an underground ventilation tunnel system, bus operator training school, and the organizational headquarters for the T.

MassDOT offers variations of this tour every other week to Boston residents. The locations on the tour change based on weather. Ethan Feuer, Student Activities Coordinator for the MIT Energy Initiative, organized the tour for twenty five students in order to learn more about large infrastructures and emergency preparedness in cities.

Our tour was led by two MassDOT veterans, Adam Hurtubise, Assistant to the Highway Administrator at Massachusetts Department of Transportation, and Darrin McAuliffe, Director of Communications and Coordination.

We boarded our privately-chartered MBTA bus and departed for our first stop: bus driver training school. Driving a 40 or 60-foot bus through the crowded streets of Boston is no easy task. The rigorous training program accepts applicants with a Certified Driver’s License permit, and begins testing them only eight days later to determine if they will qualify to become a bus operator. For their final exam, students must complete a serpentine maneuver, back up in a straight line, parallel park, and drive through the streets to the satisfaction of their examiner.

As part of the training program, students are introduced to the feeling of the bus driver’s seat in a simulator. We were able to give the simulator a whirl. When I first entered the

MassDOT, Page 9

### THE TECH RETURNS TO NORMAL...

... for our publication schedule! Next Tuesday we resume our twice-weekly issues.

### MIT RIFLE IN SECOND PLACE

Rifle team hosted annual Beanpot competition on Friday. **SPORTS, p. 15**

### ON THE MARCH FOR LIFE

What is the actual attendance of *Roe vs. Wade* protests? **LETTERS, p. 4**



### DISHONORED: IS IT WORTH YOUR TIME?

Has Bethesda Softworks managed to create a “proper stealth game?” **ARTS, p. 8**

### MEN’S FENCING DOMINATES 4-1

MIT Men’s Fencing had final NFC competition at Brown. **SPORTS, p. 15**

### SECTIONS

World & Nation . . . 2  
Opinion . . . . . 4  
Fun Pages . . . . . 5  
Arts . . . . . 8  
Sports . . . . . 15





# Judge approves BP criminal settlement

By Clifford Krauss  
*THE NEW YORK TIMES*

HOUSTON — A federal judge in New Orleans on Tuesday approved an agreement between BP and the Justice Department for the company to plead guilty to manslaughter and pay \$4 billion in criminal penalties for the 2010 oil well blowout and spill in the Gulf of Mexico that left 11 workers dead.

Under the settlement, reached in November, BP pleaded guilty to 14 criminal charges. Its payment of \$4 billion will resolve all criminal charges related to the Macondo well blowout and destruction of the Deepwater Horizon rig, which spilled millions of barrels of oil and fouled hundreds of miles of shore along the gulf coast.

Several dozen people submitted letters to Judge Sarah S. Vance, of U.S. District Court in New Orleans, requesting that she reject the plea agreement. Some wanted additional financial compensation, while others requested stronger punishment for BP supervisors or a more powerful apology.

“If I had my wish,” wrote Ashley Manuel, daughter of Keith Blair Manuel, one of the 11 rig workers who died, “it would be that the three representatives from BP who sat in my grandparents’ living room and lied to my face about the accident would sit in jail and feel the same pain and loss I feel.”

Arguing in favor of the agreement, the British-based company filed an apology with the court, saying it “deeply regrets the tragic loss of life caused by the Deepwater Horizon blowout and explosion as well as the impact of the spill on the Gulf Coast region.”

Had the judge not accepted the agreement, the company would have faced a long and expensive trial, potentially resulting in tougher penalties.

The company’s stock price, which fell roughly by half after the accident, has recovered more than 40 percent of its loss over the past three years. The company has sold off billions of dollars of assets to pay for damages from the accident and is now a smaller company, but still one focused on drilling in the

Gulf of Mexico. The company said it had already paid out more than \$24 billion on various settlements and cleanup efforts.

The two top BP officers aboard the drilling rig, Robert Kaluza and Donald Vidrine, were charged with manslaughter in connection with each of the men who died, and David Rainey, a former vice president, was charged with obstruction of Congress and making false statements for understating the rate at which oil was spilling from the well.

A low-level engineer, Kurt Mix, was previously charged with obstruction of justice for deleting text messages about company estimates of the spill flow rate.

But resolving BP’s criminal responsibility does not end the company’s legal troubles. It still faces sizable potential civil fines before it can put the accident behind it. A settlement with the Justice Department has so far been elusive, and a trial to resolve the remaining civil litigation is scheduled for Feb. 25 in New Orleans.

# Activists seek repeal of New York’s new gun-control laws

By Thomas Kaplan  
*THE NEW YORK TIMES*

ALBANY, N.Y. — More than 100,000 people have signed online petitions denouncing New York’s new gun laws. Gun owners are contemplating civil disobedience, vowing to ignore a requirement to register guns they own that are now classified as assault weapons. And some are even calling for the impeachment of Gov. Andrew M. Cuomo.

Gun rights activists, stunned and stung by the swift passage of some of the toughest gun laws in the country, are trying to channel their anger into action. Fueled by social media, and encouraged by gun owners in more conservative states, they are pushing for the repeal of New York’s law.

And they are preparing to go to court; the New York State Rifle and Pistol Association notified the state attorney general on Tuesday that it planned to ask a judge to overturn

the law on constitutional grounds. They face long odds in a state where the public and elected officials seem to have reached a consensus in favor of more restrictive gun laws. But just as Cuomo vowed that New York would provide a model for other states in response to the massacre in Newtown, Conn., gun owners were promising to set an example in fighting back.

“The more people see about this, the angrier they are getting,” said Jacob J. Rieper, the vice president of legislative and political affairs for the Rifle and Pistol Association.

He recounted sympathetic phone calls from as far away as Nebraska, where a man pledged to collect donations at his gun club to support a legal challenge to the law, and angry messages from New York gun owners who were eager to campaign against the legislators who voted for the measure.

“The bottom line is none of these people thought this through, and it’s starting to stink,” Rieper said.

A petition circulated by state Sen. Kathleen A. Marchione, R-Saratoga County, that condemns the new gun laws has more than 118,000 signatures. Marchione, an NRA member, is drafting legislation that would repeal many provisions in the bill, but her effort is mostly symbolic.

“The reality is that the Assembly would never pass it,” said Sen. Dean G. Skelos of Long Island, the Senate Republican leader, “the governor would never pass it, so I think we move on now to other issues.”

Thousands of gun owners gathered for a rally at the Capitol the weekend after the bill was enacted, on Jan. 15, while others assembled in Buffalo, N.Y., where the Republican nominee for governor in 2010, Carl P. Paladino, denounced Cuomo and the “gutless, cowardly legislators” who supported his legislation.

And thousands of people have signed petitions seeking the impeachment of Cuomo — again, not a likely outcome, given that Cuomo enjoys broad legislative support.

# FDA approval for genetic drug to treat a rare inherited disorder

By Andrew Pollack  
*THE NEW YORK TIMES*

The Food and Drug Administration approved a new drug Tuesday that not only treats a rare inherited disorder that causes extremely high cholesterol levels and heart attacks by age 30 but does so using a long-sought technology that can shut off specific genes that cause disease.

The drug, Kynamro, which was invented by Isis Pharmaceuticals and will be marketed by Sanofi’s Genzyme division, is unlikely to be a blockbuster. It has some worrisome side effects, and there might be no more than a few hundred people in the United States with the disease, known as homozygous familial hypercholesterolemia, or HoFH.

Still, Kynamro could become the first commercial success for the gene-silencing technique, which is known as antisense, and which some experts say is finally poised

to fulfill its promise after more than two decades of research.

“What many people have been waiting for is validation where someone actually makes a profit and where patients actually benefit,” said Arthur M. Krieg, chief executive of RaNA Therapeutics, an antisense drug developer in Cambridge, Mass.

Isis, which is based in Carlsbad, Calif., has been pursuing antisense technology since the company’s founding in 1989, spending about \$2 billion. It had one drug approved in 1998 for an infection associated with AIDS, but the drug did not sell well, and some experts said it did not really use the gene-silencing mechanism.

Isis’s experience contrasts with that of Gilead Sciences, which was also founded in the late 1980s to pursue antisense technology. It gave up after several years — selling the patents it no longer needed to Isis — and went on to develop anti-

viral drugs using other techniques. It is now a biotech superstar with a market value of \$59.8 billion, compared with \$1.4 billion for Isis.

Stanley T. Crooke, the founder and chief executive of Isis since its inception, said the long period of development was not unusual for a new technology.

“I told people it would be at least 20 years and \$2 billion before we knew if the technology would work,” he said in an interview Tuesday. “We think it’s a seminal day for the technology and the company.”

The company or its partners are developing drugs to lower triglycerides, treat spinal muscular atrophy and reduce scarring from operations, among other things. The partners include Biogen Idec, Pfizer and AstraZeneca.

Two rival antisense companies, Sarepta Therapeutics and Prosensa, are developing drugs for muscular dystrophy that have shown promise in early clinical trials.

# Republicans pull back on immigration, not on guns

WASHINGTON — As Congress and the White House prepare to refight two epic policy battles from the past — a new agenda to stem gun violence and another to address the nation’s heavily criticized immigration system — political, demographic and economic shifts are propelling immigration changes forward as forcefully as they are pulling lawmakers away on guns.

Bruised by successive presidential defeats in which Hispanic voters played a significant role, Republicans are eager to join in producing legislation that would make it easier for people to immigrate to the United States or stay here in some cases if they entered illegally. The cause has been helped by years of a sputtering economy, which has reduced the flow of illegal immigrants, and thus the red hot anger directed at them, as well as increased border security.

But while Republicans are drawing back from their outspoken stance on immigration, as well as opposition to gay marriage and other social issues, they have found gun rights a secure policy to defend, often with the help of Democrats from conservative states, and are almost certain to oppose any agenda beyond changes to background checks for gun owners.

The dynamic in Washington mirrors the sentiment back home for many lawmakers.

“We are getting closer to a balanced approach,” said Chad Connelly, chairman of the South Carolina Republican Party, about immigration. “We got spanked in November, and I think what Republicans are looking for is something that enforces border security while making it easier to come here.”

—Jennifer Steinhauer, *The New York Times*

# Ford motor profit rises 54 percent

DETROIT — Last year, Ford Motor broke ranks with other auto companies when it announced major cuts in its troubled European operations, including the closing of three factories, to address a sharp downturn in sales on the continent and an oversupply of vehicles.

On Tuesday, Ford, the second-biggest American automaker, behind General Motors, startled the industry again by predicting that Europe, a critical market, would get worse before it begins improving later this year.

Ford said European auto sales, including commercial vehicles, could fall as low as 13 million this year, and its own annual losses in the region could reach \$2 billion. Europe is Ford’s second-largest market, after North America.

“The industry did 14 million last year, and that was the worst in 20 years,” Bob Shanks, Ford’s chief financial officer, said in an interview. “But the industry is continuing to decline, and we think 13 million is the trough.”

—Bill Vlasic, *The New York Times*

# Bloomberg outlines leaner budget with spending flat

NEW YORK — Mayor Michael R. Bloomberg, proposing a New York City budget for the 12th and last time, called Tuesday for agencies across the city to cut costs as he seeks to keep spending flat despite the prospective loss of hundreds of millions of dollars in state education aid because of a labor dispute.

Bloomberg offered no major new initiatives but said the city would spend billions of dollars to rebuild after Hurricane Sandy. All of that money, he said, would be supplied by the federal government.

The mayor proposed closing 20 firehouses, reducing thousands of city-financed child-care slots and cutting thousands of teacher positions — all suggestions he had made in past years but had dropped after resistance from the City Council.

Overall, Bloomberg proposed a \$70.1 billion budget for the 2014 fiscal year, which begins July 1. That is \$1.6 billion more than the one approved by the City Council for the current fiscal year. But because of emergency city spending connected to the hurricane, the actual figure in the current fiscal year will be \$70.4 billion — meaning that Bloomberg is proposing a slightly leaner budget.

Much of the increase stems from costs that the city says it cannot control, like those of pensions, health care, Medicaid and debt service. But Bloomberg said that an improving national economy, the recovery on Wall Street and the city’s increasingly diversified economy would cushion the blow.

—David W. Chen and Marc Santora, *The New York Times*

# Analysts see the good in Amazon’s poor results

A glorious future beats a glorious past. Investors decimated Apple last week when it appeared the world’s mightiest profit machine might be slowing down just a tad. But they cheered Tuesday when Amazon said its fourth-quarter sales and earnings fell short of expectations. Oh, and expect a lousy first quarter, too.

Shares in Amazon immediately jumped nearly 10 percent in after-hours trading, about the same amount that Apple fell after releasing its news.

What caught the eye of investors was that operating margins as a percent of consolidated sales rose to 3.2 percent, from 2.7 percent a year ago.

“The carrot for Amazon investors is improvements to margin over time,” said Gene Munster, an analyst with Piper Jaffray. Apple, on the other hand, would need to build a cheaper iPhone to keep growing as fast as it has been, which would slice into its margins.

For more than a decade, Amazon has teetered between minimal profits and no profits. During all of 2012, it said Tuesday, it lost money. But Wall Street has always been more about promises than results, and Amazon is always on the verge of converting its overwhelming online presence into buckets of cash.

“As long as the dream is there, the stock is going to go up,” Munster said.

—David Streitfeld, *The New York Times*

WORLD&NATION WORLD&NATION WORLD&NATION WORLD&NATION WORLD



## PRODUCTION STAFF

## OPINION STAFF

### SPORTS STAFF

## ARTS STAFF

### PHOTOGRAPHY STAFF

### CAMPUS LIFE STAFF

*COPY STAFF*

### BUSINESS STAFF

## TECHNOLOGY STAFF

## ONLINE MEDIA STAFF

## EDITORS AT LARGE

## ADVISORY BOARD

### PRODUCTION STAFF FOR THIS ISSUE

*The Tech* (ISSN 0148-9607) is published on Tuesdays and Fridays during the academic year (except during MIT vacations), Wednesdays during January, and monthly during the summer by The Tech, Room W20-483, 84 Massachusetts Avenue, Cambridge, Mass. 02139. Subscriptions are \$50.00 per year (third class). **POSTMASTER:** Please send all address changes to our mailing address: The Tech, P.O. Box 397029, Cambridge, Mass. 02139-7029. **TELEPHONE:** Editorial: (617) 253-1541. Business: (617) 258-8324. Facsimile: (617) 258-8226. *Advertising, subscription, and typesetting rates available.* Entire contents © **2013 The Tech.** Printed on recycled paper by Mass Web Printing Company.

Additionally, the third paragraph of the MIT DNS attack

article in last Wednesday's paper also ambiguously states that "the hack and subsequent outages were due to a configuration change at EDUCAUSE." The configuration change refers to a compromise of MIT's account at EDUCAUSE, not EDUCAUSE's databases. According to Garth Jordan, EDUCAUSE's vice president of operations, someone logged into MIT's account successfully on the first try, indicating that the person knew MIT's password when accessing the account. An email was sent to MIT's contact on record when the account was accessed.

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

Those news sources that do briefly cover the March tend to speak of “thousands” or “tens of thousands” of people — clearly inaccurate estimates. At the same time, these sources try to exaggerate the number of people protesting in support of *Roe vs. Wade*. In reality, most people at the March don’t notice any pro-choice protesters, though there is always a handful around the steps of the Supreme Court — in the past three years I have never seen more than 20.

*Georgina Botka '14*  
*Vice-President*  
*MIT Pro-Life*

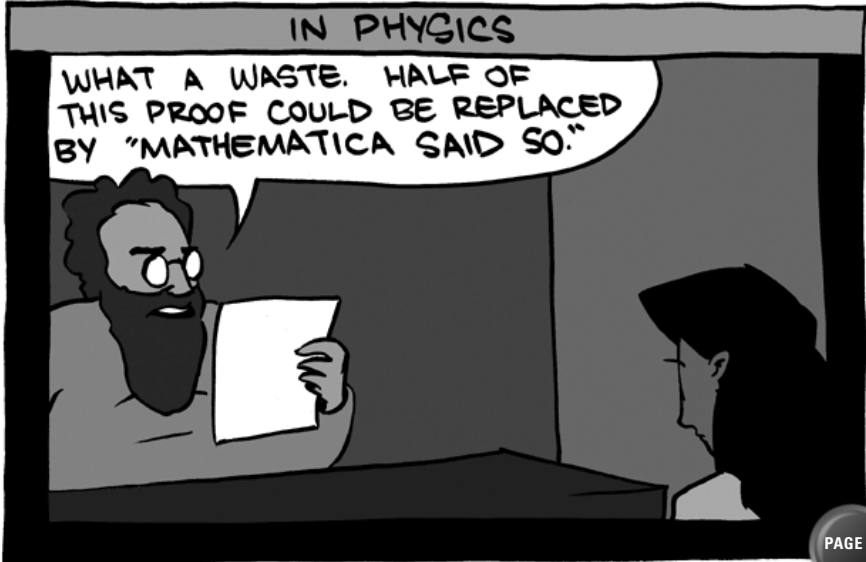
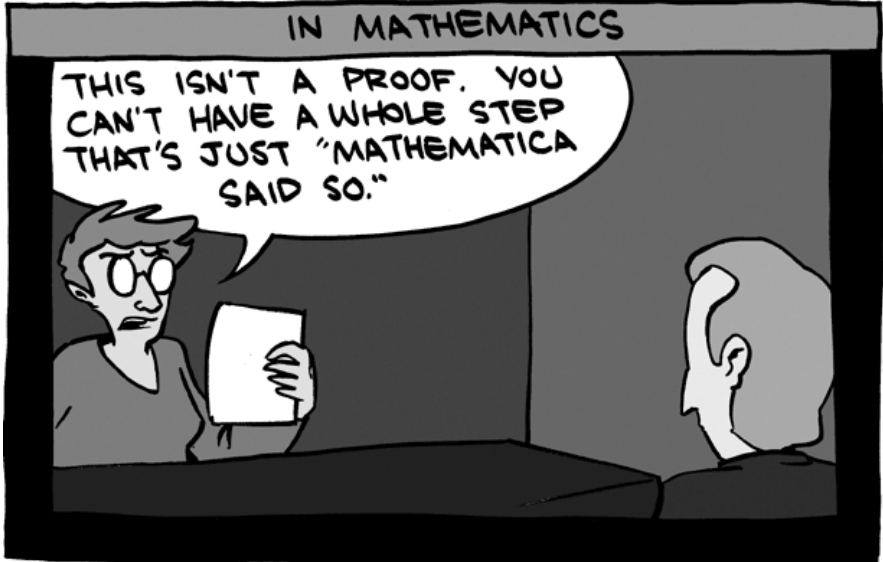
**Guest columns** are opinion articles submitted by members of the MIT or local community.

*The Tech's* telephone number is (617) 253-1541. E-mail 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](mailto:general@tech.mit.edu), and it will be directed to the appropriate person. You can reach the editor in chief by e-mailing [eic@tech.mit.edu](mailto:eic@tech.mit.edu). Please send press releases, requests for coverage, and information about errors that call for correction to [news@tech.mit.edu](mailto:news@tech.mit.edu). Letters to the editor should be sent to [letters@tech.mit.edu](mailto:letters@tech.mit.edu). The *Tech* can be found on the World Wide Web at <http://tech.mit.edu>.





UPPERCUT by Steve Sullivan



Finish Lines by Fred Piscop

Solution, page 14

ACROSS

- 1 Way out there
- 4 Fundamental
- 9 Curaçao neighbor
- 14 Run a tab
- 15 Gladiators' venue
- 16 Kind of eclipse
- 17 Desperate try
- 20 Most iffy
- 21 Gullible one
- 22 Render speechless
- 23 Right-angle shape
- 25 Experience anew
- 29 Prefix for sweet
- 31 British noble
- 33 Olympics blade
- 34 Drs.' group
- 36 As compared to
- 38 www.salvationarmy.\_\_\_\_
- 39 Game show segment
- 43 Homer Simpson shout
- 44 Music score symbol
- 45 Place for pampering
- 46 "Knock it off!"
- 48 Poems titled "To a . . ."
- 50 Theme of the puzzle
- 53 Worst of the stadium seats

- 55 Mileage rating org.
- 57 Party mixes
- 59 City north of Pittsburgh
- 61 Willa Cather heroine
- 63 Attorney's summation
- 67 Spotted horse
- 68 Frequently
- 69 Confederate soldier
- 70 Writer Sinclair
- 71 Ill-mannered look
- 72 Hog's home

DOWN

- 1 Does origami
- 2 Watches for
- 3 Coast Guard job
- 4 Said, as a farewell
- 5 Greet the day
- 6 Come to terms
- 7 Corporation designation
- 8 Lyricist Sammy
- 9 Caine or Law title role
- 10 Clothing frill
- 11 Numero \_\_\_\_ (top dog)
- 12 Keep out
- 13 Creative material
- 18 Oz visitor

- 19 Winter cap parts
- 24 Library penalty
- 26 Walkman descendant
- 27 Exceedingly
- 28 Neurologist's test, for short
- 30 Apple all-in-one computer
- 32 Frat letter
- 35 Permit to enter
- 37 Back of the neck
- 39 Picture, in product names
- 40 Denny's rival
- 41 President Bartlet of The West Wing
- 42 Patternless
- 43 "Spring forward" period: Abbr.
- 47 Magic word
- 49 Enemy of Athens
- 51 Roadside restaurants
- 52 Small piano
- 54 Celestial hunter

1	2	3		4	5	6	7	8		9	10	11	12	13
14				15						16				
17			18						19					
20							21							
22					23		24		25			26	27	28
	29			30		31		32			33			
				34		35		36		37		38		
	39	40				41				42				
43				44				45						
46			47		48		49		50		51	52		
53				54		55		56		57			58	
				59		60		61		62				
63	64	65				66								
67						68					69			
70						71						72		

- 56 Extreme displeasure
- 58 Failed to act
- 60 Self centers
- 62 Bring to proper pitch
- 63 PC's "brain"
- 64 Back talk
- 65 Ottawa's loc.
- 66 Rearward, at sea



WWW.PHDCOMICS.COM

## Solution, page 14

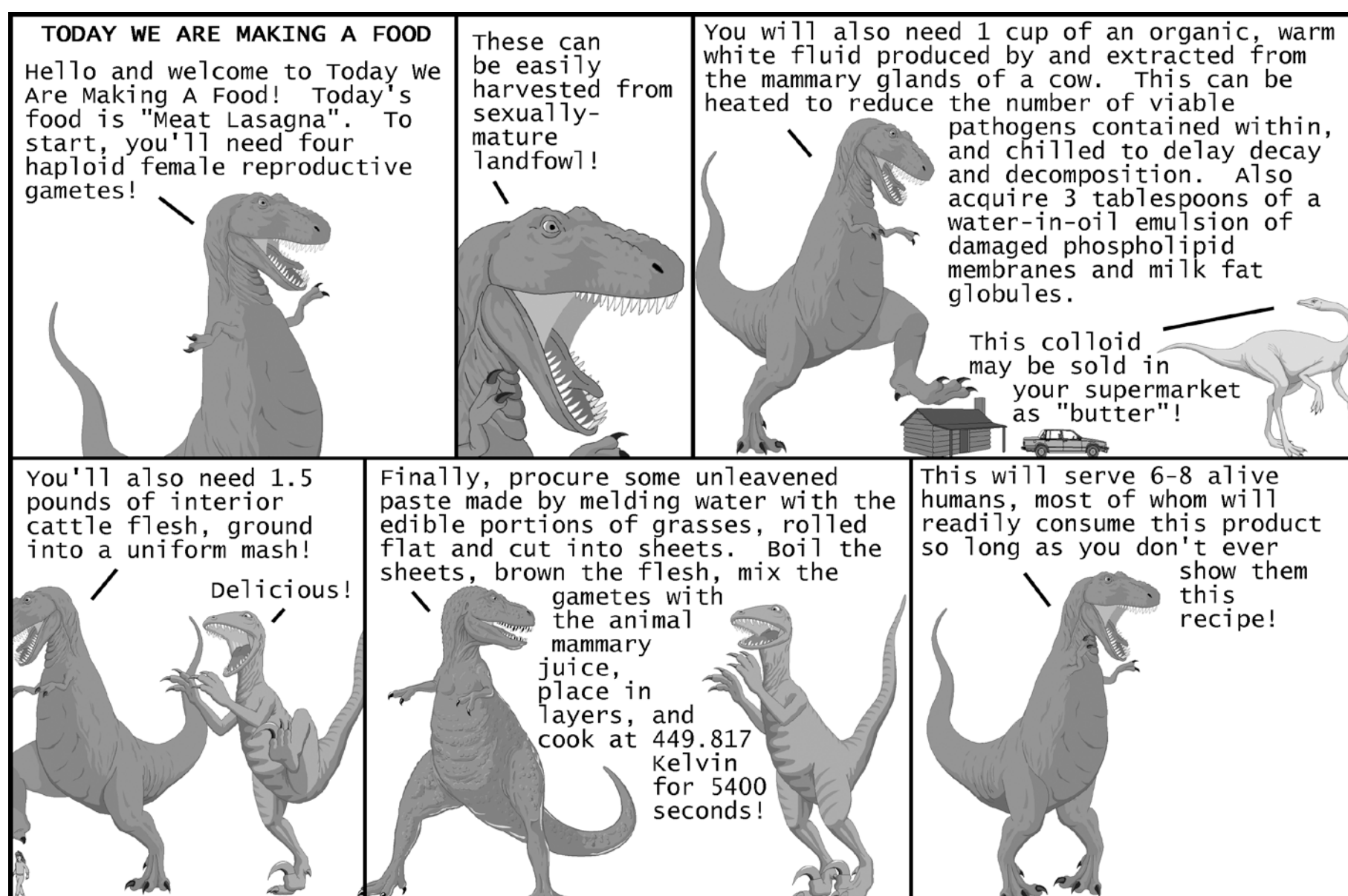
8					3		6	
6	5		4			7	1	9
		7			9			
					6			5
	2		9		1		8	
9			3					
			2			4		
3	8	4			5		2	7
	7		8					3

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.

## Solution, page 14

6x		60x			24x
13+			18x		
	2-		2		5÷
180x		96x			
3+			30x	1-	
	5x			1-	

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.





# The Residential Life Area Directors of west campus

*RLADs talk about day-to-day lives, student interactions, relationships with house teams*

**RLADs**, from Page 1

with the GRTs — I consider myself a resource for the housemasters, GRTs, and students. We have a very positive relationship [with the GRTs] — I’m there to help them do their job and make sure they have the skills to help them be the best GRT that they can be.

*TT:* How is this job different from the previous RLA position?

*RK:* I don’t feel any different in terms of job function, but I feel very different in the way that it’s focused. I told students when they asked about the changes in the position over the summer was that no one’s changing, we’re still doing the same job, but we’re going to do it better and be able to help [the students] more.

*TT:* What are specific services you provide for students?

*RK:* The two key resources that I definitely offer are event planning and leadership development. Beyond that, I also assist in crisis management.

*TT:* What’s your day-to-day life like as an RLAD?

*Laurel Dreher (Next):* I usually try to chat with my front desk workers when I go down in the morning. My house manager is sometimes in and around the building, so I don’t always see him, but I might see our custodial staff so I stop and chat with them. Checking email is the way I start my day — I usually check to see if the GRTs have emailed me about anything, if my housemasters have anything they need me to take care of; just making sure I have a grasp on where the day is going to go because things can change in a heartbeat. A student crisis could happen at any moment, and I make sure to stay connected and am able to rearrange and drop things when a student needs my support.

*TT:* When was a time you felt like you really connected with the your dorm’s community?

*LD:* I spent a lot of time with my students during REX. I think my favorite event was the life-size version of Angry Birds they did in the TFL. It was really fun to come home and see a giant structure made of cardboard and different boxes, with people shooting birds at it. My exec team and house government was really welcoming, as were the GRTs. I know that a lot of us (the ADs) just try to be present and around, just to show that we were dedicated to getting to know students without stepping in and taking over everything. The students’ experience is the students’. We’re here to guide, advise, and help, so I thought the beginning of the semester was a great time for us to show that. Beyond that, my students like to play Duck Hunt, so I’ve had them over to my apartment to do that. Recently, I was also invited to watch the Dark Knight with some students in one of the wings, so I try to spend time with my students as well.

*TT:* Coming in as an RLAD, have you felt any negative reactions from students?

*LD:* I haven’t experienced any push-back or negativity in Next House. If anything, it’s been the exact opposite, The GRTs, Housemasters, students, and the exec board have all been very welcoming. I think one thing that we all tried to do at the beginning of this year, especially us newbies, was to come in and learn. None of us

wanted to come in and disrespect the culture and traditions our houses had built.

*TT:* What’s something you’ve done to try to connect with the students?

*Michelle Lessley (Burton Conner):* At the beginning of the school year, I invited every student into my apartment to hang out — I had baked an obscene amount of cookies and I just had my door open. Students came in; I just wanted to invite them to my space to let them know that my doors open — I want people to feel comfortable coming to talk to me. In turn, I was invited to a lot of the study breaks; it was great to see the students in their environment with their traditions.

*TT:* What programs or initiatives have you started while being an RLAD?

*ML:* I put out a newsletter. Also, every Monday night, I hold a knitting class in my apartment that students come to. We donate the projects that we create to Knit for Boston, an organization that donates hats to children at the children’s hospital and some homeless communities. Then, once a month, I partner with the house team and throw a spaghetti dinner.

*TT:* How do you fit into the house team of your dorm?

**‘Each day is an adventure, and that is what is so appealing about this position.’**  
*Michael Zakarian*  
MACGREGOR RLAD

*ML:* One of the things that I really enjoyed in transitioning from the RLA role into the RLAD position is the change in interactions with the GRTs, many of whom I already knew from being an RLA. Part of the Area Director role is to be much more involved in the house team, and I’ve seen really positive relationships grow from my role. Because my GRTs trust me and have that relationship with me, my students trust me.

*TT:* What is one concrete thing you’ve brought to the house since you started being an RLAD?

*Lauren Piontkoski (McCormick):* I took all of the information I was getting from students and I started compiling newsletters for McCormick, so I’m building an image toward what we do and what we want to accomplish as a house. Since September I’ve been putting out one each month. It’s been well received — there are pictures and stories from the students directly; it wasn’t just a one-time thing, it’s something that’s been happening progressively over the semester.

*TT:* Do you view the RLAD position as more of an administrative role or an active student support role?

*LP:* I would liken the role to a chameleon because day-to-day, it could be a mixture of both administrative tasks and supporting students.

*TT:* What are your responsibilities as an RLAD?

*James Reed (New House):* In New House, there are nine different communities — they function largely by having the central exec board performing a number of key functions. I usually interact with the President and Vice President who have just come in for this next year, so I’m

starting to get them organized. [The RLADs] also have a number of responsibilities from the Division of Student Life, such as to sit on committees for projects and initiatives that are going on within our department, so we also work behind the scenes on those.

*TT:* How often do you interact with the students?

*JR:* I’ve been doing a newsletter monthly since about September/October. We’re working on turning that into a blog so that we can update it a little more. My office is on the main hallway of New House, so I try to keep my door open all day long when I’m there. Students usually pop in and out. I attend many of the study breaks, held by GRTs and by students.

*TT:* What has been your favorite moment as an RLAD so far?

*JR:* At the end of last semester, the social chairs for New House organized an end of semester party/care package making. At the end of the event, they came up to me and said “You’ve been very helpful this to us semester and we wouldn’t know who would have been able to help us have as many events or do as much as they had this year if it wasn’t for you.” Any moment you get the sense from the students that you’ve given them an opportunity or that you’ve really opened up their viewpoint is always great.

*TT:* What do you like about being an RLAD?

*Michael Zakarian (MacGregor):* One of the best aspects of the Area Director position is that the day-to-day aspects of the job depend on the culture and temperature of your building. There are days where I am in my office interacting with students and discussing possible program ideas. There are times where I’m working with the Area Director team to build programs for the Residential Community as a whole and looking for ways that we can make a positive impact at MIT. There are also days where I’m working closely with the House government, or following up with situations that happened in the building over the weekend. Each day is an adventure and that is what is so appealing about this position.

*TT:* How do you interact with the GRTs and Housemasters?

*MZ:* The GRTs are a great resource for both the students and the RLAD. They have such a great feel for their entry and assist in keeping the RLAD and Housemasters in the loop. We work hand in hand in program planning and meet monthly as a team to discuss the building. Similarly, the Housemasters and the RLAD work together to ensure that MacGregor is a warm, welcoming community. We work together, along with the Associate Housemasters to make sure we are communicating effectively. The housemasters have such great knowledge of the building and a strong sense of what will and will not work in the community. They have really assisted in my transition into this position and I greatly appreciate their perspectives.

*TT:* What is your vision of this position in the future?

*MZ:* The most important thing is that this position needs to continue to be a resource for students, whether it is to assist in personal issues, event planning, conflict resolution, or just day-to-day operations of the building.

## Bexley, EC, Random, Baker to receive RLADs in Fall 2013

The Residential Life Area Director (RLAD) program is expanding to include Bexley, Random, Baker, and East Campus, Christina Davis, Director of Residential Life Programs, confirmed. If RLADs for these dorms are found, that would leave Senior House as the only undergraduate dorm without an RLAD.

“Myself, Naomi Carton, and Henry Humphreys met with the housemasters, the students and the GRTs of the dorms without area directors to get a sense of those communities and what they’re looking for in terms of area directors,” Davis said. “We’re still ironing out the final map of what the [expansion of the program] will look like.”

Henry Humphreys, Senior Associate Dean for Student Life, noted that because the communities of Bexley and Random are so small, there will be one RLAD that serves both houses, with offices in both places, but living in Bexley. Humphreys noted that they have not yet worked out the exact configuration to place the new RLAD living spaces so as to disrupt the fewest number of students.

As for Senior House, Humphreys said that he, along with the Senior House Housemasters are still in the process of understanding each other’s goals in relation to bringing in an RLAD, so they do not plan on bringing in an RLAD to Senior House just yet.

“[Myself and Augustin Rayo] need to come to a better understanding of what Senior House’s needs are so we can work together to find the best solution,” Humphreys said. “Until we define the goals, we don’t want to put someone in the [RLAD] position.”

Humphreys said that the normal recruiting period for people looking for these types of positions in higher education begins in March. The Division of Student Life (DSL) plans to put out a national call for applicants around that time so they can bring people to campus for interviews sometime in late March or April. To accommodate students and the input they will provide on the process, Humphreys said he would like to finish the interviews before finals start, so the final hiring decisions can be made by the end of May, and the new RLADs can move to campus in June to start work over the summer.

—Stan Gill



A Public Service of  
This Publication

# WE LIVE IN THE HOUSE WE ALL BUILD.

We choose the world we live in, so make the right choices. Earth Share supports more than 400 environmental and conservation organizations that impact you every day.

Visit us at [earthshare.org](http://earthshare.org)

Earth Share



# Bethesda Softworks masters a lost art

It's rare to come across a proper stealth game these days — by which I mean it is so rare that it's hard to know if what I consider good stealth games are even stealth games at all. Maybe it's the stealth genre that I dislike, and I just happen to enjoy a couple games that call themselves stealth games.

Whatever the case, I don't care. It's time to soapbox. You know what's wrong with stealth games? They aren't tests of intellect — they're tests of patience. Success flows from a willingness to simply sit and wait, until a window of opportunity opens in guards' patrol patterns. This is boring. I'd just as soon play as one of the guards, patrolling a little 10-meter patch of space for eternity.

By extension, games that try to present a stealth option at parity with a combat option almost always fail. The long, boring, waiting-based gameplay of stealth is the sucker's choice, compared to running and gunning through the level. And most game developers, knowing that run-of-the-mill stealth gameplay will always play second fiddle to run-of-the-mill combat gameplay, don't even try to present the two options as equals. Stealth is largely a self-imposed burden in games like *Fallout 3* or *Skyrim*.

So it was with much trepidation that I approached “stealth game” *Dishonored* by Bethesda Softworks. At first glance, the game struck me as a steampunk version of *Deus Ex: Human Revolution*, a game that matches perfectly my personal stereotype of stealth games as boring wait-fests, carried (if at all) by story, characters, dialogue ... anything but gameplay. But that was not the case.

In Dishonored, you play as Adam Jensen— sorry, Corvo Attano, head security guy for Sarif Industr— sorry, Empress Kaldwin. While preparing for an important tr— sorry, after returning from an important trip, the place you work at is attacked by cyber-enhanc— sorry, magic enhanced dudes who kill (sort of!) your love interest and make a major mess of things. You're in a bad situation, but six months after the event, you are given the cybe— errr, magic powers that the dudes who attacked used (You didn't ask for this!), and set on a mission to kill the bad dudes, uncover their mysterious plottings,

and set the cyberpun— sorry, steampunk world to rights, mostly by running a blade across the throats of anyone who can press an alarm button.

Although the dust jacket blurbs for *Deus Ex* and *Dishonored* are similar, the games are anything but. *Deus Ex* was a tedious game only worth playing for the dialogue and plot (and even then, your mileage may vary). In *Dishonored*, the protagonist is silent, and if anything the plot is the weakest point; it is the gameplay that carries.

*Dishonored* is a game that offers combat on truly equal footing with stealth. The game offers a variety of powers and perks that Corvo can acquire as he completes missions and uncovers hidden artifacts. Teleportation, possession of animals and enemies, stopping time, and other unique mechanics turn the game into a challenge of

lateral thinking. Fighting one's way through a level is not some straightforward run-and-gun. It requires both uncanny timing as well as a creative use of Corvo's combat powers and gadgetry. And for those who choose the stealth path, the powers system completely subverts the usual process of sitting and waiting for guards to walk themselves into closets.

Some trial and error exists, but instead of watching paint dry while an opening appears, the player spends his time scanning the area, working out safe paths to teleport to a ledge near a target, actively search-

ing for outs, his desire to move through the level quickly limited only by his own ingenuity. Each level has multiple paths to success as well, adding to the replay value. The AI feels organic — gone are imbecile guards who dismiss arrows to the head as just their imagination after some patient stealthing by the player. And best of all, the game employs a moral choice system that actually matters — the more blood Corvo spills, the further the city descends into chaos, not just changing the ending the player receives, but also the obstacles they face in subsequent levels.

The primary complaint I have of the game is its length. As well-designed as the levels are, and as much as they contribute to an open, sandbox-y feel, there's no getting around that there just aren't that many of them. Even two playthroughs leave Dis-

**For Microsoft Windows,  
PlayStation 3, Xbox 360**

honored with a shorter playtime than that to which I've grown accustomed. And the mile deep, inch wide nature of the game has unfortunate consequences for the game's ability to immerse the player. Dishonored paints a fantastical world of rat plagues, mystical steampunk-technology-powering whales, dark rituals, and high political intrigue—fantastical to a point of over-wrought ridiculousness that was hard to engage with.

Just as I felt I was settling into the fantasy, the game was over, abruptly wrapped up with both little hint of a sequel and no closure on many of the game's open questions. Of course, this might have gone differently, had I realized earlier on that the beating heart Corvo is given by *The Outsider*, besides helping reveal the game's hidden artifacts, also provides mysterious exposition of the world if used on other parts of the world.

In any case, if a game is to come up lacking, better for it to leave the player wanting more, rather than wanting something different. Had Bethesda doubled the length of *Dishonored*, they'd have, far and away, the game of the year on their hands. But even in its brevity, *Dishonored* delivers. Pick it up now before IAP ends, and you'll be able to enjoy this gem before the next semester starts.





# Taking a tour of inner workings of our transit system

## A look into the MassDOT system, the T operations center, practicing with driving simulators

MassDOT, from Page 1

simulator cab, I was surprised by the size of the steering wheel. Making tight turns with the bus required not only excellent timing but also rapid spinning of the wheel. The size of the bus and the seemingly countless rearview mirrors were disorienting and meant I was never entirely sure where the back of my simulated bus was. I successfully right-turned and merged into traffic, only to hit a taxi seconds later as I tried to pull over to the bus stop.

The bus instructors entertained themselves by introducing obstacles, such as ambulances and elderly pedestrians, into the simulated roadway, and by turning the roads icy or making it snow in the view screen. During one particularly unfortunate drive, they caused a boulder to roll into the middle of the road. After struggling with the simulator, I am much more impressed by the MBTA drivers’ ability to maneuver these behemoths.

The next stop on our tour was Vent Building 4, one of 13 major ventilation buildings located throughout Boston. These buildings take in fresh air from above ground, pump it into roadway tunnels, and expel the exhaust-filled air from within the tunnel. This system is key to keeping the MassDOT Central Artery roadway tunnel system pleasant to drive through, and safe from smoke build-up in case of a fire.

Many vent buildings are built into pre-existing buildings, including the upscale Intercontinental Hotel. Vent buildings can be identified by the large vents on the side of them, but the vents are designed to be inconspicuous and the building interiors are mostly unaffected. You might never guess that the basements of such buildings house several-story-high fans, backup generators and batteries, and tunnels that connect most of the city of Boston.

We visited the Haymarket T station vent building. Before beginning this part of our tour, they outfitted us in outrageous orange hard hats and vests, because we were going to see “live traffic coming at us.”

According to Hurtubise, the Haymarket building has so much basement space that it is deeper underground than it is high. We took an elevator down into a chilly series of rooms made entirely of cement and lined with pump machinery and gauges (in case of “water infiltration,” said our guides), wandered past two large 8- and 12-cylinder diesel generators, which the city keeps in order to light the traffic tunnels in case of a power outage, through rooms containing large arrays of backup batteries in case the generators fail, until we came to a flight of stairs leading further down. The ceilings were very high, and at this point, we began to suspect the basements were even colder than the frigid 15 degree air at

ground level.

“Congratulations,” said McAuliffe, as he directed us into an enormous room with fans the size of the MIT chapel lined up on one side, “you’ve found the coldest place in Boston.”

We were in the supply plenum of the vent building. Every vent building has a supply and exhaust plenum. The supply plenum is full of fans to suck fresh air into the building. In the Haymarket plenum, we could stand in the center, look directly up, and see straight out of the skylight at the top of the building. We also visited the exhaust plenum, which was much darker, creepier, and more damaging to the lungs.

Our guides assured us the levels of carbon monoxide within the car tunnels are continuously monitored to maintain a safe level. The vent system can also react to smoke from a car fire by pressurizing one part of the tunnel more than the other in order to dispel the smoke.

While in the plenum, our guides showed us a place where the room narrowed into a car-size tunnel. They explained such tunnels connect most of the vent buildings together, meaning you can travel across Boston via them, in a similar way to traveling through the MIT tunnels, although perhaps not quite as luxurious. Sometimes, said Hurtubise, the tunnels get so narrow you have to crawl. The vent building also connects directly to the car tunnel it ventilates. So, it was time for us to see some “live traffic.”

Our guides opened a door which led to a narrow concrete platform in one of Boston’s car tunnels. I had seen maintenance doors countless times in traffic tunnels, but never imagined what was on the other side. From our position, we could look down to see cars driving through the tunnels and feel the freshly ventilated air blow into our faces.

At the ventilation building, we visited one of the emergency systems MassDOT has in place in case of superstorms like Hurricane Sandy. The low-point pump room, the deepest part of the building, deals with any flooding that may occur in that section of the tunnels. We could see evidence of the most severe flood experienced in Vent Building 4: a water mark about three feet high on the walls. According to our guides, MassDOT is unsure of how its systems would be affected by a sudden rise in water level, such as Hurricane Sandy caused in New York, and is currently conducting a study on how much their infrastructure could handle.

By now, we were ready to warm up and feel our extremities again, so we proceeded to the MassDOT Highway Operations Center. This office, housed on the second story of an inconspicuous office building, resulted from the merger of Massachusetts Highway Authority and the Turnpike Authority, which occurred during

the formation of MassDOT in 2009.

Most of the office was a single large room that resembled spy headquarters from an action movie. The back wall of the office displayed multiple video feeds from some of the 900 video cameras dispersed along the Massachusetts highway system.

I had seen the maintenance doors countless times, but never imagined what was on the other side.

The Highway Operations Center monitors the video feeds with help from computer algorithms to identify traffic accidents and provide emergency responders with exact location and visual information. The cameras employ an accident-finding algorithm, which triggers an alert when one camera shows non-moving tail-lights, which means the camera is viewing the back-up behind an accident, or when a camera shows no traffic at all, which means the camera is trained on the roadway in front of an accident.

The manager of the operations center, Michael Fitzpatrick, shared stories with us about incidents the office handles. The center has over-height vehicle detection systems, which alert when a truck that is too tall for a tunnel is en route to pass through it. They respond by flashing warnings on digital signs on the side of the road. Fitzpatrick said once a driver ignored the warnings and scraped a video camera off the tunnel ceiling. Police followed him in order to retrieve the camera, which was dangling from the back of his trailer.

Being MIT students, we were

especially interested to learn more about their computing systems. Another unique algorithm the Highway Operations Center developed works like the Google Maps traffic feature to track the speed of traffic. Sensors identify bluetooth devices in vehicles, mainly cell-phones, and record how long it takes the devices to go from checkpoint to checkpoint. Fitzpatrick explained the color coding on the traffic map. Since it was the middle of the day, most roadways were green; amusingly some stretches were blue, indicating the average car speed was above the posted speed limit.

Although the Highway Operations Center uses some clever algorithms, several issues from the merger remain. According to Fitzpatrick, many of their monitoring and data-collection systems run on different platforms, so they do not communicate with each other.

Our final stop on the tour continued to indulge our tech-oriented sides. We parked our bus outside of a inconspicuous office building. Most passerby did not give the building a second glance, but the security guard in the foyer made us realize this building was important.

“No one really knows where this building is,” said Hurtubise. “We don’t advertise it.”

We were inside the MBTA Operations Control Center, home to the logistics departments responsible for deploying T trains and MBTA buses. The operations centers for these two transit systems were located on separate floors.

In the bus headquarters, we learned more about the role of MBTA buses. They respond to emergency situations, such as building evacuations or natural disasters, by providing buses for shelter or egress. Employees in this

office were responsible for tracking the location of buses and making calls to drivers to keep them within five minutes of schedule.

The T train operations center looked like the command center from a sci-fi ship. All the walls were painted black, employees sat at computers arranged on terraced platforms facing the front wall of the room. On this wall a huge projected graphic depicted the train lines, stops, and trains currently on the track.

This tour left me amazed with amount of detail MassDOT manages every day and great respect for its employees. Feuer called it a “wonderful” and “holistic” tour which covered many aspects of the MassDOT system.

This is the first time the MIT Energy Initiative has organized such a tour with MassDOT. The tour fit in well with this month’s theme at the Energy Initiative, “Preparing for Climate Variability.”

Due to the New York subway shut-down in the aftermath of Sandy, Feuer wanted to find out how prepared Massachusetts’ transportation systems are for such an event.

Feuer said he was pleased by the feedback he received from both students and our tour guides, and, luckily for the many students on this tour’s waitlist, he hopes to do more tours in the future.

“One student said it was a real highlight of his seven years at MIT,” said Feuer, “and Adam [Hurtubise] has told me we were the best group, that people are telling him we brought our A game.”

This tour was a unique opportunity for students. As Feuer put it, “rarely do we get to see the underpinnings of public transit” and the “engineering marvels” involved.

# National Medal of Science for Chisholm

## Biological oceanographer recognized

Chisholm, from Page 1

ocean,” said Chisholm. “I’m fascinated by them, and I want them to be recognized as significant players.” According to Chisholm, there are many things she has learned about phytoplankton through her research that can be used in actual applications, such as biofuels.

Chisholm is currently on sabbatical. Soon, she will spend a month in Italy at the Rockefeller Foundation Bellagio Center, a “place for scholarly retreat and writing,” where she will be working on a book.

In addition to her research, Ch-

isholm has also published two children’s books and is working on a third. The first two, *Living Sunlight* and *Ocean Sunlight*, co-authored with writer and illustrator Molly Bang, aim to teach about photosynthesis on land and in the oceans, respectively. Her third book will be on fossil fuels.

“We make sure everything in the books is scientifically correct, and we use scientific terms,” said Chisholm. “They’re children’s books, but they’re really intended for all ages. Anyone who reads them could learn something new, or something they’d forgotten.”

### Attention MIT Undergraduates!

## Want to spend your summer in Singapore?



### Apply now for a SMURF Fellowship!

Deadline to submit your application is January 31, 2013

- Roundtrip economy class airfare
- Housing provided
- Hourly compensation
- Daily food and transportation allowance

Visit the Singapore-MIT Undergraduate Research Fellowship website at **SMART** <http://smart.mit.edu/home.html>

# techfair

February 4, 2013 10AM - 3PM

## Events

### hackMIT

Feb 2-3, 8PM - 1PM

Check out MIT's biggest hackathon of the year, sponsored by Techfair and Palantir. Compete against college students from all over New England for over \$5000 in prizes. Register at [hackmit.eventbrite.com](http://hackmit.eventbrite.com).

### Résumé Drop

Feb 3, by 11:59PM [techfair.mit.edu/drop](http://techfair.mit.edu/drop)

Reach out to 60+ companies by dropping your resume online before the fair. Company representatives will be able to invite students to the banquet so get your résumés in as soon as possible!

### The Fair

Feb 4, 10AM - 3PM Rockwell Cage

Now in its fifth year, Techfair is featuring the largest number of companies and student projects ever. Techfair is a whole new approach to career fairs, bringing cool tech expos, student projects, and excitement. Don't forget to drop your résumé online!

### Banquet

Feb 4, 6PM - 8PM\* Boston Marriott Cambridge

Enjoy a classy dinner with company representatives at this exclusive event. Company reps will be able to invite students before the fair via the résumé drop as well as the day of the fair.

\*Networking begins at 5:30PM

### Afterparty

Feb 4, 9PM - 11PM Media Lab, 6th Floor

Kick off the Spring semester with a night of excitement at Afterparty. Enjoy live music from DJ Cruz, help your FSILG win a free Xbox/Kinect in the Greek challenge, and enter to win a free Surface or Xbox/Kinect!

### Techtalks

Feb 8, 4PM - 8PM 32-123

Join us for our second annual Techtalks event -- come hear from Paul English, Ari Gesher, John Biket, and Yoky Matsuoka speak about innovation in this data-driven world. Register at [mittechtalks.eventbrite.com](http://mittechtalks.eventbrite.com).

Platinum Sponsor



Gold Sponsors





# American pulls back at Logan International

## Flights to London cut, others reduced

By Katie Johnston  
THE BOSTON GLOBE

American Airlines is slipping away from Boston.

Logan International Airport’s biggest carrier for most of the past decade has shrunk to the fifth-largest, carrying just 11 percent of the airport’s passengers last year, down from a peak of 21 percent in 2004. The carrier now flies to just six cities nonstop from Boston, down from 33 in 2003. At the end of March, the number of American nonstop destinations out of Boston will fall even further when the carrier cuts its only remaining international flight, to London.

Even before the airline declared bankruptcy in 2011 and entered into merger talks with US Airways expected to be completed soon, American Airlines was pulling back from second-tier cities to focus on its five biggest domestic markets: Dallas-Fort Worth, where the airline is based, Miami, Chicago, Los Angeles, and New York.

These five cities are also the only destinations American will fly to nonstop from Boston after it drops its London service. The carrier also operates seasonal service between Boston and Paris.

“The largest concentration of business and high-end travelers are located in these five gateway or hub cities,” said Tim Ahern, American’s vice president for New York and international, noting that many of the country’s Fortune 500 companies are located in these markets.

American’s vanishing act is problematic for Boston fliers because it gives them fewer options and nonstop flights. The airline has less than a third of the daily departures it had out of Logan a decade ago, when there were more than 100 a day, including flights on the carrier’s regional affiliate, American Eagle, which pulled out of Logan in late 2011.

“We hate to see any airline that has been a strong player here at Logan scale their operations down,” said Edward Freni, director of aviation for the Massachusetts Port Authority, which runs Logan. “Fortunately for this airport, other airlines have benefited from American’s reduction and picked up and back-filled behind them.”

The pullback from Boston reflects the airline’s struggles in recent years. American’s operating costs are higher than other major international carriers, many of which cut costs during their own bankruptcies and joined forces through mergers, and American has to make changes to stay competitive, airline analysts say.

Along with retreating to its hubs, the airline has outsourced cabin cleaning and ticket agents and negotiated new contracts that increased its pilots’ workload.

Unfortunately for American frequent fliers, however, their perks generally don’t transfer to domestic carriers picking up the slack, such as JetBlue Airways and Southwest Airlines.

George Sprague, a retired Cambridge district court judge, is a platinum level frequent flier on American, which means along with benefits such as free upgrades and faster boarding, he can rack up miles at an accelerated rate. But this status only benefits him if American offers flights he wants to take.

“They’ve left me high and dry with no place to go,” said Sprague, 74. “I feel as if I have a big bank account and nowhere to spend it.”

Sprague can no longer fly American nonstop from Boston to his home in Fort Lauderdale or to visit his son in San Francisco. Come spring, he also won’t be able to fly American for his annual trip to London, where he serves on the board of a school, although he can use his frequent flier miles on British Airways, which has a partnership with American.

London is the most popular international route out of Logan, with three times as much traffic as any other overseas destination. British Airways will add a fourth daily flight from Logan to its schedule starting March 31, and Delta Air Lines and Virgin Atlantic Airways also have daily nonstop service. But when American drops its 22-year-old flight between Boston and Heathrow, there will be about 300 fewer outbound seats a day in the summer.

“It makes it that much tougher to get to London,” said Michael Friedman, a senior analyst at Delaware Investments in Boston. “It absolutely will drive prices up, there’s no question about it, because we’re taking seats out of the market.”

American’s shrinking network also means local companies are less likely to use the airline as their preferred carrier, Friedman said, further discouraging the airline from building back up its presence here.

If American merges with US Airways, the third-biggest airline at Logan, the combined carrier would be a major presence in Boston. Ahern, the American vice president, declined to comment on what effect a merger would have on his airline. American will continue to grow in its five biggest markets, he said, but the airline has no plans to revive its glory days in Boston.



# MIT-ISN /Army Labs 2013

## Student Summer Internship Program



### Earn up to \$2864/month this summer!\*

**Program Summary** MIT undergraduate students conduct scientific and engineering research at Army Science and Technology Centers under the direction of Army Scientists, from June to August. The Army host and student determine the exact starting and finishing dates.

**Professional Benefits**

- Gain valuable research experience
- Build new professional relationships
- Access world-class research facilities
- Contribute to a team that is providing new, life-saving technologies

**Disciplines of Interest and Project Content**

- Most areas of science and engineering
- The Army Lab Host determines the project content and subject matter. The projects can involve basic research, applied research, or both and do not need to be related to the ISN mission or to nanotechnology

To view internship opportunities and learn more about this program, please register at the website:

<https://isn.mit.edu/internship/index.php>

If you have questions about this program, or experience difficulty using the website, please contact Marlisha McDaniels, at the ISN: [mmcd@mit.edu](mailto:mmcd@mit.edu), 617.324.4700.

**\*The Army Lab provides the intern's salary, which typically ranges from \$2280/month to \$2864/month depending on class year. Under certain circumstances the ISN can provide the intern with a supplement of up to \$1500 to defray costs of local accommodations and travel.**

The mission of the MIT Institute for Soldier Nanotechnologies is to dramatically improve the protection and survivability of the Soldier and first responder through basic research and collaboration with the Army and industry.

# The last challenge of a socially conscious society?

Depression strikes millions– indiscriminately. Depression is simply a suppression of brain activity that makes life unbearable. And even though depression is readily treatable, only 1 in 5 ever seeks treatment. Why do so many just drag themselves along or eventually seek relief through suicide? First, there’s the lack of awareness of depression– as an illness and as the threat that it is to each and every one of us. Second, there’s the unwarranted negative stigma attached to it. You know, the ‘mental’ thing. It’s time to collectively face depression. To know it’s an illness, not a weakness. And it’s a challenge that’s long overdue. It’s taken too many of us already.

UNTREATED  
DEPRESSION

#1 Cause of Suicide

Public Service message from SA·VE (Suicide Awareness·Voices of Education) <http://www.save.org>



# We offer a broad range of opportunities for the brightest graduates



GIC is among the world's largest fund management companies. We were incorporated as a private company in 1981 to manage Singapore's foreign reserves and now have a portfolio of well over US\$100 billion in multiple asset classes in more than 40 countries. We are a diverse organization with over 1200 employees in nine offices worldwide.

## GIC Summer Internship Program

### What we offer

As an intern, you will take on projects that offer you challenging opportunities and insights to the fund management business, while experiencing first-hand GIC's culture and working environment.

The program runs from June to August 2013 for 8-10 weeks.

The deadline for applications is February 1, 2013.

### What we look for

We welcome interns who have consistently achieved good grades and are eager to learn. You should either be:

- An undergraduate student in your penultimate year
- A postgraduate student available during your summer vacation

The location of your internship in GIC can be either at your home country or your country of study depending on our business needs.

## Visit us and apply at [www.gic.com.sg](http://www.gic.com.sg)

# An optimistic Menino returns to the public stage

## Boston mayor highlights accomplishments, proposes education and housing initiatives

**By Andrew Ryan**  
*THE BOSTON GLOBE*

In a speech by turns sentimental and unabashedly bullish, Mayor Thomas M. Menino returned to the public stage Tuesday night after a lengthy illness and offered a buoyant vision of Boston, celebrating accomplishments and outlining initiatives for the future.

Menino entered Faneuil Hall to thunderous applause from a crowd of 800 that included Governor Deval Patrick, members of Congress, and scores of other elected officials and dignitaries gathered for the mayor's State of the City address.

Waving to the audience, Menino — serenaded by a Kelly Clarkson pop anthem with the lyric, "What doesn't kill you makes you stronger" — used a cane to help navigate the 50-foot walk to the stage.

The standing ovation roared for 2 minutes, 46 seconds. Finally calming the crowd, Menino said that in two decades in office, he had never been so optimistic about Boston's future. Young people are flooding the city, he said, not fleeing as in years past. Older Bostonians have returned home, drawn by what he described as the "era of the city" in the United States. Boston, he said, is "the city of the era."

"Our progress is real," Menino said, according to a copy of his prepared remarks. "Our future is bright. The state of our city is striking, sound, and strong."

Menino offered few clues about whether he will seek reelection this fall, although he did make an oblique reference to 2017, which would be the final year of a sixth

term. He unveiled several initiatives, however, that would appeal to key constituencies if he runs for reelection, such as a series of measures designed to make "Boston the premier city for working women."

### Menino used the opportunity for a campaign-style trumpeting of his administration's accomplishments.

Menino used the opportunity for a campaign-style trumpeting of his administration's accomplishments, a list that touched almost every corner of the city. He pointed to the big: the forest of construction cranes rising against the skyline, evidence of \$1.6 billion in construction projects that broke ground last year. And he highlighted the small: the new gym floor and other improvements at the Shelburne Community Center in Roxbury.

Among new initiatives, the mayor proposed using 1 million square feet of city-owned property to develop affordable housing. He announced a partnership with Harvard University and the Massachusetts Institute of Technology to bring cutting-edge online learning to Boston's community centers. This year, he said, 68 recruits would join the police department. And he pledged \$30 million in new money for schools to support a longer school day and upgraded facilities.

He began the address with a sentimental tone that rang familiar — a tone he has invoked repeatedly since his release last month after an eight-week hospital stay for an acute respiratory infection, blood clot, fractured vertebra, and diagnosis of type 2 diabetes. Menino spoke of the unwavering support of his wife, Angela, who sat in the front row beside Victoria Kennedy, the wife of the late US senator. Menino evoked President Kennedy's 1961 inaugural address as he thanked doctors, nurses, physical therapists, and hospital staff. "They embody the words of a young president," Menino said, "who spoke of God's work truly being our own."

He thanked his staff for "not missing a beat," while he was hospitalized, and gushed about the visitors, prayers, and hundreds of cards and get-well wishes. "I stand before you, a grateful mayor," Menino said. "I am just Tommy Menino from Hyde Park. I can't tell you how humbled I am and how lucky I feel. I don't need fancy words to say this to all of you: Thank you. You pulled me through."

The 70-year-old mayor must decide by May 13 whether he will apply for nomination papers, the first in a series of steps in running for a sixth term. On July 12, he will celebrate his 20th anniversary of taking office as acting mayor after his predecessor, Raymond L. Flynn, left to become US ambassador to the Vatican.

A major opponent has not stepped forward to challenge Menino, and the mayoral race is only months away. Menino has roughly \$650,000 in his campaign account, less than half of what he had four

years ago but more than most of his potential rivals.

In his speech, Menino focused on human potential and sought to link people who supported him during his illness to citizens of Boston rallying behind a common purpose.

"The point is this," Menino said. "If we help our neighbors learn more, produce more, and succeed more, we will do more to help Boston than anyone can do for us." To that end, Menino promised to expand opportunities for youngsters with autism, helping them find summer jobs and expanding access to after-school programs.

### In trying to gauge Menino's appetite for a sixth term, the most telling details may have been the initiative aimed at women.

Menino highlighted his work against illegal guns with Mayor Michael R. Bloomberg of New York. He linked the massacre of 20 children in Sandy Hook, Conn., to shootings in Boston, including slayings on Woolson Street in 2010 and Harlem Street last summer.

In the audience, Menino identified Shirley Clarke, whose 13-year-old son, Gabriel, was shot and wounded earlier this month on his way to church choir practice in Roxbury.

"After her son was shot, she called for peace," Menino said.

He contrasted that with the response of the National Rifle Asso-

ciation, which demanded armed guards in schools after Sandy Hook: "That is crazy! Every victim of gun violence and their families know that's crazy."

In trying to gauge Menino's appetite for a sixth term, the most telling details may have been the initiatives aimed at women. Menino noted that women make up more than half of Boston's residents, but own less than one-third of its businesses. Recent female college graduates earn less than their male counterparts, he said, and many working mothers struggle to find affordable child care.

To remedy the inequities, Menino said he would launch a forum for women-owned businesses. He pledged \$1 million for low-interest loans for new child-care facilities and promised to make Boston the first city to help young women negotiate fair pay.

After the speech, well-wishers surged to the front of the hall to greet Menino, who sat in a chair. One man told the mayor he was "awesome," another patted his arm and told Menino he had lost weight.

"The passion in his voice was real," City Councilor Matt O'Malley said. "You could hear his gratefulness to this city that pulled for him. It was a strong, palpable moment."

State Treasurer Steven Grossman heard something more. "I heard him saying that, 'I'm ready to lead this city and bring these goals and these initiatives and implement them in the next few years,'" Grossman said. "I think everyone in this room is saying, 'You want an encore, Mr. Mayor. We'll give you an encore.'"

Do you want to make a DIFFERENCE?  
...but don't have time over the semester?  
Now, YOU CAN  
with  
**ALTERNATIVE  
SPRING BREAK**



Trips include tackling:  
Poverty @ San Francisco, California  
Energy & Sustainability @ New York, New York  
Special Education @ St. Louis, Missouri  
Healthy Lifestyes @ Sunrise, Florida  
Wildlife Protection @ Eureka Springs, Arkansas

APPLY @ <http://asb.mit.edu/apply.php>  
DEADLINE: Feb. 8, 2013  
Questions? [asb-board@mit.edu](mailto:asb-board@mit.edu)

# Got REST?

"The best elective on the market. My best class at MIT."  
-Course Evaluation Guide

## 12.400: The Solar System

Professor: R.P. Binzel  
Macvicar Faculty Fellow

T-TH 3:00-4:30  
Room 4-153

Units 3-0-9 REST  
Prereq: Physics I (GIR)

**EAPS**  
Earth, Atmospheric and Planetary Sciences

**BUY RECYCLED.**

**AND SAVE.™**

When you buy products made from recycled materials, recycling keeps working. To find out more, call 1-800-CALL-EDF.

**Ad Council** A Public Service of This Publication **EPA** ENVIRONMENTAL DEFENSE FUND **EDF**



# An Evening with **Jim Gaffigan**



**8pm Friday, Feb. 22**  
**Kresge Auditorium**

Open to MIT students, faculty, and staff

Free tickets available by lottery  
through 5pm Wednesday, Feb. 13

**[shass.mit.edu/gaffigan](http://shass.mit.edu/gaffigan)**

Sponsored by the De Florez Fund for Humor  
SCHOOL OF HUMANITIES, ARTS & SOCIAL SCIENCES



Council  
for the Arts  
at MIT

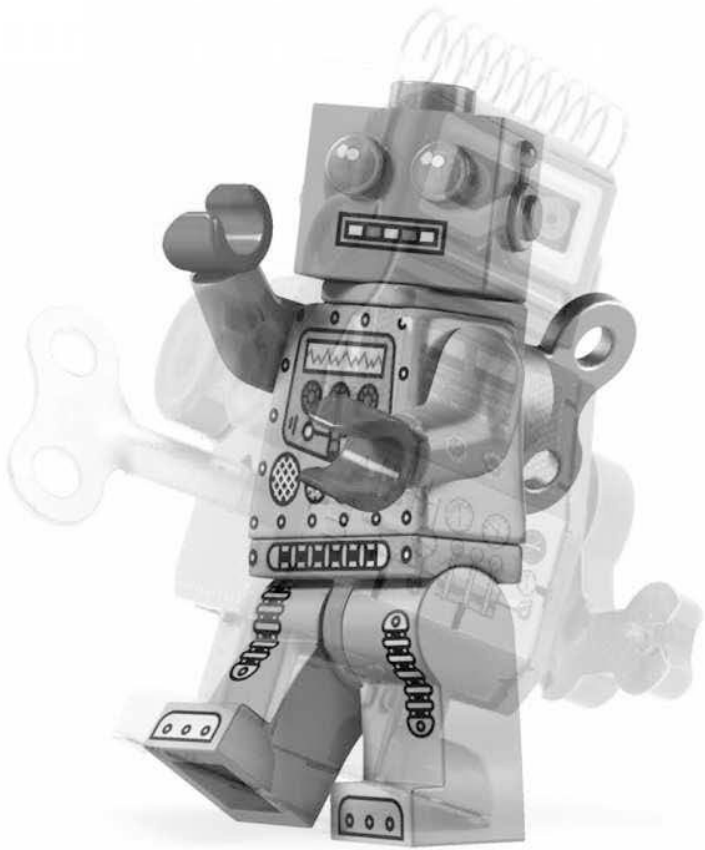
## GRANTS PROGRAM

All current MIT students, staff & faculty are invited to apply for funding to support art related projects.

**NEXT DEADLINE**  
**FEB 22, 2013**

**[arts.mit.edu/participate/grants/](http://arts.mit.edu/participate/grants/)**





THERE ARE NO TOYS HERE  
THESE ARE REAL ROBOTS

MASLAB FINAL COMPETITION. FRIDAY FEB 1. 5 PM. 26-100.

MASLAB (Mobile Autonomous Systems Laboratory) is MIT's most intense IAP robotics competition.

For the past month, MASLAB teams have been designing, building and coding their own autonomous robot from scratch. Armed with an Arduino, some motors and a healthy layer of Python, these robots are packed with computer vision, maze navigation, and ball launching skills.

Come watch these robots compete head-to-head at the MASLAB Final Competition on Feb 1 at 5 PM in 26-100. Audience prizes will be served.

Solution to Crossword

from page 5

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

Solution to Sudoku

from page 6

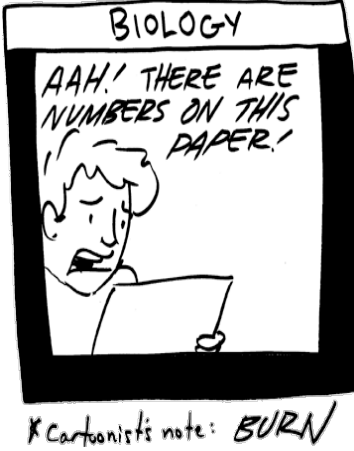
8	9	2	1	7	3	5	6	4
6	5	3	4	8	2	7	1	9
4	1	7	5	6	9	8	3	2
1	3	8	7	2	6	9	4	5
7	2	5	9	4	1	3	8	6
9	4	6	3	5	8	2	7	1
5	6	1	2	3	7	4	9	8
3	8	4	6	9	5	1	2	7
2	7	9	8	1	4	6	5	3

Solution to Techdoku

from page 6

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

SMBC, from Page 5



Fine dining. On *The Tech*.



Be a restaurant critic.

arts@tech.mit.edu



# Rifle competes in Beanpot

## MIT takes second place, Akron comes in first

By Phil Hess  
DAPER STAFF

Competing for the first time since early December, the MIT Rifle team hosted its annual Beanpot competition at the MIT Shooting Center on Friday and Saturday. Shooting against a seven-team field that included No. 17 Akron, the Engineers wound up second overall with an overall score of 4,399. Akron was first with 4,556 points, with Penn State taking third with 4,388 and Coast Guard fourth with a total of 4,301.



Elizabeth A. Phillips '13 continued her strong season for MIT, tying for the top score in the air rifle completion with a total of 576. Victoria Brown and Crystal Reynolds of Akron also posted 576's for the Zips. MIT's team total of 2,224 was third among the competing teams, trailing Akron (2,292) and Penn State (2,247). Sarah N. Wright '16 and David D'Achiardi '16 each posted a season-best score in air rifle for MIT, firing a 563 and 529 respectively. Kaiying Liao '14 finished with a 545 for the Engineers, with Timothy Jenks '13 turning in a 540 to round out the scoring for MIT. Two other Engineers had

season-high air rifle scores for MIT. Erica S. Chung '14 turned in a 516, while Abra H. Shen posted a 518. In the small bore competition MIT turned in a 2,175 to claim second to Akron's 2,264. Phillips and Wright were again the top two shooters for the Engineers, with Phillips posted a 562, tying for fifth overall, and Wright a 543. Alan Agnew and John Hupp from Akron shared high score honors with 571 totals. Jenks and D'Achiardi tied for the third best score for the Engineers with a 535, with Liao adding a 517. Eeway Hsu '16 established a new career best for MIT with her score of 475.

# Men's fencing dominates

## Team ends NFC tournament with 4-1 record

By Mindy Brauer  
DAPER STAFF

MIT Men's Fencing compiled a 4-1 ledger in its final Northeast Fencing Conference (NFC) competition held this past Saturday at Brown University. The Engineers fell to the host Bears (19-8), but defeated Boston College (16-11), Tufts University (22-5), Dartmouth College (15-12), and Vassar College (18-9). The épée team racked up a record of 38-7 on the day while the best individual performance came from Nicholas Sledeski '16



who won 14 of his 15 bouts in sabre action. Joseph F. Rafidi '14 powered the épée unit with a 13-2 record while Jackson T. Crane '13 had a total of 11-4. Jack A. Greenfield '16 defeated eight of his nine opponents as classmate Giulio R. Gueltrini '16 won all six of his outings. The Engineers swept Tufts and Vassar, overpowered Dartmouth (8-1) and Boston College (7-2), and edged out Brown (5-4). Behind the strength of Sledeski's outstanding effort, the sabre squad finished at 22-23. MIT topped Boston College (6-3) while picking up 5-4 wins over Tufts and Vassar. Luke

O'Malley '14 registered a total of 6-9 while Pon Jirachuphun '16 picked up two wins. Dwayne George '15 also saw some action but was unable to earn a victory in his three appearances. Scott Robinson '16 led the foil team with a 9-6 record as Alexander E. Siy '13 came in at 7-8. James R. Clark '14 posted two wins against Tufts while Chris J. Perera '13 defeated his foe from Vassar. MIT ended the day with a total of 19-26 as its only win, an 8-1 decision, came against Tufts. Next up for MIT (9-6, 8-2 NFC) will be its final home competition of the season, the Eric Sollee Invitational, which will be held on Sunday, Feb. 3.



CHRISTOPHER A. MAYNOR—THE TECH

**Jacob T. Wachlin '15, a forward for the MIT men's club hockey team, maneuvers towards the opponent's goal in Friday's game against Bates College.** The Engineers lost the game 4-3 after a last minute goal by the Bobcats.

### UPCOMING HOME EVENTS

<b>Wednesday, Jan. 30</b>	
Men's Basketball vs. Wheaton College	7 p.m. Rockwell Cage
<b>Saturday, Feb. 2</b>	
Squash vs. Boston College/Boston University	1 p.m. Zesiger Center
Men's Basketball vs. Springfield College	1 p.m. Rockwell Cage
Women's Basketball vs. Mount Holyoke College	3 p.m. Rockwell Cage
<b>Sunday, Feb. 3</b>	
Fencing vs. Eric Solle Invitational	8:30 a.m. DuPont Athletic Center

All Serious Physical Science Students  
A must read

Foundations of Physics

By Joseph M. Brown  
Ph.D., Purdue University, 1952

- Starts with basic Newtonian particles
- Derives conservation of mass, momentum, and energy
- Derives Newton's equations of motion
- Shows why Maxwell-Boltzmann gas parameters  $v_r$  and  $v_m$  arranged as  $[(v_r - v_m) / v_m]^2 = (\sqrt{3\pi/8} - 1)^2 = 1 / 137.1$  is fundamental to quantum mechanics
- Shows how neutrinos develop  $10^6$  newton thrust
- Proves that Newtonian particles can form stable inhomogeneous states – the neutrinos
- Shows why fundamental angular momentum has one value –  $\frac{1}{2}$  Planck's constant
- Shows what produces the magnitude of the proton mass
- Shows how hydrogen is formed
- Shows what causes electric charge
- Derives the strong nuclear force
- Shows how matter motion is accomplished
- Shows what causes matter waves and magnetism
- Derives superconductivity
- Derives the neutron and what causes nuclear decay
- Shows exactly what a photon is
- Shows what causes gravitation
- Shows how atoms are formed
- Shows how stars are formed
- Shows why photons decay with travel
- Shows why matter we see was formed  $10^{10}$  years ago

Other books by Dr. Brown

*The Grand Unified Theory of Physics,*  
ISBN 9780971294462, 2004, \$29.95

The comprehensive unified theory showing what the neutrino structure must be

*The Chemistry and Mechanics of Human Aging,*  
ISBN 9780971294486, 2008, \$19.95

An increment of torsional strain is induced in DNA at each division – probably the cause of aging.

*Photons and the Elementary Particles,*  
ISBN 9780971294455, 2011, \$29.95

The detailed structure of the photon is derived.

*The Neutrino,*  
ISBN 9780971294479, 2012, \$29.95

Finally a rigorous proof is obtained of the neutrino structure which is a counter example to the second law of thermodynamics. The neutrino is a translating tornado-like stable flow pattern.

*Principles of Science,*  
ISBN 0-9626768-0-2, 1991, \$39.95

Language and mathematics foundations are derived. Also an outline of a unified science theory is presented.

See the destruction of age-old misconceptions of the Universe

- Counter example to the Second Law of Thermodynamics
- Einstein's theory of relativity is erroneous – see how to find the absolute speed of the earth
- See the fallacy of the expanding Universe

Basic Research Press  
120 East Main Street  
Starkville, MS 39759  
662-323-2844  
www.basicresearchpress.com

Hard Back: \$29.95  
ISBN-978-0-9883180-0-7

Royal Bengal

Boston's only authentic Bengali Cuisine restaurant

313 Mass. Ave., Cambridge  
(617) 491-1988  
T: Red Line, Bus #1 – Central Square

Open Daily Except Monday  
11:30 am – 11:30 pm  
Lunch Buffet \$7.95  
Reasonably Priced Dinners

10% Discount on \$15  
(or more) order with MIT ID.

Free delivery for orders over \$10.  
Take-out, platters, and catering available.  
<http://www.royalbengalrestaurant.com/>

Roadkill Buffet Presents:

The "We Promise Not to Use Funny-Enhancing Drugs" Show

Free Improv Comedy  
From MIT's Premier Improv Comedy Troupe

Friday, February 1 at 8:00pm in 6-120

This space donated by The Tech

Do you like doodling during class?  
Are your psets covered with drawings?  
If so, become a Tech Illustrator!

E-mail [join@tech.mit.edu](mailto:join@tech.mit.edu)



[tbpfair.mit.edu](http://tbpfair.mit.edu)



DATE

Feb. 5<sup>th</sup>



TIME

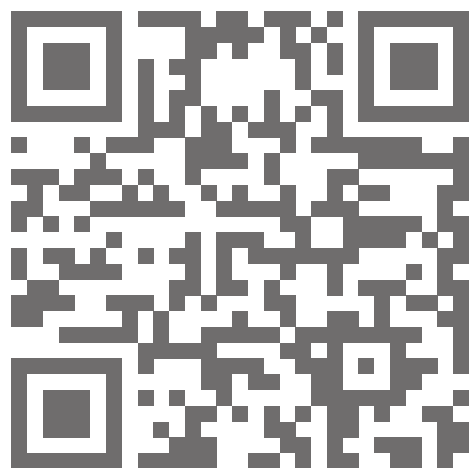
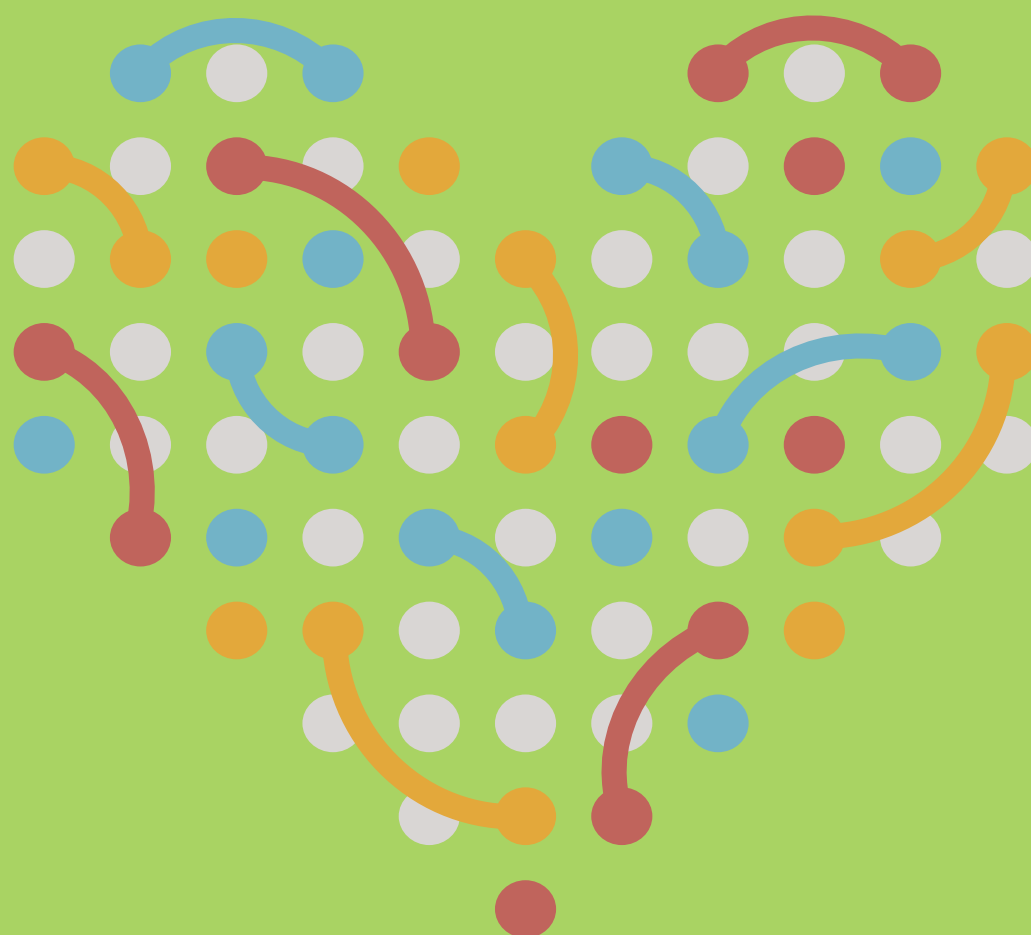
10AM–3PM



LOCATION

Rockwell Cage

Secure your position  
at a company you'll love.



Drop your résumé now at  
**[tbpfair.mit.edu/drop](http://tbpfair.mit.edu/drop)**  
and join us on February 5th

*and you'll be entered to  
win a **free iPad!***

