

# Spacetime ripples, full of secrets

*MacArthur winner studies gravity's waves*

By Stan Gill  
STAFF REPORTER

When she was contacted by the MacArthur Foundation, Professor Nergis Mavalvala PhD '97 couldn't believe it. "I really thought it was a prank call," said Mavalvala. "I expected at any moment one of my friends was going to jump in on the other side of the line."

Mavalvala of the Physics Department is the latest of 35 MIT alumni, faculty, and staff that have been awarded the prestigious MacArthur Fellowship, commonly known as the "Genius Award."

MacArthur Fellowships are awarded to U.S. citizens and residents who have shown exceptional creative promise in their field. They are nominated anonymously by experts invited specifically by the MacArthur Foundation. This year, twenty-three fellowships were awarded to individuals in fields ranging from quantum astrophysics, Mavalvala's field, to fiction writing, population genetics, and music.

Mavalvala started her career at Wellesley College as an undergraduate majoring in Physics and Astronomy. Having completed her PhD at MIT in 1997, she spent time doing postdoctoral research

MacArthur, Page 14

## Many talents on display at Late Night



MENG HENG TOUCH—THE TECH

The pledges of Phi Kappa Theta perform a skit/dance based on the "Yes Dance" of YouTube fame at Sigma Kappa's Late Night. The variety show, held last Friday, benefited the Sigma Kappa Foundation's Alzheimer's research funding campaign.

# Live tracking available for EZRide buses

By Joanna Kao  
STAFF REPORTER

Real-time GPS tracking for the EZRide shuttle went live last Thursday, according to Information Services and Technology.

EZRide, a shuttle run by the Charles River Transportation Management Association (CRTMA) merged with MIT's Northwest Shuttle in August to help cut costs for MIT. GPS equipment was installed in the EZRides buses on August 15, and the system was being tested these past weeks by Nextbus, the company that handles GPS tracking for MIT.

The system in which data is being generated from each bus is still "being beta tested," according to Jim Gascoigne, executive director at the CRTMA.

"We like to go slow to go fast," said Gascoigne. "We would rather have everything tidied up before we publicize it. You'll be hearing from us soon. It's been up so we can watch it, so we can make sure it works."

All seven EZRide buses have GPS equipment installed now. At this time, one is out of service, and some of the substitute buses do not have

EZRide, Page 17

# Student-built race car does 0-60 in 3 secs

*Students in MIT Motorsports build super fast Formula SAE cars (in red)*

By Evan Moore

Deep in the recesses of the MIT Museum, one group of students is tooling. Yet no one is struggling with a psat, or studying for a test; rather, boards are being cut, things are being welded, and the sound of power machinery is heavy on the ears. Indeed, the MIT Motorsports team is hard at work applying their knowledge to a race car.

The MIT FSAE (Formula Society of Automotive Engineers, also known as MIT Motorsports) designs and builds a competition Formula One race car. Made with a \$30,000 budget, the car can go from 0 to 60 miles per hour in



JULIE ANDREN

The MIT Formula SAE car poses at the June FSAE West competition in Fontana, California. The team placed eighth overall and second in fuel economy out of 80 attending schools.

three seconds, and can max out at a lateral 1.5 Gs — more than any street car is capable of, according to Team Manager Erich Brandeau '12. Sporting a push-button shifter for the custom-designed Engine Control Unit and running on a tank of ethanol, the car maxes out at around 85 miles per hour.

All of these contribute to giving the MIT Motorsport Team an edge in collegiate Formula SAE competitions, where the car is put to the test both on and off the track. The team competes once per year, usually at the FSAE West competition in Fon-

MIT Motorsports, Page 18

## Trader Joe's shuttle schedule revised to clarify last bus times

The schedule for the Sunday shuttle to Trader Joe's and Whole Foods has been revised following confusion in past weeks that left students stranded, waiting for the last listed bus to pick them up at the grocery stores. The new schedule lists the shuttle as running on Sundays from 12:00 p.m. to 4:00 p.m., with an earlier end time than originally posted. The last bus picks up students at Whole Foods and Trader Joe's at 3:47 p.m. and 3:49 p.m., respectively. Students going to the stores on that run will not be provided transportation back to campus. Service ends at 4:04 p.m., when the bus stops at Random Hall for the final time.

— Stan Gill

## Solicitor General supports schools in Stanford v. Roche patent case

Last week Tuesday, the United States Solicitor General filed a brief before the Supreme Court in *Stanford v. Roche*, a case about technology transfer from universities to private industry. MIT and university advocacy groups had also filed briefs last spring.

The Supreme Court had deferred deciding whether to accept the case, and asked the acting Solicitor General for his opinion.

The Solicitor General strongly supported the side of Stanford University and its peers, including MIT. He is asking the court to accept the case, and to decide in favor of Stanford.

The brief argues that Bayh-Dole, a 1980 technology transfer law, prevents a federally funded inventor at an institution like Stanford from assigning his invention to a third party.

The Court of Appeals for the Federal Circuit previously found in favor

of Roche, saying that the specific language of an agreement the inventor signed could affect whether Stanford held title to the invention under Bayh-Dole.

The government said the appeals court decision "creates serious uncertainty" about the ownership of patents and "frustrates Congress's efforts to foster scientific research and development."

The Acting Solicitor General is Neal Kumar Katyal; he replaced Elena Kagan, who starts her first term as a Supreme Court Justice this month.

— John A. Hawkinson

## IN SHORT

**The first walk-in flu clinic** will be held by MIT Medical today from 10 a.m. to 4 p.m. in the Student Center. Flu shots at the session are free for MIT students, employees, and retirees.

**Add date is this Friday, October 8.** This is the last day to add classes to your schedule this semester, and to drop classes without them showing up on your internal transcript.

**It's Nobel week!** Prize winners are being named every day this week. On Monday, Robert G. Edwards won the Prize in Medicine for developing the in vitro fertilization procedure. The Physics prize will be announced on Tuesday, the Chemistry prize on Wednesday, and the Literature prize on Thursday.

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

**THE INSURANCE DEATH SPIRAL**  
Democrats jumped the gun on guaranteed-issue children's insurance. They should have known better.  
OPN, p. 4

**BROUHAHA RHYTHM**  
Why I love performing stand-up comedy.  
CL, p. 8

**VARIOUS STATES OF UNDRRESS**  
You are beautiful. You are bodacious. Don't you dare feel otherwise.  
CL, p. 8



**MITWIT**  
Why everyone should take some EAPS classes.  
FUN, p. 10

**WATER POLO FALLS TO BROWN**  
Water polo's three-game streak ended in a tight 5-4 loss to Brown on Friday night.  
SPO, p. 20

**SECTIONS**  
World & Nation . . . 2  
Opinion . . . . . 4  
Campus Life . . . . . 8  
Fun Pages . . . . . 10  
Sports . . . . . 20



# In Haiti, pressure rising for displaced to vacate church

By Deborah Sontag  
*THE NEW YORK TIMES*

PORT-AU-PRINCE, Haiti — As tent camps go, the one on the 28-acre Church of God property overlooking the Valley of Bourdon is almost bucolic, with hundreds of canvas-draped shelters under leafy shade trees and a cohesiveness among residents. But panic is building there.

The Church of God is planning to evict the encampment in the near future. While the church rented on a Sept. 30 deadline under pressure from humanitarian officials, it still wants its Haitian headquarters rid of a population that church officials have come to see as a freeloading nuisance.

“This used to be a beautiful place, but these people are tearing up the property,” said Jim Hudson, a Church of God missionary living at the site. “They’re urinating on it. They’re bathing out in public. They’re stealing electricity. And they don’t work. They sit around all day, waiting for handouts.”

Increasingly, property owners

here are seeking to dislodge tent camps, saying they are tired of waiting for the government to resettle the people or for the people to resettle themselves.

Almost nine months after the earthquake that devastated Haiti, eviction threats have increased markedly and have become an urgent humanitarian concern, international groups say. Some 144,175 individuals have been subject to threats of eviction since March, and 28,065 have been evicted, according to data collected by shelter experts here.

Humanitarian officials have asked the government to consider a moratorium on evictions and to address the issue publicly, urging compassion. They worry that the evictions could increase conflict, lead to the mushrooming of smaller sites without services and force people into locations that are unsafe.

“It’s a huge problem that could exacerbate lots of other problems,” said Lilianne Fan, the housing, land and property coordinator for the multiagency shelter cluster. “The

bottom line is that the vulnerable become more vulnerable, and you get into a situation of continual displacement without a long-term solution.”

Many landowners, fearing that the tent cities will become entrenched slums, say they need to reclaim their properties sooner rather than later for their intended uses.

Their eviction practices vary, from sudden and violent to mediated and planned. In some cases, landowners have sent thugs to slash or burn tents; in others they have offered cash payoffs to expedite expulsions.

But whatever the method, the evictions increase the instability of the displaced population for whom few alternatives exist, given the slow pace of the cleanup and reconstruction effort.

Humanitarian officials are working with the government to develop a comprehensive strategy for handling camp closings based on the now scattershot efforts to help people clean up and move back into their neighborhoods.

# Recent suicides highlight stresses on gay teens

By Jesse Mckinley  
*THE NEW YORK TIMES*

FRESNO, Calif. — When Seth Walsh was in the sixth grade, he told his mother he had something to say.

“I was folding clothes, and he said, ‘Mom, I’m gay,’” said Wendy Walsh, a hairstylist and single mother of four. “I said, ‘OK, sweetheart, I love you no matter what.’”

Last month, Seth went into the backyard of his home in the desert town of Tehachapi, Calif., and hanged himself, apparently unable to bear a relentless barrage of taunting, bullying and other abuse at the hands of his peers. He was 13.

The case of Tyler Clementi, the Rutgers University freshman who jumped off the George Washington Bridge after a sexual encounter with another man was broadcast online, has shocked many. But his death is just one of several suicides in recent weeks by young gay teenagers who had been harassed by classmates, both in person and online.

The deaths have set off an impassioned — and sometimes angry — response from gay activists and caught the attention of federal officials, including Secretary of Education Arne Duncan, who on Friday called the suicides “unnecessary tragedies” brought on by “the trauma of being bullied.”

And while suicide by gay teenagers has long been a troubling trend, experts say the stress can be even worse in rural places, where a lack of gay support services — or even openly gay people — can cause a sense of isolation to become unbearable.

“If you’re in the small community, the pressure is hard enough,” said Eliza Byard, executive director of the Gay, Lesbian, and Straight Education Network, which is based in New York. “And goodness knows people get enough signals about ‘how wrong it is to be gay’ without anyone in those communities actually having to say so.”

Glennda Testone, the executive

director of the Lesbian, Gay, Bisexual & Transgender Community Center in New York City, said their youth programs serve about 50 young people a day, often suffering from “bullying, harassment or even violence.”

“The three main groups of pivotal figures are family, friends and their schoolmates,” she said. “And if they’re feeling isolated and like they can’t tell those people, it’s going to be a very rough ride.”

In Tehachapi, more than 500 mourners attended a memorial on Friday for Seth Walsh. One of those, Jamie Elaine Phillips, a classmate and friend, said Seth had long known he was gay and had been teased for years.

“But this year it got much worse,” Jamie said. “People would say, ‘You should kill yourself,’ ‘You should go away,’ ‘You’re gay, who cares about you?’”

Wendy Walsh said she hoped her son’s death would teach people “not to discriminate, not be prejudiced.”

# Jury begins deliberations in murders of mother and two daughters

By William Glaberson  
*THE NEW YORK TIMES*

NEW HAVEN, Conn. — After hearing weeks of often gruesome testimony, and with more than 200 pieces of trial exhibits to sift through, jurors on Monday began deliberating the charges against a parolee accused in a home invasion in Cheshire, Conn., that left a mother and her two daughters dead.

Jurors finished at 4:30 p.m. without reaching a verdict; they are to continue on Tuesday. At one point, they sent out a note asking for a transcript of a police interview with the defendant, Steven J. Hayes, in which he confesses to his involvement in the July 2007 crime. After being told that no such transcript exists, the foreman said the panel did not need it.

Hayes, 47, faces 17 charges, including murder, kidnapping, sexual assault, burglary and arson. Included are six capital felony counts. A

conviction by the jurors on any of the capital charges would require a second phase of the trial for the same jury to consider whether Hayes is to be sentenced to death. The jurors must reach a unanimous decision on each count, Judge Jon C. Blue told them.

Two alternate jurors were sent home before deliberations began with instructions they may be called back.

The panel, 12 jurors and the two alternates, heard closing arguments in State Superior Court on Friday. The lead defense lawyer, Thomas J. Ullmann, conceded that Hayes committed a series of crimes including the murder and rape of the mother of the family, Jennifer Hawke-Petit, kidnapping all four members of the family and committing larceny and burglary.

But he made several arguments intended to persuade the jurors not to convict Hayes of the six capital counts.

The testimony showed that Hayes and another man, Joshua Komisarjevsky, who will be tried separately, entered the Petit house in the middle of the night, beat and restrained the father, Dr. William A. Petit Jr., and wreaked havoc, including the rape and strangulation of Hawke-Petit.

The two daughters, Michaela, 11, and Hayley, 17, died of smoke inhalation in a fire set by the intruders.

The two men met at a Connecticut halfway house for parolees. In the hours before the crime, which they planned that day, Hayes even sent a text message with the phrase LOL — “laugh out loud” — apparently to describe his enthusiasm.

Petit survived and testified at the trial. He has called for the execution of Hayes and Komisarjevsky, whose trial will likely occur next year. The Cheshire case has played a central part in a debate in Connecticut about whether to repeal the capital punishment law.

# Hispanic coalition urges pending nominee Senate confirmation

WASHINGTON — A coalition of Hispanic groups on Monday applauded the Senate’s confirmation of two Latino presidential appointees, but urged lawmakers to push through a backlog of nominations when it returns after the Nov. 2 midterm elections.

The Senate last week confirmed South Texas native Raul Yzaguirre as ambassador to the Dominican Republic and Washington lawyer Jimmie Reyna to the U.S. Court of Appeals for the Federal Circuit.

“While Hispanics across the U.S. can today celebrate the accomplishments of Mr. Yzaguirre and Mr. Reyna, we urge the Senate to continue to make progress on nominees for other critical positions that remain vacant,” said Lillian Rodriguez-Lopez, chair of the National Hispanic Leadership Agenda.

The NHLA said the Senate has failed to confirm other Hispanics nominated by President Obama for important administration and judicial posts.

Michael Camunez of California awaits confirmation to be assistant secretary of commerce, as does Mary Murguia of Arizona, nominated to fill a vacancy on the 9th U.S. Circuit Court of Appeals. Albert Diaz in North Carolina was nominated a year ago for an opening on the 4th U.S. Circuit Court of Appeals.

Meanwhile, the Senate approved the nomination of Yzaguirre, the former president and chief executive officer of the National Council of La Raza, to serve as U.S. ambassador to the Dominican Republic.

— Gary Martin, *The San Antonio Express-News*

# Sanofi Aventis makes Genzyme bid hostile

Frustrated by a lack of cooperation from executives at Genzyme Corp., French drug maker Sanofi Aventis SA Monday began a hostile bid for the state’s largest biotechnology firm.

Sanofi refused to budge from the \$69 a share it offered in August for Cambridge-based Genzyme — about \$2 below the stock’s closing price Monday — in what was seen as the opening gambit of a protracted takeover battle. The \$18.5 billion bid was quickly rejected by Genzyme’s board, with chief executive Henri A Termeer insisting it undervalued his company.

While Sanofi has since hinted it might raise the bid and Genzyme suggested it was open to a deal at a higher price, neither side has changed its position and Sanofi Monday opted to appeal directly to shareholders. The company is asking them to turn over their Genzyme shares by Dec. 10, in a tactic known as a tender offer.

But with Genzyme’s share price edging up Monday to \$71.01, investors will not be in a hurry to cash out. Analysts said Sanofi’s aggressive move is more likely intended to pull Genzyme’s leaders into negotiations, something they have resisted as Sanofi’s overtures intensified.

—Robert Weisman and Erin Ailworth, *The Boston Globe*

# Visa, Mastercard agree to tentative deal in antitrust suit

Consumers may see more discounts for using cash instead of a credit card under a tentative deal announced Monday by the Justice Department and the credit card companies Visa and MasterCard.

The proposed settlement, which is subject to court approval, came after a two-year investigation into rules imposed by Visa, MasterCard and American Express that often prohibit merchants from steering customers toward cash, checks or other payment types that avoid transaction fees.

“We want to put more money in consumers’ pockets, and by eliminating credit card companies’ anticompetitive rules, we will accomplish that,” the attorney general, Eric H. Holder Jr., said at a news conference.

Merchants had already scored a major victory against the credit card networks earlier this year. As part of a major overhaul of financial regulation, Congress passed legislation that is expected to limit the swipe fees that Visa and MasterCard can charge merchants for each debit card transaction.

—Andrew Martin, *The New York Times*

# Drones kill militants from West in Pakistan

WASHINGTON — Drone aircraft operated by the Central Intelligence Agency killed several militants with German citizenship in the mountains of Pakistan on Monday, according to Pakistani and U.S. officials.

The missile strikes were part of an escalating barrage of attacks by the CIA over the past month and came amid tension in European capitals over the possibility that operatives of al-Qaida who are based in Pakistan and North Africa might be planning terrorist attacks somewhere on the continent.

A small stream of German Muslims has traveled to Pakistan’s mountainous tribal areas in recent years, part of what some European counterterrorism officials see as al-Qaida’s effort to recruit young Westerners who might be able to return to Europe or the United States to carry out attacks.

It was unclear whether the drone strikes Monday were related to the suspected terrorist plots in Europe. News organizations in Pakistan reported that missiles struck a mosque in Mir Ali, a town in North Waziristan, the region where most of the drone strikes have occurred this year.

U.S. officials offered few details about the strikes Monday, and there were conflicting reports about the number of German militants killed in the attacks. A Pakistani official said 10 to 12 people were killed, at least four of them German.

Usually, it takes the CIA several days to analyze communication intercepts and other information to confirm the identities of those killed in airstrikes.

On Sunday, the State Department issued a vague travel alert to Americans in Europe, warning of threats to “tourist infrastructure” but not mentioning any specific countries that might be at risk.

—Mark Mazzetti and Souad Mekhennet, *The New York Times*

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



## LETTERS FROM PBE

# The Cambridge hazing trials

## *Rival fraternities took advantage of a process with no oversight*

**By Jonathan Frazier**

Between February 1692 and May 1693 in Salem Village, Massachusetts, twenty nine men and women were tried and convicted of witchcraft. Salem Village had a “zero tolerance” policy for witchcraft, which was at the time a capital felony. Nineteen of the convicted witches went to the gallows. A twentieth man was crushed to death during attempts to draw out a confession. Luckily, the right lessons were learned, and the state of Massachusetts was never again the host of such a gross miscarriage of justice. That is until, September 2010. I welcome you, ladies and gentlemen, to the first case of the Cambridge Hazing Trials. And sadly, it might not be the last.

Hazing, like witchcraft, is generally considered a bad thing. To the outside observer, it is at best a bunch of silly, meaningless rituals, and at worst can lead to grave injury or death. I sympathize with the Puritan establishment in Salem. Momentarily suspending disbelief, if, hypothetically, there were actual witches hexing and cursing people, it would be in the public's best interests that they be brought to justice. Responsible governments take action to prevent unnecessary harm, because people should have the right to live without being subject to malicious torment.

But the Salem Witch Trials didn't just happen because there were laws against witchcraft. They happened because of prejudice against people who had different norms and traditions. People wanted to believe they were "witches." They happened because of a climate of economic competition where accusing someone of witchcraft was a quick and easy way to get their land and assets. They happened because of a standard for witchcraft whereby

nearly anyone could be “proven” guilty. They happened because no one stood up and said, “This is ridiculous. This isn’t the way the our government should be run.”

I'm sure everyone is tired of hearing about the PBE suspension by now, especially given how little has actually been said. The IFC claims that PBE hazed, based on a description of initiation procedures and testimony of an "anonymous witness." PBE claims they didn't haze, because no one was in physical or mental danger, no participants felt they were hazed, and the initiation rituals are essentially a harmless team building experience. Some PBE alums thought the decision was hasty, and asked for the MIT to independently review the case. MIT's position was to support the IFC's right to self government. PBE representatives pointed to the suspicious timing of the accusations during the early stages of rush, violations of the statute of limitations, and questioned the general lack of due process in the case. The IFC pointed to rights being waived and the fact that everyone had agreed to be governed in this way. There have been claims, counter-claims, and conspiracy theories, but very few answers.

Unfortunatly, at this time, I don't have any answers to add. But I do have a few more questions. First of all, what is hazing? According to the state law, hazing is something that willfully or recklessly endangers someone's physical or mental health. Despite claims to the contrary, the IFC has yet to provide even a single example of danger to anyone's physical or mental health. If no one was harmed, and no one was in danger of being harmed, when did hazing take place?

According to Fraternal Information and Programing Group (FIPG) policy, hazing

is something that intentionally produces mental or physical discomfort, embarrassment, harassment, or ridicule. But how do you establish intent? PBE claims that it's intent was to promote bonding through a shared experience in the traditions of a fraternity with 120 years of history. The strength of the connection between the active brothers and the alumni would seem to lend credibility to this motive. How do you determine whether someone was uncomfortable, embarrassed, harassed, or ridiculed? The easiest way would be to ask the initiates, the supposed "victims" of the crime. Not only did the IFC never ask the former pledges, it continues to ignore their protests to the accusations, and threatens to kick them out of their home. If PBE can be judged guilty of hazing based on circumstantial evidence and with no victims, it could happen to any member of the IFC or MIT community.

**If no one was harmed,  
and no one was in  
danger of being  
harmed, when did  
hazing take place?**

I am not specifically accusing the IFC JudComm of any bias in their process, but I do think the competitive nature of Rush presents plenty of opportunity for conflicts of interest. Greater oversight should be exercised during any judicial procedure that happens during Rush. Fraternity rush is extremely competitive, as proven by the tens of thousands of dollars spent annually by houses to attract freshmen. I suspect that the MIT policies requiring freshman to live on campus and balancing

the campus gender ratio have only added to this pressure in recent years. Without freshman in the house, fraternities need larger pledge classes to keep their houses full. Also, the trend towards gender parity means that there is a smaller pool of men for the fraternities to draw from.

This increasingly competitive climate gives fraternities ample incentive to eliminate competing houses. With respect to hazing, where the determination of the offense is subjective, and the punishment is so severe, it is unacceptable that this judgement can be passed down overnight by a handful of rival fraternity members with zero oversight. It is unacceptable that the supposed "witness" of these events remains anonymous, and PBE was never given a chance to cross examine this person. It is unacceptable that a 120 year old fraternity in good standing with the Institute and with a history of excellence was kicked out overnight for an alleged crime where there are no victims and no evidence that hazing took place.

But the Cambridge Hazing Trials aren't just happening because there are laws against hazing. They are happening because of prejudice against a local fraternity that has different norms and traditions. People want to believe they are "hazing." They are happening because of a climate of fratricidal competition where accusing someone of hazing can be a quick and easy way to eliminate competitors for pledges. They are happening because of a standard for hazing whereby nearly anyone could be "proven" guilty. And they will keep happening until we all stand up and say, "This is ridiculous. This isn't the way the our government should be run."

*Jonathan Frazier is a member of the Phi Beta Epsilon Class of 2009.*

## The view from a PBE parent

*For the sake of the PBE brothers, MIT must lead a new investigation*

**By Kelly K. Leonard**

To those we've entrusted:

My name is Kelly Leonard and Nicholas Leonard, PBE-MIT '11, is my son. My husband and I are both first generation college graduates, but it came to us in the nontraditional way and later in life. We were married with children when we earned our degrees and things like dorms and fraternities were unknown to us. The only "living group" we experienced was our own family.

We've had high expectations for our kids and Nick has never let us down — we encouraged him to set his goals high and he did. Trying to be informed parents, we investigated MIT through media content, internet articles, the MIT website and blogs, and a visit to the campus. All the information we had gathered confirmed the incredible opportunities as well as the outstanding education that he would be privy to. When the word came that he had been accepted into MIT Class of 2011, we were more than pleased.

Late August 2007, we put Nick on a plane to arrive in Boston so he could attend Freshman Leadership Program (FLP) before classes began. A week later, we loaded the car to bring his belongings and help him move into Baker dormitory. He made a smooth and easy transition to college life.

I was a little skeptical when he told me that he was “rushing” and was interested in a fraternity named Phi Beta Epsilon. He told me what they had presented themselves as to him, including their high group GPA and the benefits of having “brothers” who had “been there and done that” as far as classes go and how much it would help him academically. They have a long and outstanding legacy as a local fraternity with much charitable involvement and diversity. My only experience with “frat” houses was limited to movies and the news, none of which portrayed fraternities in a good light. I had a conversation with Nick specifically discussing my displeasure over the possibility of hazing. He believed then, and assured me later that my fears

had been ungrounded and that the pledge process and fraternity initiation were all about bonding and brotherhood and left him feeling more supported academically and emotionally that he could have ever imagined.

PBE has provided a safe, conveniently located roof over his head, meals in his stomach, tutoring when needed, social contact, encouragement, friendship, fun, companionship and support — just like a family. They *are* his family when he can't be here with us. They are his older brothers who've guided him and taught him responsibility and discipline and his younger brothers who've taught him patience and pride. All of the brothers before him and all that will come after him are family.

**Is there any just cause for punishing these students this extremely? Could no other alternate, more fitting, resolution be found?**

We sent Nick to you with the understanding that MIT is an institution that cares about its students. Our son is not just a tuition check to you, but a person who, with the opportunity being given to him, could change the world. MIT gets this and fosters this atmosphere. But our family is deeply concerned about Nick right now. He and his fellow brothers have had the rug pulled out from under them with their expulsion from the IFC. How can they possibly study, learn and maintain grades with this kind of stress? Are any of the current actives accused of a violation? Is there any just cause for punishing these students this extremely? Could no other alternate, more fitting, resolution be found? Perhaps an educational workshop to be hosted by PBE, to inform all the other fraternities, sororities, dorms, living groups, athletic groups and yes, MIT sponsored activities

like FLP, the definition of hazing and how it might apply to them?

Our judicial system is one of the best in the world. It is a hallowed and revered institution that I fully support. In a civilian court, we are protect against biased judges and partial jurors. Judges will recuse themselves from cases and jurors are vetted at the onset by both sides of the process. We also have the right to face our accuser. I also believe that "evidence" obtained illegally cannot be introduced to the court. Our system also allows that if and when the process fails, there is protection in the form of mistrials, retrials and appeals.

While I understand and believe in the benefit of a student organization to self-govern, these are still very young and inexperienced adults who are absolutely capable of bias and partiality. That is why an advisory representative should be in place to oversee their actions and to guide them through the process especially in a case of this significance. I am dismayed that the Dean of Student Life appears more concerned with “supporting the student leaders who made this difficult decision” than the actual students whose lives this decision affects. These same students have not been shown to be responsible for *any* misconduct.

Noted in Commonwealth of Massachusetts General Laws 269:17 HAZING; ORGANIZING OR PARTICIPATING; HAZING DEFINED: “any conduct ... whether on public or private property, which willfully or recklessly endangers the physical or mental health of any student or other person. Such conduct...which is likely to adversely affect the physical health of any such student or other person, or which subjects such student or other person to extreme mental stress.” Under this definition, our sons, being “willfully exposed to extreme mental stress” and the possibility of “physical endangerment” through unknown future housing are being hazed right now. Unfortunately, they are not afforded protection from the IFC nor the decisions of the IFC.

Here are the things that concern me about recent events:

1. The lack of transparency (through the protection of the criminal who submitted the illegally obtained “evidence”).

2. There was no Institute adviser present during the IFC meeting "due to the holiday."

3. A biased and tainted juror was allowed to serve, deliberate and hand down a sentence.

4. The extremeness of the punishment. I have to question the motives behind the expulsion (later changed to suspension).

5. The lack of adhering to the IFC's own 60 day statute of limitations regarding the presence of alcohol (which was never consumed nor even unsealed, yet was admittedly present).

6. No person, past or present, can be found to corroborate any accusation of hazing yet PBE was found guilty of such a violation.

7. There doesn't seem to be an organized appeal process available. The Dean of Student life appears interested only in "supporting the process" and not in supporting the wrongfully displaced students.

**8.** I'm concerned about my son and the other MIT students of PBE who have had their home and social support network dismantled without just cause.

I'm not an MIT alum, I have no experience with the judicial system and I'm not an eloquent writer, but I hope that MIT hears and understands my concerns regarding this situation. I hope that the administration will look into this matter more thoroughly and I hope that they will be part of the process to oversee a resolution to this injustice. This is my son's senior year at MIT, one that I thought would be as rich and rewarding as his previous three. But, instead, we're finding that it's been a nightmare of uncertainty and stress.

We trusted MIT three years ago with our son's education and well-being. We're trusting them again now that this matter will be attended to and that MIT will not allow an incident of this magnitude to occur without a thorough and impartial investigation.

*Kelly K. Leonard is the mother of Nick Leonard '11, a brother at PBE.*

# The danger when renovations run late

*At MacGregor, summer safety upgrades blew deadline after deadline, putting students at risk*

By **Ryan Normandin**  
*STAFF COLUMNIST*

Over the summer, MacGregor was extensively renovated, which is a good thing. It means that we can now turn our heat up or down, the shower feels like a firehose, and there's no more asbestos killing us as we sleep. MIT also installed a completely new fire alarm system. And although the voice that tells us to evacuate the building is terribly annoying, I can forgive that small deficiency since it might save my life. But there is another problem that is a bit more troubling. The fire alarm testing was not completed over the summer, which meant that for several weeks, the residents of MacGregor got to listen

to fire alarms and an annoying voice telling them to leave from 8:30 a.m. until 5 p.m. Even after classes started, the fire alarms continued to be tested for an hour or so at a time. While many residents certainly found this quite irritating, it in itself was not a danger. The danger came when, after the fire alarms were supposedly done testing for the day, they went off again. In the words of Leon Zhou '14, a resident of MacGregor, "We all thought that it was a drill or a test, not the real thing." Another resident, Frances Chen '13, pointed out that "after three weeks of testing, residents don't know if it's a drill or not." As a result of this widely shared sentiment, only about fifteen to twenty people actually evacuated the

building, and only after the alarms had been active for several minutes. The scary thing about this incident was that the alarms had gone off because they really did detect smoke. Had it been a fire, this story would not have a happy ending. The next morning, the fire alarms went off again, and a substantially higher number of people evacuated successfully, so it appears that the residents now know to take future fire alarms seriously. But this does not change the fact that had the first alarm been more than smoke from an oven, the consequences could have been severe. Looking beyond the dangers of desensitizing residents to the fire alarms, the alarms themselves were highly disruptive once

classes began and students were trying to focus on work. They also made REX somewhat difficult for MacGregor — the most prominent memory many freshmen probably have of their time here was the fire alarms going off nonstop. That certainly doesn't predispose freshmen to have a positive conception of MacGregor. When MIT renovates dorms over the summer, the renovations should be complete before students return — and especially before classes start. Renovations that take place while students are in the dorms are disruptive, and in situations involving fire safety, potentially dangerous. We got lucky this time, but it's better to be safe than sorry.

# Abandoning sound economics on children's insurance

**Healthcare**, from Page 4

holistically, for reform to work, the two need to be large enough to compel the healthy to purchase insurance despite being forced to cross-subsidize the unhealthy. One can disagree with how Congress struck the balance between subsidies and penalties, but on the net, the health care reform was a success: in 2014, all three legs of the stool will simultaneously come into being, and the stool will be sturdy enough to support a large expansion of insurance coverage...with one hitch: last week, virtually every major insurance company in America stopped writing children's insurance policies in the non-group market. The reason is simple: when it comes to children, the Obama administration decided it needed to enact one leg of the stool — guaranteed issue — now, rather than wait until all three kick in in 2014. Not all children are affected. Where children are only a small part of the total insured pool and purchase is already semi-

mandatory (for example, in employer-based plans that extend insurance to employee children), insurance will continue much as it ever did. But for the million or so kids that seek insurance from the individual market, the outlook is grim. What is most tragic about this death spiral is that it was completely unnecessary. The crafters of the Affordable Care Act understood the three-legged stool and never intended to spatchcock a guaranteed issue provision so early in the act's timeline. For that bit of masochism, we have Kathleen Sebelius, the Secretary of Health and Human Services, and her boss, President Obama, to blame. Defying the very economic theory that provided the impetus for health care reform in the first place, Mrs. Sebelius and Mr. Obama decided to creatively interpret some loose language in the bill and enforce a guaranteed issue provision three years before it was set to commence. One has to wonder what the motivation behind this is. It could, perhaps, be an electoral ploy — the White House has certainly

tried to leverage this move as a victory for children against insurance companies — but if it is a ploy, it's a truly depraved one. It takes a very hardhearted cynic to sacrifice the health care of a million children in exchange for a political soundbite (especially one of such questionable value). I have no special insight into the inner-workings of the president's mind. However, I can't help but remember that when Barack Obama was fighting to win the Democratic primaries two years ago, he campaigned against exactly the reforms that were subsequently pushed through Congress. Perhaps Candidate Obama was unserious in his opposition to insurance mandates. More likely, I think, is that President Obama, upon assuming office, skeptically yielded his judgment to his economic betters. Seen in this context, the disaster unfolding in children's health insurance is not a callous political maneuver, but simply President Obama returning to his roots and governing from his gut. And if this is the case, then in the same stroke, the recent high pro-

file defections from President Obama's economic advisory team can be understood as the breakdown of his brain trust as the president increasingly subordinates his experts' advice to his own, flawed, economic ideas. The Obama administration may be, in a sense, trapped in its own death spiral. The more the president shrugs off the pleas of his experts, the greater the exodus of those experts will be, and without resistance from learned men, the president will find it easier to substitute his own shaky command of economic theory for that of professionals. At the end of this death spiral, we will likely find the full manifestation of a mind that conceives of the world as a zero-sum game: that which is bad for insurance companies must be good for their customers, that which is bad for the rich must be good for the poor, that which is bad for business must be good for labor, that which is bad for foreign companies must be good for domestic ones, and so on. Today, a million children are left to dangle over an abyss. Tomorrow, things may be worse.

# Do you blog?

The Tech's Opinion section is starting a blog this semester.

If you care about politics, international relations, or campus events, but don't have the time to write long-form opinion columns, this is your chance.

We want bloggers to write short entries for two Opinion features:



★ **Political Coverage** ★  
2010 Midterm Elections

 **ON CAMPUS**

Things that happen in the U.S. political world. 2010 is shaping up to be an exciting year!

Things that happen here at MIT (dining, student government, dorms, fraternities...take your pick!)

And beyond: We love internationally-themed content!

email us at:  
**opinion@tech.mit.edu**

# In vitro fertilization pioneer wins Nobel Prize

By Nicholas Wade  
*THE NEW YORK TIMES*

The Nobel prize in physiology or medicine has been awarded this year to Robert G. Edwards, an English biologist who with a physician colleague, Patrick Steptoe, developed the in vitro fertilization procedure for treating human infertility.

Since the birth of the first test tube baby, Louise Brown, on July 25, 1978, some 4 million babies have been conceived by mixing eggs and sperm outside the body and returning the embryo to the womb to resume the normal development. The procedure overcomes many previously untreatable causes of infertility and is used in 3 percent of all live births in developed countries.

Advances in human reproductive technology arouse people's deepest concerns and often go through a cycle, first of outrage and charges of playing God, then of acceptance. In vitro fertilization proved no exception.

"We know that IVF was a great leap because Edwards and Steptoe were immediately attacked by an unlikely trinity — the press, the pope and prominent Nobel laureates," biochemist Joseph Goldstein said in presenting the Lasker Award to Edwards in 2001.

Research with human embryonic stem cells, made possible by Edwards' development of in vitro fertilization, has evoked a similar outcry, but so far there are no offsetting practical benefits like the birth of healthy babies to eager parents. Because of the difficulty of stem cell research, such benefits may not be seen for many years, if ever.

Edwards, a physiologist who spent much of his career at Cambridge University in England, devoted more than 20 years to solving a series of problems in getting eggs

and sperm to mature and unite successfully outside the body. His colleague, Steptoe, was a gynecologist and pioneer of laparoscopic surgery, the method he used to extract eggs from the prospective mother.

Steptoe, who presumably would otherwise have shared the prize, died in 1988 (the Nobel prize is not awarded posthumously). Edwards, 85, has retired as head of research from the Bourn Hall Clinic in Cambridge, which he and Steptoe founded as one of the world's first centers for in vitro fertilization.

Because of health issues, Edwards himself was not available to reflect on his research career or the children alive because of his achievement.

"Unfortunately he is not in a position to understand the honor he has received today," said Dr. Michael Macnamee, director of the Bourn Hall clinic and a longtime colleague of Edwards. "He remembers the past very well but not the present."

The deliberations of the prize-giving committee at the Karolinska Institute in Sweden are confidential, and it is unclear why it took so long to acknowledge Edwards' achievement.

The Swedish committee is believed to avoid controversial people and issues. The ethical objections to in vitro fertilization may have been one reason for the delay. Scientists speculated that Edwards' political views — he has been a committed socialist — may have been another.

The committee routinely ignores the stipulation in Alfred Nobel's will that the prize should be awarded for a discovery made the preceding year, because it takes longer than that to evaluate most scientific claims, but delays of 30 years or more are unusual. The Lasker Foundation in New York, whose jurors often anticipate the Nobel

prize committee, awarded Edwards its prize nine years ago, although it, too, failed to act in time to honor Steptoe.

Although in vitro fertilization is now widely accepted, the birth of the first test tube baby was greeted with intense concern that the moral order was being subverted by unnatural intervention in the mysterious process of creating a human being. Edwards was well aware of the ethical issues raised by his research and took the lead in addressing them.

The objections gradually died away — except on the part of the Roman Catholic Church — as it became clear that the babies born by in vitro fertilization were healthy and that their parents were overjoyed to be able to start a family. Long-term follow-ups have confirmed the essential safety of the technique.

Edwards' research proved too controversial for the Medical Research Council, a government funding agency that is the British equivalent of the National Institutes of Health. In 1971 the council rejected an application from Edwards and Steptoe to work on in vitro fertilization, but they were able to continue with private funds.

Both Edwards and Steptoe had to endure an unremitting barrage of criticism while developing their technique. Steptoe "faced immense clinical criticism over his laparoscopy, even being isolated at clinical meetings in London," Edwards wrote in the journal *Nature Medicine* in 2001 after receiving the Lasker award. "Ethicists decried us, forecasting abnormal babies, misleading the infertile and misrepresenting our work as really acquiring human embryos for research."

Edwards fought back, forming alliances with ethicists in the Church of England and filing libel actions — eight in one day — against his

critics.

"I won them all, but the work and worry restricted research for several years," he wrote.

Even after the birth of Louise Brown, the government refused to support his work, which was delayed for 2 1/2 years, Edwards wrote, until he secured private funds.

"There was at one time a possibility that Steptoe and Edwards would emigrate to the United States," said Macnamee.

In parallel with defending his work in public, Edwards had to surmount one daunting problem after another in his laboratory. It sounds easy — mix eggs and sperm in a Petri dish and let nature do the rest. But the opposite is the case.

At the outset of his research, Edwards wasted two years trying to get eggs to mature outside the body, based on a report that human eggs matured in 12 hours. Eventually he learned that at least 25 hours is required.

Needing a reliable supply of human eggs, he approached Steptoe at the Oldham and District General Hospital because of his expertise at retrieving unfertilized eggs from the ovary through minute incisions in the patient's skin. The two agreed to work as equals, to halt their work if danger emerged to patients or children and to ignore all religious and political criticism they deemed frivolous. The partnership lasted 20 years, until Steptoe's death.

The two began transferring fertilized eggs to the womb in 1972, assuming that the rate of implantation would be as high as with farm animals. Their hopes were dashed. At first, the hormones given the mother to induce ovulation interfered with the growth of the embryo. Edwards and Steptoe then injected mothers with extra hormones, but these turned out to induce abor-

tions.

They persisted through more than 40 embryo transfers before obtaining their first pregnancy. Unfortunately it was ectopic and had to be aborted. Louise Brown was born from the second pregnancy.

"It required grit and determination to keep going," Macnamee said of his colleague. "But he had the conviction of his research work and he wanted to see it delivered to the people who needed it."

Despite the ethical objections leveled at his work — some of which persist today, over the disposal of unused embryos and the high risk of multiple births — Edwards was nonetheless allowed to develop the technique over many years.

"It would be very difficult to develop in vitro fertilization now because the ethical committees would have stopped his research," Macnamee said.

The ability to fertilize eggs in a dish made possible several other significant advances in reproductive technology, such as pre-implantation diagnosis of genetic diseases and the culturing of embryonic stem cells.

Edwards was keenly interested in human embryonic stem cells and started work toward developing them in the 1980s. He published an article in *Science* in 1984 reporting the culture of human blastocysts, the pre-implantation embryos from which stem cells are derived. But he discontinued the work because of the controversy it aroused in England.

"It was a very touchy subject in the early 1980's. Bob was continually involved in lawsuits," said Kay Elder, a colleague at the Bourn Hall Clinic.

Human embryonic stem cells were later derived by James Thomson of the University of Wisconsin in 1998.



MAKING AND DESIGNING

MATERIALS ENGINEERING

CONTEST

2010

*Materials Solutions  
for Alternative Energy*



COURSE III DMSE

Finalists presentations and Awards Ceremony  
Tuesday, October 5 2010, 7PM  
MIT Room 4-237  
<http://dmse.mit.edu/madmec>

**By Michael T. Lin**  
*CAMPUS LIFE EDITOR*

Taking a class in stand-up comedy last year was not part of my plan of college activities to pick up, which mostly consisted of low-risk, low-impact, dead-center-of-my-comfort-zone activities like writing, piano playing, and flossing. Of course, I was never very good about following plans or flossing, so the exact composition of my college extracurricula deviated significantly from the plan. The fact that I like

**As it turns out, stand-up is something of a rush for me. Some people skydive, some people surf — I stand on a stage in a leisurely rest state with a microphone in my hand.**

sounds, the reasoning is pretty straightforward — things that happen according to expectation are, by definition, normal, and therefore probably unfunny. Said deviation from the norm could come from expecting something ordinary and getting something outrageous, or expecting something outrageous and getting something ordinary, but it needs to come from somewhere. In everyday life, expectations arise naturally, and a punchline is all that needs to be added to be funny — hence the widespread use of innuendo regarding what some female did or did not say. In stand-up, expectations must be set up beforehand. Generating the right surrounding structure for your punchline is a task that can be approached from multiple directions, a phrasing that might also be used to characterize someone's mother. Similarly, telling a funny story to your friends and telling a funny story on stage are drastically different propositions. A story might seem funny compared to what you see from day to day, but on a stage in front of dozens of people expecting something particularly funny, that anecdote about your supposedly-hilarious ad-lib in your 3rd-grade school play just doesn't

One of the most common things people ask me when they hear I do stand-up (in the absence of a proper comic around) is how one writes a joke. The crucial revelation, at least for me, was word association. In addition to revealing the strange and twisted directions the human mind is capable of going, word association collects all of the words in your head associated with the topic you want to write a joke about, which shrinks the mental haystack containing the comic needle significantly. It also conveniently eliminates any completely unrelated hay on the upcoming midterm or recently procrastinated pest. For instance, if you want to write a subtle punchline to work into your job interview for Apple, word association helps make sure that the words “Flash” and “antenna” remain tactfully absent.

Admittedly, although my introduction to the world of stand-up comedy has been cursory at best, I'm pleasantly surprised at how far a few basics can go. The next step in my stand-up education: how to hold the microphone the right distance from my face. That's a mistake I refuse to make a third time.

# You sexy thing

**By M.**

What, the, fuck.

Of course, I completely forgot about my own insecurities. A few years ago, I had major issues with my body. By the time I started high school, I was sporting a pretty bodacious rack and getting the attention that came with it. And the women in family run thick, so I was stuck with a few extra pounds on my thighs and butt that not even the Atkins diet

And then when I started having sex, my insecurities were a bit of an obstacle. You know those girls who get naked and cover themselves with the sheets and insist on having sex with the lights off and wake up early to groom, lest she look like Chewbacca? That was me! It made absolutely no sense. Oh, and Cosmo wasn't even the first one to come up with tummy-minimizing sex positions, because that's how I got into the missionary.

I'm way more confident now — I know I don't look like a supermodel, but guess what? I also don't have to diet and work out like one. My boobs are still strange-looking and my thighs are still thick and my ass still doesn't fit into 99 percent of jeans, but I like my body. I can have sex with it, and sex is

So if you haven't figured out what my message is yet, let me spell it out: Stop obsessing. Sex gets a million times better when you stop thinking about your jiggle thighs or your beer belly or what-have-you and focus on more important things like, you know, your or-

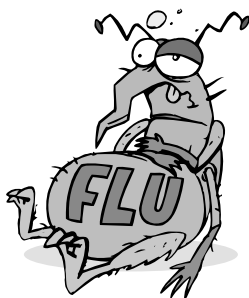
**My ass still doesn't fit into 99% of jeans, but I like my body. I can have sex with it, and sex is pretty awesome.**

I know what you're thinking: Easier said than done. Confidence is not built overnight.

But the best piece of advice I can probably give you, and the one that's helped me the most, is this: Instead of focusing on your insecurities, focus on the fact that the person on the other end is way excited out of their mind to be screwing you soon. If they do give you shit about your body, kindly remind the asshole in question that he's lucky enough to be getting laid and if he's going to get sassy, he can take his limp business elsewhere. Do it in any position you want, and for fuck's sake, please leave the lights on.

*M. is a senior in Course 10. She can be contacted at undress@tech.mit.edu.*

***Get your  
flu shot...***



## Free walk-in clinics

**Tue. October 5** 10 a.m. – 4 p.m.**Thu. October 14**    Noon – 4 p.m.**Mon. October 18** 10 a.m. – 4 p.m.

**MIT Student Center, 3rd floor • Bring your MIT ID**

Oct. 14 clinic open to MIT students only. Other clinics open to MIT students, employees, health plan members and retirees.

 **MITMedical** [web.mit.edu/fluinfo](http://web.mit.edu/fluinfo) • 617-253-4865

# Royal Bengal

*Boston's only authentic Bengali Cuisine restaurant*

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/>

# SPERM DONORS

Earn up to **\$1200** per month

Invest minimal time

Make a real difference in the lives of families

Receive free health and genetic screenings

**APPLY ONLINE:**

**SPERMBANK.com**

- convenient Cambridge location

# Wanna make columns?

# Not an architect?

Join  
Campus Life  
at *The Tech*!

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

FOR 2010 CONSULTING MAGAZINE NAMES

# STROUD CONSULTING

# #1 BEST

## SMALL FIRM TO WORK FOR

# AGAIN

"OVER DINNER, MY  
MANAGER AND I  
DEVELOPED MY  
CAREER PLANS (EVEN  
BEYOND STROUD)!"  
PETER, '09, ASSOCIATE

"THE OPERATIONS MANAGER  
WAS ASTOUNDED WHEN HE  
LEARNED THAT THE OUTPUT  
OF THE COOLERS HAD BEEN  
IMPROVED BY 43%--WITHOUT  
SPENDING A DIME."  
PREETI, '09, ASSOCIATE

"BY GETTING THE FACTS  
THE TEAM DISCOVERED THE  
TRUE CAUSE OF THE  
PRESSURE DROP THAT WAS  
LIMITING PRODUCTION--AND  
WE CHANGED PEOPLE'S  
MINDS ABOUT WHAT WAS  
POSSIBLE."  
ALEXIS, '10, ASSOCIATE

"I HELPED A DIRECTOR  
BUILD THE 2-YEAR  
STRATEGY FOR HIS  
BUSINESS AREA,  
SOMETHING I COULD  
NEVER HAVE DONE A  
YEAR AGO."  
JOE, '08, CONSULTANT

"I HELPED A GENERAL  
MANAGER CHALLENGE A  
\$300 MILLION SPEND IN  
HIS BUDGET."  
RYAN, '01, LEAD CONSULTANT

"I HAD A CLIENT APPROACH  
ME TO DISCUSS HIS CAREER  
PLANS AND WE HAD A GREAT  
CONVERSATION ABOUT HOW  
HE CAN ADVANCE HIS  
CAREER."  
SCOTT, '00, PRINCIPAL

## YOUR WORK WILL MAKE AN IMPACT FROM DAY ONE.

**STROUD CONSULTING NEEDS TALENTED, DRIVEN PEOPLE** TO JOIN OUR RAPIDLY GROWING OPERATIONS AND MANAGEMENT CONSULTING PRACTICE. WE ARE ACTIVELY LOOKING TO HIRE INDIVIDUALS WHO WANT TO ROLL UP THEIR SLEEVES, PARTNER WITH OUR CLIENTS, AND GET IT DONE.

## MIT INFORMATION SESSION & INTERVIEW SCHEDULING

To be considered, you must attend one of our information and interview scheduling sessions. Please bring a copy of your resume including GPA. Food will be provided.

WEDNESDAY, OCTOBER 6, 2010, 7:30PM-9:30PM, MIT ROOM 1-190  
THURSDAY, OCTOBER 7, 2010, 5:00PM-7:00PM, MIT ROOM 1-190

Questions? EMAIL – [us.recruitment@stroudconsulting.com](mailto:us.recruitment@stroudconsulting.com) ONLINE – [www.stroudconsulting.com](http://www.stroudconsulting.com)



BOSTON | LONDON

# FUN FUN FUN FUN FUN



**ACROSS**

- 56 Tavern brew  
57 Three longs  
62 Fabled also-ran  
63 Funny Jack of Hollywood  
64 End-of-week cry  
65 Tan and Smart  
66 Huntley and Atkins  
67 Camera's eye

- 1 Mineral finds
- 2 Think out loud
- 3 Three shorts
- 4 Actor Wallach
- 5 Robberies
- 6 Soothing lotion
- 7 Three shorts
- 8 Booze, butts, and bullets bureau
- 9 Adriatic or Caspian, e.g.
- 10 Assist a wrongdoer
- 11 Three shorts
- 12 Boxing letters
- 13 Stitch
- 18 Litigators
- 19 Courtney or Wally
- 24 Indian cash
- 26 Abides by
- 27 Hardworking insects
- 29 Composer Saint—
- 30 Provide with a trait
- 33 Forbidden acts
- 34 Greek letter
- 35 Heap of Dickens
- 36 Reputations

39 Calf-length skirt  
43 Egg white  
46 Dracula's conquests  
48 J. Edgar Hoover's org.  
50 Baylor of basketball  
51 Coral colonies  
53 Shoshones

- 55 1st letter  
57 \_\_ Na Na  
58 Bad actor  
59 Part of SSA  
60 Well, \_\_-di-dah!  
61 Braves in box scores





SAM RANGE—THE TECH

**President Susan Hockfield (left) delivers opening remarks at Wednesday’s State of the Institute address,** before hosting a question and answer session with Chancellor Phillip L. Clay PhD ‘75 (top), Provost L. Rafael Reif (bottom), and Treasurer Theresa M. Stone SM ‘76. During the annual summary of the Institute’s financial and strategic positions, administrators emphasized the stability and sustainability of MIT’s current budget, following significant cuts over the last year.



# Better banking means better offers for students!

Open a new Student Banking Package. Add great features.  
**GET UP TO \$75\***

**Get up to \$75 and great student features!** Now through November 12, 2010, students who open a Student Banking package—including Free Student Checking, Free Student Savings, Free Online Banking, and a Sovereign Debit Card—plus use the Debit Card to make 5 purchases within 60 days—get a **\$50 cash bonus!**\*

Plus, set up and receive direct deposit into the account within 60 days of the account opening and get an **additional \$25 cash bonus! That’s a total of \$75!**\*

Get banking features created for students today! Stop by the nearest Sovereign Branch, call 1-877-SOV-BANK, or visit [sovereignbank.com/75](http://sovereignbank.com/75) today!

Santander Strong—Sovereign is part of Santander, the “Global Bank of the Year”†

Sovereign

Santander  
UNIVERSITIES

**1.877.SOV.BANK | [sovereignbank.com/75](http://sovereignbank.com/75)** Sovereign Bank is a Member FDIC and a wholly owned subsidiary of Banco Santander, S.A. © 2010 Sovereign Bank | Sovereign and Santander and its logo are registered trademarks of Sovereign Bank and Santander, respectively, or their affiliates or subsidiaries in the United States and other countries. Student Banking package is available for full-time and part-time students between the ages of 17 and 25 attending a college, university or other undergraduate-level school. \*In order to qualify for a cash bonus, you need to: (1) open a new Sovereign Free Student Checking account and a Sovereign Free Student Savings account, or have a pre-existing savings account, by 11/12/10, each with a minimum opening deposit of \$10; (2) enroll in Online Banking at account opening; and (3) request a Sovereign Debit Card (“Debit Card”) and make 5 Debit Card purchases within 60 days after you open your account. When you qualify, you will receive a credit of \$50 to your new checking account within 75 days of account opening. In addition, if you set up and receive a direct deposit within 60 days of account opening and fulfill the above requirements, you will receive an additional bonus of \$25, which will be credited to your new checking account within 75 days after account opening. Maximum \$75 bonus per customer. Checking account must be open to receive bonus. Annual percentage yield (APY) for Free Student Savings is 0.05% as of 9/1/10 and is subject to change at any time and after account opening. Fees may reduce earnings. The total amount of the bonus credited to your account will be reported to the IRS as interest on your Form 1099-INT for the year in which the bonus is paid. Current personal checking customers or anyone who has had a personal checking account with Sovereign Bank or any of its divisions in the last 6 months are not eligible for this offer. Cannot be combined with other personal checking offers. Offer available only to residents in the following states: ME, VT, NH, CT, RI, MA, NY, NJ, PA, WV, MD, DE, District of Columbia. Sovereign Team Members are not eligible for this offer. †According to *The Banker*, December 2009.



# READ THIS AD.

## OR, DON'T.

*An exercise in freedom.*

By deciding to continue reading, you've just demonstrated a key American freedom~choice. And, should you choose to turn the page, take a nap or go dye your hair blue, that's cool too.

Because while rights like freedom of speech, freedom of religion and freedom of the press get all the attention in the Constitution, the smaller liberties you can enjoy every day in America are no less important or worthy of celebration.

Your right to backyard barbeques, sleeping in on Sundays and listening to any darned music you please can be just as fulfilling as your right to vote for the president. Maybe even more so because you can enjoy these freedoms personally and often.

So take a moment to celebrate all the little liberties you enjoy in America. Or, forget all this and choose to take them for granted~it's a free country.

FREEDOM. APPRECIATE IT. CHERISH IT. PROTECT IT.



# Student Explorer Grant

- Turn your ideas into a business venture
- Receive up to \$50,000 funding

APPLY  
NOW

Do you have an exciting game or web application? Do you want to be an entrepreneur? The Explorer Grant will assist individual students or groups of students explore further development and commercialisation of innovative games and web applications originated by them. The Explorer Grant will provide up to \$50,000 in funding to develop commercial prototypes, evaluate go-to-market strategies so that your game or web application can be licensed to an existing company or form the basis of a start-up company. The Explorer Grant will provide business expertise, guidance on intellectual property and networking opportunities with the Singapore and international venture capital community.

Eligibility

- ◆ Full time undergraduate or graduate students at:
  - Massachusetts Institute of Technology
  - Nanyang Technological University
  - National University of Singapore
  - SIM University
  - Singapore Management University
  - Nanyang Polytechnic
  - Republic Polytechnic
  - Singapore Polytechnic
  - Temasek Polytechnic
  - in some instances other Singapore Institutes and recent graduates can be considered.
- ◆ You must identify a faculty member at your institute to act as a Faculty Mentor.
- ◆ You can work in student teams or individuals. If working as a team, a team leader must be identified. Teams from multiple universities can be formed.

Submission Process

Submit the proposal electronically to [explorergrants@smart.mit.edu](mailto:explorergrants@smart.mit.edu) by 15th November 2010, 5 pm, Singapore time.

Visit <http://web.mit.edu/smart/explorer> to download Grant application form.

For inquiries, contact Howard Califano at [howard.califano@smart.mit.edu](mailto:howard.califano@smart.mit.edu) or visit <http://web.mit.edu/smart/innovationcentre> for more information.

Important Dates	
01 October 2010	Grant Submission
15 November 2010	Grant Closes, 5 pm
28 February 2011	Award Grant



# Grant allows bold risks

## Holds 'special place' in research

MacArthur, from Page 1

at CalTech before returning to be a part of the MIT faculty in 2002.

The bulk of her research throughout her career has been devoted to the detection of gravitational waves as a new tool for astrophysics. In the past, astronomers have relied on analyzing properties of light coming from distant celestial objects to learn more about the universe. Now, with the advent of the Laser Interferometer Gravitational-Wave Observatory (LIGO), researchers like Mavalvala can analyze the nature of the gravitational waves given off by these objects and look at the data from a whole different perspective.

"Once we start detecting the gravitational radiation, it really allows us to look at the universe with a completely different messenger," Mavalvala said.

"We can find many things that, once we start making detections and using astrophysics, we'll be able to learn so much more things about nature and understand it so much better."

Besides the coveted public recognition, the MacArthur Fellowship provides an unrestricted stipend of \$500,000, awarded in quarterly installments over five years,

"Funding like this has a very special place in research," Mavalvala said. "It allows us to try out risky ideas that agencies might not be willing to fund." She believes the payout of these risks could potentially be huge. However, although Mavalvala has some ideas on what to do with the fellowship money, she still does not have any precise plans.

"I have not in any way developed specifics," Mavalvala said.

### A random sampling of people you'll meet during a typical dinner at The Tech:

Elijah, Course 1	Greg, Course 8	Josh, Course 17
Joy, Course 2	Ethan, Course 9	Jeff, Course 18
Nina, Course 3	Maggie, Course 10	Jack, Course 19
Jenny, Course 4	Vince, Course 12	Aislyn, Course 20
Elijah, Course 5	Jeff, Course 14	Jessica, Course 21
Joe, Course 6	Maggie, Course 15	Keith, Course 22
Jingyun, Course 7	Steve, Course 16	

Meet your new pset support group



MIT OFFICE OF MINORITY EDUCATION

# Need Extra Cash?

# Aced Your Classes?

# Like Helping People?

Provide *Tutoring*  
through  
Tutorial Services (TSR)

Serve as a *Facilitator*  
for  
Seminar XL

Salary  
Undergraduates \$16/hour  
Graduate Students \$18/hour  
Research Scientists/Post Docs Negotiable

Contact the Office of Minority Education for more info | Room 4-113 | 617.253.5010 | [web.mit.edu/ome/](http://web.mit.edu/ome/)



Massachusetts Institute of Technology, Office of Minority Education  
Building 4-113, 77 Massachusetts Ave. Cambridge 02139  
617.253.5010 [ome@mit.edu](mailto:ome@mit.edu)

# Toiling against a deadly disease to save a threatened frog

By Erica Rex  
THE NEW YORK TIMES

SEQUOIA AND KINGS CANYON NATIONAL PARKS, Calif. — From the summit of Bishop Pass in the Sierra Nevada, elevation 11,972 feet, all you can see are miles of granite peaks against the sky. There is no traffic and no pollution. The natural world seems pure and unspoiled.

But appearances are deceiving. Over the last decade, disaster has struck in the form of chytridiomycosis, or chytrid, a deadly fungal disease that has driven at least 200 of the world’s 6,700 amphibian species to extinction. One-third of the world’s frogs, toads and salamanders are threatened. Forty percent are declining. Chytrid’s arrival has laid waste to the indigenous Sierra Nevada yellow-legged frog, *Rana sierrae*.

In Dusy Basin, a remote glacial valley in Sequoia and Kings Canyon National Parks a few miles west of Bishop Pass, Vance Vredenburg, a professor of biology at San Francisco State University, is conducting an experiment he hopes will help preserve what remains of these once abundant creatures. Vredenburg and his colleagues are inoculating chytrid-infected frogs with a bacteria, *Janthinobacterium lividum*, or J.liv, that does not prevent infection with chytrid but can help frogs survive.

Vredenburg, Reid Harris of James Madison University in Harrisonburg, Va., and colleagues found the symbiotic bacteria on several amphibian species. Lab experiments last year showed that J.liv produces a metabolite, violacein, that is toxic to the chytrid fungus. Vredenburg wants to see how effective the treatment will be in the wild.

Even before chytrid arrived, the Sierra frog population had been severely reduced by the California Department of Fish and Game’s practice of seeding high-elevation lakes with hatchery-raised fingerling trout for the sport fishing industry. Chytrid has hastened the destruction. Vredenburg and colleagues counted 512 populations scattered among the thousands of mountain lakes in the park in 1997. In 2009, 214 of these populations had gone extinct. A further 22 showed evidence of the disease. It is a far cry from the early 1900s, when frogs in the region were so common that lakeside visitors reported tram-

pling them underfoot.

Vredenburg, 41, has been doing frog research in the Sierra since the mid-1990s. He chose frogs as research subjects because he wanted to do “basic science that could be applied toward solving some real-world problems, like the biodiversity crisis. Once your study animals start dying, believe me, you pay attention!” At the time, he said, “I saw many scientists as living and working in a bubble. Besides,” he added, “I like catching frogs.”

Vredenburg himself was “speechless” when the park service granted permission to carry out the J.liv experiment in Dusy Basin. “Then I had to start planning,” he said.

Vredenburg chose Dusy Basin for his experiment because chytrid is just arriving here. Unlike Sixty Lake Basin several miles to the south, where frogs went extinct within four years of the arrival of chytrid, Dusy Basin still has frogs. Biologists do not know what first brought chytrid to the Sierra. But Vredenburg’s research showed that chytrid spreads in a linear wave across the landscape, an infection pattern like that of human epidemics. Infection levels start out light, then increase to very high. Then there is a mass die-off.

In July, Vredenburg and his students captured and tagged 100 frogs, apparently the last remaining here, with transponder tags. They weighed and measured frogs, and they recorded the tag numbers using an electronic reader. The experimental group contained 80 frogs; 20 were designated controls. Vredenburg and his students placed experimental frogs in plastic containers for an hourlong bath in cultured J.liv — long enough for J.liv to colonize on frogs’ skins. They released the frogs into the ponds and streams where they had been captured.

Early in September, Vredenburg made his last trip of the season to Dusy Basin to see how the frogs were faring. At this elevation, snowfall often starts right after Labor Day, and the lakes start to freeze over. The yellow-legged frogs hibernate beneath the ice for eight months of the year.

Vredenburg spent two days catching frogs, weighing them, checking to see if they were experimental or control animals, and treating them. He found several that

had not been tagged.

He found one untagged female in a puddle beside a lake. He held her outstretched in his hand and pointed to her yellow underbelly and the bright yellow-orange of her legs. “I can smell garlic on her,” Vredenburg said. “Many frogs species have defensive compounds that smell like garlic.” He swabbed her belly, her

thighs, her toes and the webbing between her feet. “This gets a layer of skin where I can detect both microbes,” he explained. Later in the lab, he would extract DNA from the swab to verify the presence of the protective J.liv bacteria.

By Sept. 2, Vredenburg had caught 43 frogs: 33 that had been treated with J.liv previously, one con-

trol — previously tagged but untreated — and eight brand new, which he treated. Frogs inoculated earlier in the summer were surviving.

Several weeks later, Vredenburg had results from the lab: all the frogs caught in early September were infected with chytrid. The inoculated animals had the lowest levels of infection.

## What are you doing for IAP?

### JANUARY SCHOLARS IN FRANCE 2011

MIT’s Foreign Languages and Literatures invites undergraduates to apply for the January Scholars in France program.

The program is now a credit-bearing subject that will include lectures, seminars, papers and a final exam.

This year’s topic is: Discovering France, Apprehending One’s Self.

Conducted entirely in French, the 9-unit subject will allow up to twelve MIT students to experience two weeks of cultural immersion and analysis in Paris and Marseilles during IAP (January 3 – 18, 2011).

**Application deadline is October 15, 2010.**

For more information and application forms, go to [web.mit.edu/jsf](http://web.mit.edu/jsf) or to FL&L’s main office (14N-305).



#### Solution to Sudoku Hard

from page 11

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

#### Solution to Crossword

from page 10

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

#### Solution to Sudoku Easy

from page 11

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

# Bicycle Theft Prevention Workshop

Participants at the experimental workshop Oct. 3 discovered a surprisingly productive method for splatter-painting bicycles with acrylic paint.

At the Oct. 9 workshop, combinations of acrylic and fluorescent tempera will be explored.

Cambridge Auxiliary Police Officer Robert Marshall, photographer, CSI Unit, will describe neighborhood crime patterns and take photographs of the most creatively theft-proofed bicycles.

Participants will be provided hose clamps for securing quick-release levers to frames.



## Saturday Oct. 9, EC Courtyard 1 pm–4 pm

MIT Events Calendar, [events.mit.edu](http://events.mit.edu)

Open to MIT and Harvard students only

Sponsors: MIT Crime Club & Harvard Crime Club

Send comments and inquiries to [crimeclub@mit.edu](mailto:crimeclub@mit.edu)



# Sunday, October 10th

## MIT Habitat for Humanity's Annual 5K Run

Come join us to help us help humanity!

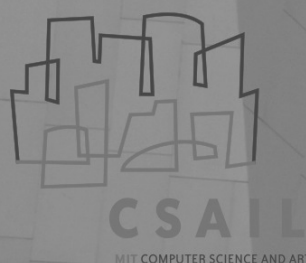
Everyone is welcome, from the pro athlete to the casual walker!



To sign up go to...  
**habitat.mit.edu**

...or visit us in Lobby 10 October 3rd-9th

***Come for the run, but stay for the fun!***



# 2010-2011

## Dertouzos Lecture Series



**Craig Mundie**  
 Chief Research and Strategy Officer  
 Microsoft Corp.

**Date:** Thursday, October 7, 2010  
**Venue:** MIT Stata Center, Building 32-123/Kirsch Auditorium  
**Time:** 4:30pm

### More like Us: Human-Centric Computing

**Abstract:** New trends in technology are transforming how we interact with computers. Increasingly intelligent devices and more natural experiences using voice, touch and gestures are starting to emerge in mobile applications and technologies such as Xbox Kinect. Soon wall-sized displays, powered by ultrafast processors and advanced software, will enable the next generation of immersive computing experiences. Microsoft's Craig Mundie will discuss these trends and show some of the possibilities of human-scale interaction.

**Biography:** Craig Mundie is Chief Research and Strategy Officer at Microsoft Corp. In this role, he oversees one of the world's largest computer-science research organizations, and is responsible for the company's long-term technology strategy. Mundie has spent much of his career building startups in various fields, including supercomputing, consumer electronics, healthcare, education and robotics, and remains active in incubating new businesses. For more than a decade, he has also served as Microsoft's principal technology-policy liaison to the U.S. and foreign governments, with an emphasis on China, India and Russia. Another long-standing focus for Mundie is privacy, security and cyber-security. Based on this work, he serves on the U.S. National Security Telecommunications Advisory Committee and the Task Force on National Security in the Information Age, and in April 2009 was appointed by President Barack Obama to the President's Council of Advisors on Science and Technology.

**Host:** CSAIL

**For more information:** [www.csail.mit.edu](http://www.csail.mit.edu) or 617.253.0145

# GPS equipment on all EZRide shuttle buses

## T tracking possibility for Mobile Web

EZRide, from Page 1

NextBus equipment installed.

“The arrival of a spare bus dedicated to EZRide is imminent, and that dedicated spare bus will carry NextBus,” Gascoigne said.

Each EZRide bus also has a sensor to count the number of passengers that enter and exit the vehicle. This eliminates the need for the drivers to keep count.

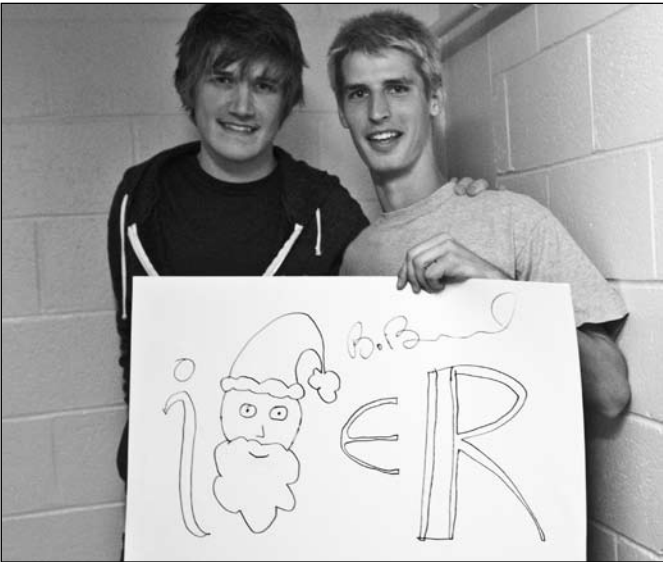
Users can go to <http://www.nextbus.com/> to see the service in action.

The update is reflected in MIT Mobile Web, which feeds the MIT Mobile iPhone application. All mobile users can go to <http://m.mit.edu/shuttle->

[schedule/](#) to see the live tracker.

According to *The Boston Globe*, on Friday, the Massachusetts Bay Transportation Authority (MBTA) began releasing real-time data informing riders of when and where to catch the next train. The article also says that T stations will install live displays so that riders can get up-to-date information without having to use a device with an Internet connection.

The real-time information about T times might make it into the MIT Mobile application “someday,” said Justin Anderson, the project leader of Mobile Computing at MIT.



SARANG KULKARNI—THE TECH

Comedian Robert “Bo” Burnham poses with fan Stephen A. McCrory ‘14 (right) after performing in Kresge last Saturday. Stephen surprised the audience during the show with a poster depicting “i times Santa is real,” a line Bo had used a few seconds earlier in one of his songs.

# PHILANTHROPY

with a chance of

# MEAT BALLS

presented by

## ALPHA EPSILON PHI

Come support AEPhi's national charities by enjoying a gourmet spaghetti dinner\* and an improv performance by Roadkill Buffet (8:15-8:45)!

**October 9, 2010 at 8pm**  
**Mezz Lounge, Student Center**

**\$6 STUDENTS**  
**\$7 COMMUNITY**  
\*kosher option available

MIT Hillel 557  
Sponsored by MIT Hillel

Sharsheret  
ELIZABETH GLASER  
PEDIATRIC AIDS  
FOUNDATION

# REALITY SUCKS

## LUCKILY THE GM COLLEGE DISCOUNT DOESN'T.

In fact, it's the best college discount from any car company<sup>1</sup> and can save you hundreds — even thousands — on a new Chevrolet<sup>2</sup> Buick or GMC. If you're in college, a grad program or even if you're a recent grad, take advantage of this discount today and get a great deal on a new ride to call your own. Check it out:

**2010 Chevrolet Camaro LS**  
(Discount Example)

MSRP (sticker price on vehicle)	\$ 23,855.00
Preferred Pricing <sup>3</sup>	\$ 23,330.24
<b>Your Discount</b>	<b>\$ 524.76</b>

**GMC 2010 GMC Terrain SLE FWD**  
(Discount Example)

MSRP (sticker price on vehicle)	\$ 24,995.00
Preferred Pricing <sup>3</sup>	\$ 24,208.95
<b>Your Discount</b>	<b>\$ 786.05</b>

Don't forget... you can also combine your discount with most current incentives.

Discover your discount today at [gmcollegediscount.com/MIT](http://gmcollegediscount.com/MIT)

<sup>1</sup> Eligible participants for the GM College Discount include college students (from any two- or four-year school), recent graduates who have graduated no more than two years ago, and current nursing school and graduate students.  
<sup>2</sup> Excludes Chevrolet Volt. <sup>3</sup> Tax, title, license, dealer fees and optional equipment extra. See dealer for details.  
The marks of General Motors, its divisions, slogans, emblems, vehicle model names, vehicle body designs and other marks appearing in this advertisement are the trademarks and/or service marks of General Motors, its subsidiaries, affiliates or licensors. ©2010 General Motors. Buckle up, America!

# MIT racing car places eighth in FSAE West

**MIT Motorsports**, from Page 1  
tana, California. There, the car is judged in various events that test its design as well as its performance, comprised of three categories — Inspection, Statics, and Dynamics — which Brandeau describes as “re-

ally intense”.  
During inspection, the vehicle is scrutinized by a team of professional engineers, where it must meet hundreds of strict requirements. First comes a visual test, where every aspect of the car is looked at to ensure safety. For instance, a driver

must be able to get out of the car in five seconds, and the car. A hydraulic lift test of 45 and 60 degrees follows; this tests the car for potential leaks and looks at its lateral acceleration. Lastly, the brakes are tested, followed by a noise test to see if the car is under the 110 decibel limit.  
Static events involve all other aspects of the car that do not involve motion. The crew must justify any design choices made, and a cost report must be presented. The team presents a business model, acting as if they are a start-up company and the automobile is their product.  
Finally, there are the Dynamic events. A drag race tests the car’s linear acceleration, followed by a figure eight track race to assess the lateral acceleration. The autocross track, a one kilometer level made of cones, tests the car’s maneuverability. The biggest point-getter and flagship event of the competition is the Endurance race. Most teams can’t finish this 22 kilometer behemoth, which examines the vehicle’s reliability. MIT Motorsports was one of the few to finish last time.



**Aaron N. Flores ‘12 pushes the car, driven by Eric O. Correll ‘11,** to the starting line during the June FSAE West competition in California.



**MIT FSAE’s trophy from the June FSAE West competition** sits next to the car. They placed eighth out of 80 universities competing.

This past June, MIT Motorsports placed eighth in FSAE West, the team’s highest finish ever. The main competition for MIT Motorsports is the Rochester Institute of Technology, the University of Oklahoma, and Oregon State University. Traditionally, the team designed the car the fall before the competition in June, and constructed the car from IAP to May. However, such a short turnaround proved problematic for the team.  
“It was really tight and crammed, so we wanted to think about how we can do it better,” Brandeau says.  
As a result the crew switched to a 2-year cycle, in which the car is designed and built one year, then further tested, developed and validated the next. This cycle caused FSAE to miss the 2009 competition, but the delay paid off with their 2010 success.  
Currently, the cycle is at one and a half years, with one year dedicated to the car’s construction. “Essentially, we’ll start designing at IAP for the next car even though one car is still being built and developed,” states Brandeau.  
Each year, a new car is built from scratch. Although parts may be used from previous years, a completely new construction is required. This can be due to either drastic design changes or adjustments to competition guidelines — for example, each year a noticeably different frame for the car is required.  
Construction on the 2011 competition car started this past weekend, and the team’s major anticipated upgrade is improved aerodynamics. In the past, the car aerodynamics were considered to have little effect at the car’s speeds, and the team had neither the time nor the expertise to implement aerodynamic principles well.  
“Beforehand, we didn’t have the resources, but now we do,” claims Michael DeMeo ‘11, the team’s new aerodynamics lead. Aside from aerodynamic improvements, new changes include a new wheel configuration, and the addition of an electronic traction control system with instant feedback.  
Two years out, the group may make an electric version of the car. There is a contest for electric vehicles in Europe in particular that Brandeau has set his sights on. “It

would be pretty similar to [the current car],” he said.  
Brandeau said that the most significant modification would be changing the engine to a new electrical system. If the team decides to pursue the concept, design for the electrical car would begin this IAP.  
Organizationally, MIT Motorsports is divided into three groups — Chassis, Powertrain, and Management. There are usually about eight core team members in the shop throughout the year, with another two dozen coming in to help throughout the year.  
Newer members generally start with building first. “It’s a complex system, and the best way to learn about it is to build it,” Brandeau explains.  
“But once you learn about the car and how it works and want to design something, every one’s welcome to.”  
The team was founded in 2001, and in 2009 the Department of Mechanical Engineering offered a role in the the construction of the car as an option in the 2.007 (Design and Manufacturing) class. Sponsors include Ford, General Motors, the American Corn Grower’s Association, and the Edgerton Center (who provides the machine shop and workspace).  
The team concerns itself with teaching and learning aspects of the program over competition. As a result, not a lot of experience is required. “I probably knew less than anyone. They turned me into something useful,” DeMeo says.  
Brandeau adds, “The teaching and learning comes before the competitiveness. That’s not to say that racing a car isn’t fun.” He believes that such design is “closer to the real-world” than other clubs at MIT.  
By emphasizing application, the team prides itself on it’s ability to teach others about manufacturing and car design. The group has come a long way since its inception in terms of performance, and it looks to improve upon its eighth place finish at the next competition in June. Until then, the group is always looking for ways the vehicle can be altered or improved, and they will continue to tool away (literally) for the next competition.



**MIT’s FSAE car undergoes lateral load stability testing.** It sits unsupported on a 60 degree incline, simulating a 1.7g corner.

Bose is pleased to offer special savings for all students, employees and retirees of M.I.T.

Receive savings on most Bose® products, including the acclaimed Wave® music system, home entertainment systems, headphones, and solutions for today’s most popular portable music devices.



Bose Wave® music system – SoundLink®



QuietComfort 15® Acoustic Noise Cancelling® headphones



Computer MusicMonitor®

Please direct all inquiries to the “M.I.T. Purchase Program.”

1-800-298-BOSE  
(2673)

**BOSE**®  
Better sound through research®



**Construction crews broke ground for the installation of a new sculpture in front of W20.** The piece, by Jaume Plensa, is scheduled to be installed in November.



**Vicky Chow performs at a concert in Killian Hall Monday,** in which she played pieces by Ryan Anthony Francis, John Cage, Daniel Wohl, Evan Ziporyn, Andy Akiho, David Lang, and Jakub Ciupinski.

→ MISTI

MIT CHINA

MIT International Science and Technology Initiatives

**Sample CETI Locations**

Dalian University of Technology

Sichuan University

Kunming University of Science & Technology

Qinghai University

Huazhong University of Science & Technology (Wuhan)

Zhejiang University

Anxian Middle School

Xi'an Gaoxin No. 1 High School

VTC Hong Kong

YuanZe University (Taiwan)

# MIT-China Educational Technology Initiative

( MIT - CETI   ceti@mit.edu )

**Teach in CHINA this summer!**

All expenses paid!

No language skills needed to apply!

**Info Session: Thurs, Oct. 7 @ 7:30pm**

**Room 3-133**

**Free Food!**

<http://web.mit.edu/mit-ceti/www/>

**MIT students,**  
**it's the best four years of your life.**  
**Make sure you never miss a thing.**

Palm® Pre™ Plus and Palm Pixi™ Plus connect more of your life, which makes them the perfect phones for college. With your favorite apps, social networks, videos, games, and automatically updated contacts and calendars, you can make the most of every minute.

**Save 10% off basic monthly service charges with a qualified plan.**

Bring your student ID to an AT&T Store today and mention code 2941588 or go to [att.com/wireless/MIT](http://att.com/wireless/MIT)

Save even more with new lowered-price data plans and may connect via text, email, and the Web! Ask an AT&T representative for more details.\*

\*Network service discount applies only to the Monthly Service Charge of eligible plans and varies monthly depending on your employer's aggregate volume of qualified charges. See your AT&T representative for complete details. 10/07/2010 INFORMATION: Limited time offer. May require a 2-year agreement on a qualified plan. Other conditions and restrictions apply. See contract and rate plan brochure for details. Data plan must be active and have a billing address within AT&T's covered wireless network coverage area. Equipment price and availability may vary by market and may not be available from independent retailers. Purchase of additional equipment, services or features may be required. Not all features available on all devices or in all areas. Early Termination Fee (ETF) may apply to prepaid service. Service charges apply. Additional fees, unlimited voice service: Unlimited voice service is provided only for line rates between two individuals. No additional discounts are available with unlimited plans. Off-net charges: If your select or managing service usage (including unlimited service) during any two consecutive months or data service usage (including unlimited service) during any month on other carrier networks (off-net usage) exceeds your off-net usage allowance, AT&T may, at its option, terminate your service, deny your continued use of other carrier coverage, or charge your plan to use. Incoming voice charges for off-net usage: Your off-net usage allowance is equal to the lower of 750 minutes or 40% of the number of minutes included in your plan. AT&T will provide notice that it intends to take any of the above actions, and you may terminate the agreement. Monthly discount: Available to qualified employees of companies and government agencies and qualified students and employees of colleges/universities with a qualified business agreement ("Business Agreement"). Service discount subject to corresponding Business Agreement and may be terminated and/or discontinued without notice to you. Service discount applies only to the monthly service charge of qualified plans and not to any other charges, a minimum number of employees, minimum monthly service charge for qualified plans, and/or other AT&T services or other requirements may apply for discount eligibility. Discount may not be combined. Offer subject to change. Additional conditions and restrictions apply. If you have a question about eligibility, discounts, or your eligibility, you can contact your company's telecommunications manager. © 2010 AT&T Intellectual Property. All rights reserved. AT&T and the AT&T logo are trademarks of AT&T Intellectual Property. Wireless service provided only by AT&T mobile number and related information required for setup and activation. Third-party software available separately. Requires data services at additional cost. For complete terms and conditions, see Data Rate Plan brochure. © 2010 Palm, Inc., a subsidiary of Hewlett-Packard Company. Palm, Pixi, and Touchstone are trademarks of Palm, Inc.

For a store near you visit:

[att.com/storelocator/](http://att.com/storelocator/)



# MIT alums to row for Team USA

# *Dise, Young prepare for Rowing Worlds*

**By Lucas Goodman**  
*TEAM REPRESENTATIVE*

Two MIT alumni, Skip Dise '03 and Stephen F. Young '09, will be headed to the 2010 World Rowing Championships in New Zealand later this month as members of the United States National Team. Young will cox the men's lightweight eight, and Dise will row in the bow seat of that boat. Dise and Young were both selected to the lightweight eight as a result of their performance in the selection camp in Oklahoma City, Oklahoma.

This past week on Mercer Lake in New Jersey, Young also qualified in the coxed pair event by coming back to win the second and third races at Trials in the best-of-three format. Young and his crew of Nareg Guregian and Justin Stangel, graduates of the University of California at Berkeley and Syracuse University respectively, trailed by five seconds at the halfway mark of the third and deciding race. They made it up, however, in the second half of the race with a convincing sprint to win by a narrow margin of 0.2 seconds.

Dise rowed with the lightweight men's team at MIT. He was the stroke-seat of the varsity eight and the captain of the team. This will be Dise's second appearance at the World Rowing Championships; he earned a silver medal in the lightweight eight in Poznan, Poland last year. Before his selection to the national team, Dise trained with the Riverside Boat Club in Cambridge, the Pocock Training Center in Seattle, and the Oklahoma City High Performance Center.

Young was the heavyweight men's coxswain from 2006 to 2009. During his collegiate career, he helped the MIT team earn respectability. He led MIT's varsity eight to victories over crews such as Dartmouth College, Princeton University, and Yale University, and earned a 12th place finish out of eighteen at the Eastern Sprints Regatta his senior year, a far cry from the last place finishes that had become the status quo the previous decades. He is currently coxing at the Pennsylvania Athletic Club in Philadelphia.

Young and Dise will now train in the States for a few more weeks before heading to Lake Karapiro on New Zealand's North Island. The Championships will be held from October 30 to November 7.

# Water polo falls short against Brown

## Fourth-quarter comeback not enough as MIT loses at home, 5-4

**By Sarah Weir**

On a rainy, windy Friday night, the MIT men's water polo team faced Brown University in the Z-Center pool. Although the Engineers failed to extend their winning streak to four games, falling 5-4, the match was filled with excitement.

It was nerve-wracking for MIT fans during the first period, with Brown dominating on offense and scoring three times — including once on a power play and another on a penalty shot. Despite MIT's defensive efforts, Brown was able to jump out to a 3-0 lead.

MIT came alive in the second period. Goalie Columbus P. Leonard '12 blocked multiple Brown shots, including one off

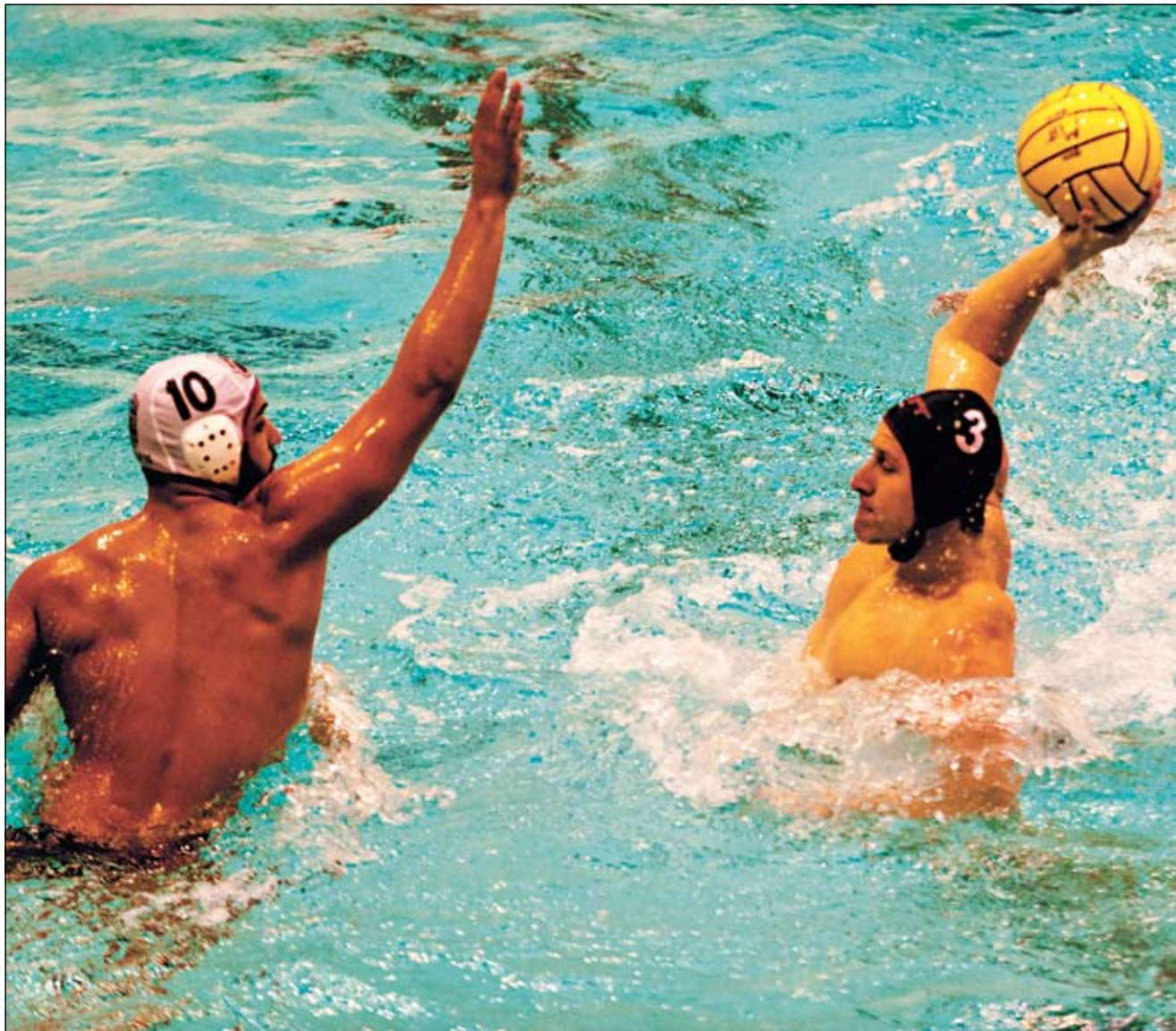
of a threatening fast break. On offense, MIT had six shots and ended up scoring twice to bring the score to 3-2. This sparked a wave of cheering, including feet stomping and drumming from the surprisingly large crowd, which entered halftime hopeful for an exciting and epic second half.

The third period began with an even matchup between the two teams — both defenses and offenses seemed to have equal bearing and neither side could find an advantage. An interception by Craig B. Cheney '14 nearly led to a tied game, but Brown's defense stepped in at the last moment and scored on the counterattack. Fans were not satisfied with the referees, as it seemed as though MIT was constantly

penalized, giving Brown more chances to score — which they capitalized on, bringing the score to 5-3.

Finally, in the fourth quarter both teams locked down on defense, and it seemed almost hopeless that MIT would finish their comeback. With 55 seconds left, Cheney was able to find the back of the net to bring MIT within one, and a wave of hopeful excitement swept over the crowd.

The crowd watched intently until the last few seconds, when a missed MIT shot resulted in Brown possession and the game ending, respectfully, with a score of 5-4. Even though it didn't result in a win, the intensity and spectators made the game worth the trek through the wind and rain.



JESSICA L. WASS

**Gavin Darcey '11 takes a shot** past a Brown defender during Friday's water polo game. MIT went on to lose 5-4 in a close game.

# Women's tennis loses to Tufts, but beats Mt. Holyoke 7-2

*Quisenberry provides Engineers' lone point against Tufts with upset of defending national champion*

**By Jennifer Rees**  
*TEAM REPRESENTATIVE*

This past Thursday, MIT women's tennis visited Tufts. They put up a good effort, but were overwhelmed by their opponents, losing by an overall score of 8-1.

First up in the match were the doubles matches. The teams of Hillary E. Jenny '12 and Jennifer A. Rees '11, and Jenny C. Dohman '11 and Sonya Makhni '11 were both shut out, losing to their opponents 8-0. Next off was the number one team of Lauren C. Quisenberry '14 and Julia C. Hsu '14, who lost their tough match 8-4. Last to finish was

the team of Melissa A. Diskin '11 and Katherine A. O'Neal '14. They had a close match, with both teams attacking the net. In the end they lost 8-6, leaving MIT down 0-3 going into the singles matches. First off were Jenny and Dohlmán, playing number five and six singles, respectively, both losing 6-1, 6-0.

Next off was Diskin, who lost her match 6-1, 6-1. Hsu was off next. She lost her match 6-1, 6-3, and O'Neal closely followed. O'Neal had a close first set but lost the match 6-4, 6-1. The last match on was that of Quisenberry, who was matched up against Tufts senior Julia Browne, the defending Division III national champion.

Quisenberry lost the first set but she took the second set in the tiebreak. She then took the third set tiebreak to beat the defending champion 2-6, 7-6 (4), 10-5, ending with the only MIT win. In exhibition, Rees lost 6-0, 6-0, and Makhni lost 8-1. Pomeroy played twice but ended up losing both 8-0.

On Saturday, MIT sought to bounce back from its defeat against Mt. Holyoke. Once again, the match started with the doubles matches. Quisenberry and Hsu were the first ones off, winning their match with a decisive 8-2 score. Next off was O'Neal and Diskin who pulled out their match with an 8-5 win. The team of Jenny and Dohlman came off

next, also winning their match 8-5. In exhibition Makhni and Pomeroy were defeated in a close match 8-6, MIT had a 3-0 lead over Mt. Holyoke going into the singles matches.

In singles, first off was Quisenberry with a quick win of 6-0, 6-1. Then, Hsu finished winning with a decisive 6-1, 6-2. O'Neal was the next one off with a win of 6-2, 6-1. Jenny finished next but lost her match 6-3, 6-1, and Diskin lost 6-3, 6-3. Rees played a close match but managed to pull out the win, 4-6, 6-4, 10-1. In the end, MIT defeated Mt. Holyoke 7-2, leaving MIT with a season of 4-1. They next face Wellesley College on Tuesday, October 5.



**Better Ingredients.  
Better Pizza.**

617-904-7272

[www.papajohnsmit.com](http://www.papajohnsmit.com)

Open till 3am, 7 days

We accept MIT Tech Cash

**CAPITAL FOR STARTUPS**

Seeking outstanding software and internet opportunities led by talented entrepreneurs. We have capital, relationships and other resources in support of the right opportunity.

**R.J. Steele Capital Advisors**

Contact: Bob Steele      [bob@rjsteeleca.com](mailto:bob@rjsteeleca.com)      760-702-5808

# UPCOMING HOME EVENTS

**Tuesday, October 5**

Women's soccer vs. Worcester  
Polytechnic Institute

*4 p.m., Steinbrenner Stadium*

**Thursday, October 7**

Men's tennis vs. Bentley University

*4 p.m., DuPont Courts*