MIT REMEMBERS
sacrifices made on September 11

By Maggie Lloyd
CONTRIBUTING EDITOR
This is the second segment in a two-part series on MIT’s response to the attacks on September 11, 2001.

There was no cloud in the sky this past Sunday morning. They say Manhattan was the same way 10 years ago when the towers fell, the entire atmosphere felt bittersweet this time around. The calm over the campus was typical for a Sunday morning at MIT, but about 8 a.m. Lobby 10 began to fill up with members of the MIT community for the Institute’s anniversary ceremony of the Sept. 11th attacks. The normally bustling lobby was unusually “sluggish” when it comes to undergraduate activity, but no candidates for 2015 president, one for vice president, and one for public chair, but no candidates for social chair. For Baker, Burton Connec, McCormick, New House, Next House, Simmons, fraternities, sororities, and independent living groups there are more open senate seats than there are candidates. The number of senators per constituency is set so that each senator represents approximately 160 students. Currently, MacGregor is the only dorm with more candidates than senate seats. The election landscape may still change. The late petition deadline to declare a candidacy is today at 5 p.m. Students who would like to become a write-in candidate should email their dorm or DSLG announcing that they are running for a position, said UA President Allan E. Miramonti ’13. An elected write-in candidate must sign a Statement of Candidacy and demonstrate that he or she is a registered undergraduate. Miramonti ’13 noted that candidate registration turnout was typical this year, and that students are normally “diligent” when it comes to meeting the Monday 5 p.m. deadline. The election results for the Senate and Class of 2015 Council will be released on Sunday.

Class registration is finally going digital
Pilot program is a welcome change

By Derek Chang
ASSOCIATE VNEWS EDITOR
Registering for classes is going to get a lot easier. Over the last two weeks, students in Courses 4, 14, 15, 16, 18, 23W, and 24 participated in the pilot online registration system. Online registration is expected to expand to other departments by next semester.

Department administrators have generally been satisfied with the online registration system. Several reported that the registration has worked smoothly, and that there have been no major complaints about the system. But not everything was perfect; Marie A. Stuppard, a course administrator for Aeronautics and Astronautics, noted in an email that the online system did not capture schedule conflicts.

Shannon M. Larkin, academic administrator for MIT’s Graduate Program in Science Writing, said the online registration system is much more convenient for her graduate students. “Over the summer, our students are required to do a 10-week internship, often off-campus and sometimes out of the country. Their paper registration forms wouldn’t come in until long after they’d left for their internships.” She wrote in an email to The Tech.

When her students were abroad, Larkin used to mail registration forms to her students to be signed and returned, or sign the forms on their behalf and mail them a copy. “The online registration allowed them to complete their summer registration from wherever they were, without my having to act as proxy,” Larkin said. “It was more than a week faster for us, and gave the responsibility back to the student.”

Both Larkin and Stuppard said that the online system was “innovative.” 1381 students submitted their online forms on Registration Day, and a total of 2228 graduated and undergraduate students submitted online registrations by 4 p.m. on September 8. “It was a day shy of the Friday deadline. In addition, 49 students submitted online registrations using mobile devices. According to Registrar Mary Callahan, the next focus will be on “Online Registration Phase II,” a multi-year project that builds on the just-finished Phase I. “We will continue to work with students and faculty to develop tools that will assist in curriculum planning, subject selection, and advising,” said Callahan in an email. “The analysis of Phase II is expected to begin in October.”

“We are also in the process of collecting feedback through a survey which is being sent to the users (students and faculty) of the system,” said Callahan.

UA elections begin tomorrow

Voting in the elections for the Undergraduate Association Senate and Class of 2015 Council will begin on Wednesday. Online voting will begin on Wednesday at 9 a.m. and run until Thursday at midnight, while paper voting will occur between 9 a.m. and 5 p.m. on Friday in Lobby 10. There are currently five candidates for 2015 president, one for vice president, and one for public chair, but no candidates for social chair. For Baker, Burton Connec, McCormick, New House, Next House, Simmons, fraternities, sororities, and independent living groups there are more open senate seats than there are candidates. The number of senators per constituency is set so that each senator represents approximately 160 students. Currently, MacGregor is the only dorm with more candidates than senate seats. The election landscape may still change. The late petition deadline to declare a candidacy is today at 5 p.m. Students who would like to become a write-in candidate should email their dorm or DSLG announcing that they are running for a position, said UA President Allan E. Miramonti ’13. An elected write-in candidate must sign a Statement of Candidacy and demonstrate that he or she is a registered undergraduate. Miramonti ’13 noted that candidate registration turnout was typical this year, and that students are normally “diligent” when it comes to meeting the Monday 5 p.m. deadline. The election results for the Senate and Class of 2015 Council will be released on Sunday.

IN SHORT

A welcome picnic for Mas- seeh Hall will be held tomor- row noon to 1:30 p.m. at Meeh Hall (W1). The rain location in the Johnson Athletic Center (W3D).

A new camera pointing over the campus has been set up atop Bldg. 54, bringing the count there to four. Thursday is the deadline to sign up for family health insurance or waive individual coverage for the fall.

Need to go somewhere? ZipCar has a new deal that will let MIT students who are 18 years or older to rent cars located on campus. See http://www.zipcar. com/mit for more details.

The Student Center was recently named in a top 10 major architecture failures by CNN. For the full article, see http:// www.cnbc.com/id/44327236

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

YOU HAVE GOOD IDEAS. SPEAK UP!
Undergrads should engage in discourse about the big issues. OPINION, p. 5

REMEMBER, REMEMBER…
The Rule of November. CAMPUS LIFE, p. 23

THEY'RE NO SUB FOR GLASSES
But carrots can still be pretty tasty! CAMPUS LIFE, p. 23

MIT REMEMBERS
Students, faculty, and staff honored the memory of those lost on the tragic day 10 years ago. VIDEO, p. 23

SIGN UP FOR TECH HEADLINES!
Visit tech.mit.edu/headlines to sign up for Tech email updates!

WEATHER, p. 2
TUE: 85°/64°
Mostly sunny.
WED: 83°/63°
Partly cloudy.
THURS: 73°/64°
Chance of storms.

SECTIONS
World & Nation . . . . 2
Opinion . . . . . . . . . . . . 4
Fun Pages . . . . . . . .8
CAMPUS LIFE . . . . 23
Sports . . . . . . . . . 24

Volume 131, Number 36
tech.mit.edu
Tuesday, September 13, 2011
See Yourself Working Alongside the Best in the Business

Technology Info Session
Thursday, September 15th
Room 32-144
6:00PM-7:00PM
Business Attire
Are you wondering how to apply your technical skill set in your career?
Interested in building and managing systems that support the growth and
development of businesses in financial services? We invite you to join us as
we discuss full-time positions in Technology. It will be a great opportunity to
speak with business professionals and alumni.
Exceed your expectations at barcap.com/seeyourself.
Resume Drop Deadline: Thursday, September 22nd.

Join the most influential leadership
network in the world

Connecting with Leaders

McKinsey Operations Event
Friday, September 16
MIT Campus - RSVP to
Katelyn_Ohara@mckinsey.com
2:00 - 4:00 p.m.

Business Analyst Presentation
Monday, September 19
Stata Center - 32-123
7:30 - 9:00 p.m.
Food Provided

Coffee Chats
Tuesday, September 20
Toscanini’s 899 Main Street
10:00 a.m. - 2:00 p.m.

Career Fair
Wednesday, September 21
Johnson Athletics Center - 2nd floor
11:00 a.m. - 5:00 p.m.

Application Deadline
Wednesday, September 21
www.mckinsey.com/usschools at
11:59 p.m.
Wall Street recovers as new worries shake Euro markets

By Christine Hauser

The New York Times

Shares on Wall Street closed mostly higher Monday despite fears of a deepening debt crisis in Europe that could erode European markets and financial institutions suspected of being vulnerable to a possible Greek default.

Markets have been subject to sharp swings in recent weeks, particularly as concerns over the sovereign debt crisis have grown. The latest slide in European stock markets occurred Monday, set off by the resignation Friday of Jaeger-Staek, a top German official at the European Central Bank. His move highlighted policy discord in the bank.

It also aggravated concerns in the currency markets that Germany was preparing contingency plans for its banks in the event of a Greek default, Eric Viloria, senior market strategist at FOREX.com, said.

Greek bonds showed recent high yields Wednesday, while Monday German bonds were at lows,别墅 noted.

"There are actually quite a bit of factors that are weighing on the euro today," said Viloria, adding that some were avoiding assets they viewed as risky. "You are seeing some dollar strength, and that is highlighted by the yields."

The latest activity reflected the market movements Monday to concerns from last week over Greece and fresh news of a problem with the possibility of sovereign downgrades.

"This is not a problem resolved in an afternoon," said Peter Tuf, president and portfolio manager at Chase Investment Counsel Inc. "And it looks like things are going to get worse before they get better."

Stocks on Wall Street veered from mixed to more than 1 percent lower, then made a late push to close higher.

The Standard & Poor's 500-stock index gained 0.84 percent, or 8.70 points, to close at 1,162.27. The Dow Jones industrial average added 99.93 points, or 0.63 percent, to close at 16,049.55. The Nasdaq composite index rose 28.70 points, or 1.24 percent, to close at 2,349.09.

In Europe, the FTSE 100 in Britain dropped 1.6 percent and the Euro STOXX 50 index of eurozone blue chips was off 1.8 percent. The DAX in Germany lost 2.3 percent, and the CAC 40 in France tumbled 4 percent despite fresh efforts by the French government and one of the hardest-hit banks, Societe Generale, to calm nerves.

Asian markets slumped. The Nikkei 225 index closed down 2.3 percent, and the Hang Seng in Hong Kong fell 4.2 percent.

The euro finished at $1.36, after declining rapidly against the dollar to $1.35 from $1.40 just over a month ago.

Interest rates rose slightly. The Treasury's benchmark 10-year note fell 0.02/32, to 101 39/32, and the yield rose to 1.95 percent from 1.92 percent late Friday. Gold fell $46.5 to $1,803.90 an ounce.

In equity markets, the technological, financial and consumer dis- cessions sectors were all up more than 1 percent.

Bank of America and JPMorgan Chase were each up more than 2 percent, at $705 and $332.42, respectively. Wells Fargo rose more than 2 percent to $24.10.

Default rates for student loans rise sharply

By Yoram Levin

The Tech

The share of federal student loan defaults rose sharply last year, especially at for-profit schools, where 8.8 percent of borrowers overall faul- tured in the first two years of re- payments, up from 1.16 percent the previous year.

According to Department of Education data, released Monday, 8.8 percent of borrowers overall default- ed in the fiscal year that ended Sept. 30, the latest figures available, up from 7 percent the previous year.

At public institutions, the rate was 7.2 percent, down from 7.5 percent, and at not-for-profit private institu- tions, it was 4.6 percent, up from 4 percent.

"Borrowers are struggling in this economy," said James Keadl, deputy undersecretary of educa- tion. "We see a strong relationship between student default rates and the unemployment rate."

Although the new overall rates are the highest since 1995, when they were also 8.8 percent, default rates peaked in 1990 at more than 15 percent.


Although for-profit colleges, which typically serve low-income students, enroll only about 10 percent of the nation's university- nates, Koval said, their students made up 150,000, or almost half, of the defaults.

The high default rate at for- profit colleges, the fastest growing sector of higher education, has be- come an increasing concern for the government, since such schools depend on federal student aid for more than 80 percent of their rev- enues. In part because of the high default rates at the for-profit col- leges, the department recently ad- opted regulations designed to curb recruiting abuses and cut off eli- gibility for federal aid at programs that leave students with high debt loads and poor job prospects.

Although default rates have in- creased in recent years, as tuition has grown faster than inflation or family income. And with the re- cession, and high unemployment rates for young workers, default rates may continue to rise for some years. Borrowers who defer can face a lifetime of consequences, in- cluding inability to borrow for a car or a house, wage garnishment, sei- zure of tax refunds, or even, in an era when employers increasingly check credit reports, difficulty in getting a job.

Weather

Warm weather now, but cooling through the week

By Roman Koweh

The Tech

New England will not contend with any rain today, except for some afternoon clouds. A strong low pressure spinning in northern Quebec will funnel in warm, moist air from the southern U.S. This will raise temperatures well into the 80s°F for today and tomor- row. Then, a cold front should ap- proach on Wednesday, providing an opportunity for some pop-up thunderstorms. A cooler air mass will follow the front's passage on Thursday, as well as clear skies by the weekend.

Unfortunately, the weather this past week allowed Hurricane Ka- tia to steer away from New Eng- land. A similar story is setting up this week regarding Tropical Storm Maria. The cold front pass- ing through on Thursday is not much of a threat to the tropics. This "jump" Maria farther into the Atlantic will save the Caribbean and land from any tropical systems in the near future. But do remember, the Atlantic hurricane season is still in full swing until the end of November.

Extended Forecast

Today: Mostly sunny and warm. High 85°F (29°C). Wind at 5 to 10 miles per hour. Sunrise: 6:09 a.m., Sunset: 7:12 p.m.


Situation for noon Eastern Time, Tuesday, September 13, 2011

Forex & Aion World

Niger, Libya's neighbor, fears influx of Gadhafi loyalists

NAMAS, Niger — Officials in this mostly desert nation border- ing Libya are wary watching and bracing for what they call the disaster scenario that has not yet happened: a huge influx of defeated soldiers loyal to the fallen Libyan leader, Mouammar Gadhafi.

So far, they have had to contend only with a thin trickle of loy- alists making their way across hundreds of miles of desert to the bare-bones towns in northern Niger, including one of Gadhafi’s sons, a handful of his generals and his security chief.

But officials here in one of the world’s most impoverished na- tions emphasized that the diplomatic awkwardness of allowing the influx of everything goes nowhere if it doesn’t include no one you call a loyalist,” as Lisa Kahnegger of the Harvard-Smithsonian Center for Astrophysics and the Max Planck Institute for Astronomy in Hei- delberg, Germany, summarized it.

Astronomers cautioned, however, that it would take years and observations from telescopes not yet built before those as- sumptions could be tested and a search for signs of life could be undertaken.

—Devin Overbye, The New York Times

Broadcom to buy NetLogic Microsystems for $3.7 billion

Broadcom agreed Monday to buy NetLogic Microsystems for $3.7 billion in cash, in a bid to capitalize on the world’s surging data needs.

The acquisition, Broadcom's largest to date, is part of a stra- tegic push into semiconductor chips for advanced networking devices. With NetLogic, Broadcom gains a valuable portfolio of patents and a coveted collection of processors for routers, comple- menting the company's vast chip business for consumer de- vice as well as consumer electronics.

"This greatly expands our market opportunities in the net- working space," Broadcom’s chief executive, Scott A. McGregor, said in an interview. "We’ll be the only company that provides complete end-to-end solutions in networking."

As more consumers buy smartphones and spend increasing time on the Internet, companies like NetLogic that build the pipe- lines of the communications industry are becoming increasingly attractive takeover targets. Earlier this year, Qualcomm agreed to acquire Arteris, another networking equipment company, for about $1.1 billion.

—Evelyn M. Rusli and Michael J. De La Merced, The New York Times
By Maita Esteban


OPINION POLICY

Editorials are the official opinion of The Tech. They are written by the Editorial Board, which consists of Chairman Ethan A. Solomon, Managing Editor Connor Kirschbaum, Executive Editor Aislyn Schalk, and General Editors Nina Salinas '13, Robert McLaughlin '13, Nina Salinas '13, Michael T. Lin '11, Natasha Plotkin '11, Microwave Associates: Brian Hemond G, Charles Lin G.

CORRECTIONS

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.

OPINION PAGE

Due to police error, the police log published on April 11, 2008 misidentified the individual, Mikhail Shklyar of Beverly Mass., who was reported arrested for trespassing on March 18, 2008. The man who was actually arrested shared the same name, Mikhail Shklyar, but was from Brooklyn, New York at the time of the arrest.
Sparking the conversation
A greater intellectual contribution from undergraduates is needed

By Jacob London

As MIT students, we need to “engage in more public discourse.” Last Thursday, the Tech’s call for undergraduates to move on from squabbling over student life complicated- tion was encouraging. The editorial inv- ited a serious discussion of MIT’s social and political importance. In the coming weeks, complaints about little things on campus will die down. But it remains to be seen whether undergraduates will stand up and begin to participate in the larger debates that will shape the future, but the world. Let me begin where The Tech left off.

As a freshman interested in political sci- ence and the STS major, I came to MIT eager to meet fellow students who were passionate about politics and policy-oriented dis- cussion. Unfortunately, after consciously seeking out these discussions, I have found that many of the students I’ve met during my short time at MIT regard politics with a sense of disillusionment and apathy. Some students intentionally do not follow poli- tics due to an overwhelming disapproval of the Congressional Budget Office, relying upon models that take Keynesian dynamics of the stimulus actually created any jobs; esti- mates are thrown away out of hand; economics is not a field where secondly, why should we think that the GDP’s of dollars worth of labor, capital, tools, and material into the creation of houses rather than factories, tools, machines, train- ing, and so on. Should come as no surprise that, having watched Friedman for nearly half of a century. Of the resources available to us over the past decades, we’ve invested only a vanishingly small fraction for the future, choosing to consume rather than save. And of what we’ve decided to save for the future, large chunks of it have been misallocated — instead of putting it in savings, instead of putting the job seekers back on the GDP side of things, the way out of the hole is simple: invest more, and invest it wisely. Keynesian proposals to fix the econ- omy only compound the problem. The Stimu- laris just another way to misallocate soci- ety’s resources, firstly because it promotes consumption over saving, and secondly because it takes the task of investing out of public hands and places it in those of govern- ment planners, who have a miserable record of investing wisely. A good example is the recent bankruptcy of Solyndra, a solar energy company once touted by the presi- dential campaign as an exemplary model of govern- ment-supported enterprise. It now looks like the taxpayer will have to foot the bill. The greater part of the over $500 million loan guarantee offered by the government. But Solyndra is only the most recent and embarrassing of the government’s misad- ventures in industry. Whether it involves companies such as General Motors, AIG, Fannie, or Freddie Mac, the past couple years have seen the government make inadvis-

The the-stimulus argument
Why Keyesians should think again

By Keith Ross

In 1965, Milton Friedman, the scion of left-wing economics, famously declared, “We are all Keyesians now.” If the world were to end today, Friedman might add. “And we are all Keyesians still” The view of mainstream economics (and myself) is that the United States is suffering from a lack of aggregate demand, and the solution to our economic woes is to use government-sponsored reduc- tion of tax cuts, government spending, and an expansion of our monetary supply. Still, if Friedman were to make his state- ment today, “we would have to be a much more realistic — why should we think that the ‘solution’ is just another way to misallocate soci- ety’s resources, firstly because it promotes consumption over saving, and secondly because it takes the task of investing out of public hands and places it in those of govern- ment planners, who have a miserable record of investing wisely. A good example is the recent bankruptcy of Solyndra, a solar energy company once touted by the presi- dential campaign as an exemplary model of govern- ment-supported enterprise. It now looks like the taxpayer will have to foot the bill. The greater part of the over $500 million loan guarantee offered by the government. But Solyndra is only the most recent and embarrassing of the government’s misad- ventures in industry. Whether it involves companies such as General Motors, AIG, Fannie, or Freddie Mac, the past couple years have seen the government make inadvis- able bets with billions of scare investment dollars. Nor does direct governmental control of the investment make matters better. Investment in transportation infrastructure, for example, is widely touted by the left wing, but in terms of return on investment, roads and bridges are nothing to write home about — in most cases, society would be better off if the resources devoted to ex- tra infrastructure were instead left in private hands.

There is not so much of a gulf between us, supply sides, and the Keynesians — if you were to ask a Keynesian what the gov- ernment should do to promote economic growth in the long term, they’d likely give you the same answer that we do: the gov-

With a realistic assessment of our productivity comes realistic wage offers from the free market. Were the unemployed put back to work, they would receive a good deal less in compensation than the inflated amounts they received before the crash.

What then is the policy solution? On the unemployment front, the policy needed is the exact opposite of what the left recom- mends. They call for unlimited unemploy- ment benefits, but such benefits raise a worker’s reservation wage. They call for debt forgiveness, but such moves would only re- move impetus to choose labor over leisure. They support minimum wages, but such regulations only serve to bar job-seekers from obtaining employment. On the GDP side of Things, the way out of the hole is simple: invest more, and invest it wisely. Keynesian proposals to fix the econ- omy only compound the problem. The Stimu- laris just another way to misallocate soci- ety’s resources, firstly because it promotes consumption over saving, and secondly because it takes the task of investing out of public hands and places it in those of govern- ment planners, who have a miserable record of investing wisely. A good example is the recent bankruptcy of Solyndra, a solar energy company once touted by the presi- dential campaign as an exemplary model of govern- ment-supported enterprise. It now looks like the taxpayer will have to foot the bill. The greater part of the over $500 million loan guarantee offered by the government. But Solyndra is only the most recent and embarrassing of the government’s misad- ventures in industry. Whether it involves companies such as General Motors, AIG, Fannie, or Freddie Mac, the past couple years have seen the government make inadvis- able bets with billions of scare investment dollars. Nor does direct governmental control of the investment make matters better. Investment in transportation infrastructure, for example, is widely touted by the left wing, but in terms of return on investment, roads and bridges are nothing to write home about — in most cases, society would be better off if the resources devoted to ex- tra infrastructure were instead left in private hands.

There is not so much of a gulf between us, supply sides, and the Keynesians — if you were to ask a Keynesian what the gov- ernment should do to promote economic growth in the long term, they’d likely give you the same answer that we do: the gov- ernment should improve incentives to work, save, and invest. Get a Keynesian past his cult of “short-term” borrowing and spending and you’ve got a reasonable fel- low. The tragedy is that Keynesians never think they’ve gotten out of the short term. We’re three years into a recession, with un- employment hovering at 9.3 percent and has come and gone, and they’re still convinced that utopia awaits with just a push of a button. They’re for a rude awakening. Still, it would be the better if they woke up sooner rather than later — the only way we’re going to get out of this mess is with hard work and a long view, and waiting on a magic recovery that will never come only distacts us from the task at hand.
Looking back at 9/11, bells ring across Boston

MIT community gathers in Killian Court to remember what happened 10 years ago

9/11, from Page 1

seemed to be frozen in time. Acquaintances shared casual nods of acknowledgement, but no words were spoken. There was silence as the assembly waited for the ceremony to begin.

After the color guard, including representatives from each branch of the ROTC and members of the MIT Police, lined up against the doors leading to Killian Court, President Susan J. Hockfield, Chancellor F. William Boland, President and Secretary of the Corporation Katharine L. Hayhoe, and Anthony D. Farmiga made their way to the front of the crowd.

Throughout Boston, bells rang at 8:46 a.m. and 9:03 a.m. to indicate the solemn moments when two planes crashed into the twin towers. Even MIT’s chapel bell rung. “Despite the fact that it sounds more like a donk,” Randolph joked.

Each of the administrators then shared a few words of respect. As Hockfield said, “We come together to honor those who lost their lives, and those that gave their lives.”

Meanwhile, in the center of the color guard’s queue, Sergeant Paul Vossmer held a folded American flag, an artifact from the color guard’s queue, Sergeant to honor those who lost their lives, Hockfield said, “We come together
dolph joked.

Ten years later, looking back

Back in 2001, after MIT learned of the attacks, members of the MIT Police were assigned as backup to various points around campus, and Vossmer found herself with the middle of campus. “I remember seeing a student sitting on the steps of the student center with a piece of the twin towers just crying and crying and crying,” Vossmer said.

Despite all the chaos, an eerie silence had lingered in the air. At around 5 p.m., Vossmer and Vice President and Secretary of the Corporation Katharine L. Hayhoe were crossing Massachusetts Avenue, “and there was no traffic,” Vossmer said. “Nothing.”

It wasn’t until Vossmer finally got home around 10 p.m. that the emotions of the day began to set in. “I remember hearing a fighter jet flying over my house and I just burst into tears. You’re not supposed to hear those things.”

Bus-loads of MIT students and staff volunteered to serve food, freshen the linens on a cot, or put a blanket and pillow in the church pews for the firefighters.

It was a trying time for members of the MIT community, to say the least. How does a university proceed with its responsibilities in light of a tragedy?

As Director of the Public Service Center, Sally Susnowitz knew her office would be busy after the attacks. Her memories swayed from when her office was doing to now her office was feeling. She remembers how a student assistant was sitting on a couch in her office weeping uncontrollably that day.

“We were determined that we should suspend normal activities really quickly and help people through what we were going through. We also started trying to think about what else people would want to have to be able to deal with this and how to help them get that information.”

During her time as director, Susnowitz said the Public Service Center, which helped in MIT’s responses to tragedies such as Hurricane Katrina in 2005 and the Japanese tsunami earlier this year, has never seen a tragedy as horrific as September 11.

“We were dealing with forces that had no regard, you’re dealing true with disasters. Everybody’s impulse is to help if they can possi-

ble that it’s very important for disaster sites to not have to deal with strangers or just stuff that’s not needed.”

That’s where the MIT Police came in. Through the MIT Activi-
ties Committee, Vossmer helped organize three trips down to New York City, coordinating dates and times for when volunteers could finally arrive and what to bring. The bellies of the busses were stuffed with supplies donated by the MIT community, including winter coats, pants, and boots.

“They desperately went through work boots,” Vossmer said. The heat from smoldering metal beams at Ground Zero would simply melt the shoes if a volunteer stood in place for too long.

The trips took volunteers to St. Paul’s Church, which stood right across the street from the twin towers just crying and crying and crying,” Vossmer said.

“One of the things we tried to do was channel people’s desire to help into useful ways and to encourage them if necessarily to wait,” Susnowitz said. “And that’s often attacks that a trip to pick up donat-
ed food from a restaurant brought back complicated emotions: “We drove by [Ground Zero] by and I was just like … there’s no words to describe the emotion, the pain, the devastation, all of those things, just — it was overwhelming.”

There was no escaping the reality of 9/11 in New York. On a mid-
night to 7 a.m. shift, Vossmer found herself looking out towards where the World Trade Center used to be, until something in the nearby cemetery caught her eye.

“Was it this tree that I saw — all of these little strings through it — there was something strange and I’m like, ‘What is that? I get up a little closer and actually inspected it. I see this little sparrow-kind of picking this stuff. It was the string from mini-blinds, and they were actually mini-blinds coming in to-
towards the street and the sparrows was using the string to make a nest. You look at this stuff and you’re like, ‘Oh my god.’” Glass pieces littered the streets. Cement dust-lined buildings, ledg-
es, and even “walk/don’t walk” signs at intersections.

While at St. Paul’s, volunteers were invited to take one of many notes of encouragement written from people all over the world. The walls of the church were covered with these letters, according to Vossmer, who chose a humble heart cut out of red construction paper for herself.

On one side, it reads “We pray that you will remember: ‘Blessed are those who mourn, for they will be comforted.’ Matt 5:4” and spoke of the benefits of laughter to our health:

“When we have undergone the pain of losing loved ones, it is dif-
ficult to find humor in our daily lives, but to maintain our health to care for the children who lost a mother or father we must try. Here is a small story which I hope will at least bring a smile to your face —”

“The other side shares a simple story:

“Maggie Lloyd — The Tech 9/11, Page 19

At the end of Sunday’s ceremony, an ROTC/MIT Police Joint Hon-
or Guard raised an American flag to the top of the flagpole in Killian Court, then lowered it to half-mast.
Get your textbooks fast with **FREE Two-Day Shipping** for students

We’re always open and only a click away

Download the Amazon Price Check app and check textbook prices instantly.

amazon.com/textbooks

Free two-day shipping available to customers who qualify for our free Amazon Student program.
Dilbert by Scott Adams

Sudoku
Solution, page 17

<table>
<thead>
<tr>
<th>5</th>
<th>8</th>
<th>6</th>
<th>3</th>
<th>7</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>5</td>
<td>2</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Techdoku
Solution, page 17

Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.
Crossword Puzzle I
Solution, page 11

ACROSS
1 Computer info
5 Slaved container
9 Quitter’s comment
14 Cassius of fashion
15 Bologna eight
16 Drew or Mariah
17 Grimm meanie
18 Arab garments
19 Go in
20 Cruisin’ locale
22 Managed with less
23 Dry run
24 Like linoleum buildup
25 Chart
28 Evening star
30 Beach toy
34 Turk’s neighbor
36 FedEx rival
37 Forearm bone
38 Possible title for this puzzle?
42 Mustached surrealist
43 Part of TGIF
44 Single-handedly
45 Of the ear
46 Cobblers
49 G-man
50 “Twittering Machine” artist
52 Zany Martha
54 Poor performance
57 Fountain employee
61 “Dog and Butterfly” rock group
62 Grad
63 Zeno’s home
64 Saffin of tennis
66 Reunion group
67 Author of “Dred”
68 Tiptop
69 Yarn

DOWN
1 Impending run
2 Pond bloomers
3 Polo of “Meet the Parents”
4 Go-between
5 Granular
6 Plate appearances
7 Men-only affair
8 Ring stations
9 Mountain climbing aid
10 Sticky get-together
11 Comic Johnson
12 Have to have
13 Novice
14 Single-handedly
15 Of the ear
16 Clobbers
17 G-man
21 G-man
22 G-man
23 G-man
24 G-man
25 Beelzebub
27 Corsican patriot
28 Evening star
29 Prize money
30 Haughty
31 Tiptop
32 Cockamamie
33 Put on cargo
35 Gunfighter’s survival characteristic
36 Central Perk serving?
37 VCR button
38 Low-stress class
39 Fraught with risk
40 Impending run
41 Of the ear
42 Central Perk serving?
43 VCR button
44 Low-stress class
45 Fraught with risk
46 Impending run
47 VCR button
48 Impending run
49 Impending run
50 Impending run
51 Central Perk serving?
52 VCR button
53 Low-stress class
54 Central Perk serving?
55 Impending run
56 Central Perk serving?
57 High-five sound
58 Central Perk serving?
59 Actual
60 “Citizen...”
A WEBcomic of ROMANCE, SARCASM, MATH, and LANGUAGE
by Randall Munroe

Crossword Puzzle II
Solution, page 11

ACROSS
1 Choir member
6 Quite
10 Ending with slug or gab
14 Make amends
15 Faulkner’s “As __ Dying”
16 Pearl Harbor site
17 Blazed furiously
18 Common nickname for a doter
19 66 and others: Abbr.
20 Weightlifting event
23 Ben-Gurion, e.g.
26 “It’s __ business”
27 Kind of biological network
28 Sea
30 Golf course pest
32 Corp. money manager
35 Fighting
36 Gallery hanging
37 Hang onto
38 ID with hyphens
39 Spinning toy manipulated with sticks
43 River in Lyons
44 Belfast’s province
45 Early Ford success
46 Actors, often
49 Honest info
52 Road sign silhouette
53 Debt indicators
54 Ticked off
55 Like some vaccines
56 Dresden’s river
61 A handful of
62 Navy commando
63 Gothic house feature

DOWN
1 La Brea goo
2 Seventh Greek letter
3 Christmas quaff
4 200 milligrams, to a jeweler
5 Original primer used to paint the Golden Gate Bridge
6 Source of the Law
7 __ Bator, Mongolia
8 Where Jesus turned water to wine
9 Cape Cod site of a JFK museum
10 How some jump?
11 Corroded
12 Sex researcher Hite
13 Mammoth features
21 Contemporary of Dizzy and Billie
23 Early Peruvians
24 Senate posts
25 Confrontation
26 Carried
27 Kind of biological network
28 Carried
31 Come out ahead
32 British actor Robert, the original Colonel Pickering in “My Fair Lady”
33 Candidate’s handout
34 Trash emanations
35 Common crowd reaction in monster films
39 Colombian city
40 Some heroes
41 Sport for 300-pounders
42 Like lovers skipping church?
43 Pharmaceutical giant that developed Celebrex
44 Alamogordo’s county
47 Nightmare, e.g.
48 Ill-fated Ford
50 Putter’s target
51 Very big wind
55 Soviet spy org.
56 Snakehead fish
57 Hip-hop Dr.

Investing
Sure, 2% interest may not seem like a lot.
But it’s compound.
If you invest $1,000 now, in just ten short years you’ll have...
... $1,219.

Al
Did you see the Cleverbot-Cleverbot chat?
Yes, it’s hilarious, but it’s just clumsily sampling a huge database of lines people have typed. Cleverbots still have a long way to go.

So... computers have mastered playing chess and driving cars across the desert, but can’t hold five minutes of normal conversation?

Pretty much.

By expressing yourselves meaning small talk at parties.

But Einstein said it was the most powerful force in the universe, and I take all my investment advice from flippant remarks by theoretical physicists making small talk at parties.
**Row for MIT!**

MEN AND WOMEN
NO EXPERIENCE NECESSARY

Become a DI varsity athlete in the ultimate team sport!

**Roster spots still available**

For more information contact the novice coaches: novicecrew@mit.edu

---

### Council candidates

<table>
<thead>
<tr>
<th>Position</th>
<th>Candidate</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Jessica J. Yang ’15</td>
</tr>
<tr>
<td>President</td>
<td>Jeffery M. Sperling ’15</td>
</tr>
<tr>
<td>President</td>
<td>Jared L. Wong ’15</td>
</tr>
<tr>
<td>President</td>
<td>Xiao (Cathy) Zhou ’15</td>
</tr>
<tr>
<td>President</td>
<td>Adisa Kruayatidee ’15</td>
</tr>
<tr>
<td>Vice president</td>
<td>Marco J. Salazar ’15</td>
</tr>
<tr>
<td>Vice President</td>
<td>Elizabeth A. Murphy ’15</td>
</tr>
<tr>
<td>Publicity Chair</td>
<td>Joanne Y. Zhou ’15</td>
</tr>
</tbody>
</table>

### Senate candidates

<table>
<thead>
<tr>
<th>Constituency</th>
<th>Candidate</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Campus</td>
<td>Trevor J. Mulchay ’15</td>
</tr>
<tr>
<td>East Campus</td>
<td>Leonid Grinberg ’14</td>
</tr>
<tr>
<td>Fraternities</td>
<td>Michael P. Walsh ’13</td>
</tr>
<tr>
<td>Macgregor</td>
<td>Ryan T. Normandin ’13</td>
</tr>
<tr>
<td>Macgregor</td>
<td>Jiahao Liang ’14</td>
</tr>
<tr>
<td>Macgregor</td>
<td>Pamela A. Montalvo ’12</td>
</tr>
<tr>
<td>Maseeh Hall</td>
<td>Jennifer B. Piokkin ’15</td>
</tr>
<tr>
<td>Maseeh Hall</td>
<td>Sungmin Cha ’14</td>
</tr>
<tr>
<td>Maseeh Hall</td>
<td>Caroline B. Shinkle ’15</td>
</tr>
<tr>
<td>Off campus</td>
<td>Rachel E. Meyer ’10</td>
</tr>
<tr>
<td>Random Hall</td>
<td>Alexandria M. Westbrook ’13</td>
</tr>
<tr>
<td>Senior House</td>
<td>Katy L. Gern ’13</td>
</tr>
<tr>
<td>Sororities</td>
<td>Katherine Y. Feng ’13</td>
</tr>
</tbody>
</table>

---

**Solution to Crossword I from page 9**

**Solution to Crossword II from page 10**

---

Justice is sweet and musical, but injustice is harsh and discordant. - Thoreau

**Bhopal**

Sponsored by: MIT Students For Bhopal - www.bhopal.net

### Sound of Struggle: 26th Movement

Performed by Pavitra Kumar (piano) & Frank Graves (violin)

- Piano Sonata No. 8 in B flat major, Op. 84 (Sergei Prokofiev, 1891-1953)
- Sonata in F major for Violin and Piano (Felix Mendelssohn, 1809--1847)

On Saturday, September 17th at 6 pm, in Killian Hall, MIT

Admission: $10 (General), $5 (Students) Proceeds go to survivors of the Bhopal Gas Disaster

For tickets, call 617-610-4120 or email rkhanna24@gmail.com or visit www.boston4bhopal.org/soundofstruggle
Start a Career in Investment Management.

Start Something

When you're looking to start a career, look to Fidelity. You'll enjoy early responsibility, global opportunities, and the autonomy to find the best ways to create value for fund shareholders.

For application information, please visit investment.fidelitycareers.com

Fidelity Careers Information Session
Room 4-145
September 15th, 2011
6-7:30pm
How Watson Learns Superhuman Jeopardy! Strategies

Abstract: Major advances in Question Answering technology were needed for Watson to play Jeopardy! at championship level — the show requires rapid-fire answers to challenging natural language questions, broad general knowledge, high precision, and accurate confidence estimates. In addition, Jeopardy! features four types of decision making carrying great strategic importance: (1) selecting the next clue when in control of the board; (2) deciding whether to attempt to buzz in; (3) wagering on Daily Doubles; (4) wagering in Final Jeopardy. This talk describes how Watson makes the above decisions using innovative quantitative methods that, in principle, maximize Watson’s overall winning chances. We first describe our development of faithful simulation models of human contestants and the Jeopardy! game environment. We then present specific learning/optimization methods used in each strategy algorithm: these methods span a range of popular AI research topics, including Bayesian inference, game theory, Dynamic Programming, Reinforcement Learning, and real-time “rollouts.” Application of these methods yielded superhuman game strategies for Watson that significantly enhanced its overall competitive record.

Joint work with David Gondek, Jon Lenchner, James Fan and John Prager.

Biography: Gerald Tesauro is a Research Staff Member at IBM’s T.J. Watson Research Center. He is best known for developing TD-Gammon, a self-teaching neural network that learned to play backgammon at human world championship level. He has also worked on theoretical and applied machine learning in a wide variety of other settings, including multi-agent learning, dimensionality reduction, computer virus recognition, computer chess (Deep Blue), intelligent e-commerce agents, and autonomic computing. Tesauro has a PhD in theoretical physics from Princeton University.

Host: Leslie Kaelbling, CSAIL

For more information: www.csail.mit.edu or 617.253.0145
Engineered T-cells vanquish cancer in patients

By Denise Grady
THE NEW YORK TIMES

PHILADELPHIA — A year ago, when chemotherapy stopped working against his leukemia, William Ludwig signed up to be the first patient treated in a bold experiment at the University of Pennsylvania. Ludwig, then 65, a retired corrections officer from Bridgeton, N.J., felt his life draining away and thought he had nothing to lose.

Doctors removed a billion of his T-cells — a type of white blood cell that fights viruses and tumors — and gave them new genes that would program the cells to attack his cancer. Then, the altered cells were dripped back into Ludwig’s veins.

At first, nothing happened. But after 10 days, he began shaking with chills. His temperature shot up. His blood pressure shot down. He became so ill that doctors moved him into intensive care and warned that he might die. His family gathered at the hospital, fearing the worst.

A few weeks later, the fevers were gone. And so was the leukemia. There was no trace of it anywhere.

A year later, Ludwig is still in remission. He became so ill that doctors had to pass his blood through a machine that removed the cells and returned the other blood components. The T-cells were exposed to the vector, which transformed them genetically, and then were frozen. Meanwhile, the patients were given chemotherapy to deplete any remaining T-cells, because the native T-cells might impede the growth of the altered ones. Finally, the T-cells were infused back into the patients.

“Doctors removed a billion of his T-cells — a type of white blood cell that fights viruses and tumors — and gave them new genes that would program the cells to attack his cancer. Then, the altered cells were dripped back into Ludwig’s veins.”

The treatment wiped out all of the patients’ B-cells, both healthy ones and leukemic ones, and will continue to do so for as long as the new T-cells persist in the body, which could be forever (and ideally should be, to keep the leukemia at bay). The lack of B-cells means that there should be, to keep the leukemia at bay. The lack of B-cells means that the patients may be left vulnerable to infection and will need periodic infusions of a substance called in-travenous immune globulin to protect them.

One thing that is not clear is why Patient 1 and Patient 3 had

T-cells, Page 15

Tuesday, September 13, 2011

Engineered T-cells vanquish cancer in patients

A few weeks later, the fevers were gone. And so was the leukemia. There was no trace of it anywhere.

Two other patients have undergone the experimental treatment. One had a partial remission, the other a complete remission. All three had had advanced chronic lymphocytic leukemia and had run out of chemotherapy options. Usually, the only hope for a remission in such cases is a bone-marrow transplant, but these patients were not candidates for it.

A few weeks later, the fevers were gone. And so was the leukemia. There was no trace of it anywhere.

A year later, Ludwig is still in remission. He became so ill that doctors moved him into intensive care and warned that he might die. His family gathered at the hospital, fearing the worst.

A few weeks later, the fevers were gone. And so was the leukemia. There was no trace of it anywhere.

Two other patients have undergone the experimental treatment. One had a partial remission, the other a complete remission. All three had had advanced chronic lymphocytic leukemia and had run out of chemotherapy options. Usually, the only hope for a remission in such cases is a bone-marrow transplant, but these patients were not candidates for it.

A few weeks later, the fevers were gone. And so was the leukemia. There was no trace of it anywhere.

Two other patients have undergone the experimental treatment. One had a partial remission, the other a complete remission. All three had had advanced chronic lymphocytic leukemia and had run out of chemotherapy options. Usually, the only hope for a remission in such cases is a bone-marrow transplant, but these patients were not candidates for it.

A few weeks later, the fevers were gone. And so was the leukemia. There was no trace of it anywhere.
Teclls, from Page 14

complete remissions, and Patient 2 did not. The researchers said that when Patient 2 developed chills and fever, he was treated with steroids at another hospital, and the drugs may have halted the T-cells activity. But they cannot be sure. It may also be that his disease was too severe.

Not without danger to patients

While promising, the new techniques developed by the University of Pennsylvania researchers are not without danger to patients. Engineered T-cells have attacked healthy tissue in patients at other centers. Such a reaction killed a 39-year-old woman with advanced colon cancer in a study at the National Cancer Institute, researchers there reported last year in the journal Molecular Therapy.

Researchers at Memorial Sloan Kettering Cancer in New York also reported a death last year in a T-cell trial for leukemia (also published in Molecular Therapy). An autopsy found that the patient had apparently died from sepsis, not from the T-cells, but because he died just four days after the infusion, the researchers said they considered the treatment a possible factor.

June said his team hopes to use T-cells against solid tumors, including some that are very hard to treat, like mesothelioma and ovarian and pancreatic cancer. But possible adverse reactions are a real concern, he said, noting that one of the protein targets on the tumor cells is also found on membranes that line the chest and abdomen. T-cell attacks could cause serious inflammation in those membranes and mimic lupus, a serious autoimmune disease.

Even if the T-cells do not hit innocent targets, there are still risks. Proteins they release could cause a “cytokine storm,” high fevers, swelling, inflammation and dangerously low blood pressure — which can be fatal. Or, if the treatment rapidly kills billions of cancer cells, the debris can damage the kidney and cause other problems.

Even if the new T-cell treatment proves to work, the drug industry will be needed to mass produce it. But June said the research is being done only at universities, not at drug companies.

For the drug industry to take interest, he said, there will have to be overwhelming proof that the treatment is far better than existing ones.

When doctors approached Ludwig, he thought that if the trial could buy him six months or a year, it would be worth the gamble. But even if the study did not help him, he felt it would still be worthwhile if he could help the study.

When the fevers hit, he had no idea that might be a good thing. But a few weeks later, he said, His oncologist, Alison Loren, told him, “We can’t find any cancer in your bone marrow.”

Remembering the moment, Ludwig paused and said, “I got goose bumps just telling you those words.”

Before the study, Ludwig was weak, suffered repeated bouts with pneumonia and was wasting away. Now, he is full of energy. He has gained 40 pounds. He and his wife bought an RV, in which they travel to and from the hospital. His mother bought an RV, in which they travel to and from the hospital. His idea that might be a good thing.

But a few weeks later, he said, His oncologist, Alison Loren, told him, “We can’t find any cancer in your bone marrow.”

Ludwig said that Loren told him, “I feel normal, like I did 10 years before I was diagnosed,” Ludwig said. “This clinical trial saved my life.”

Loren said in an interview, “I hate to say it in that dramatic way, but I do think it saved his life.”

Ludwig said that Loren told him and his wife something he considered profound. “She said, “We don’t know how long it’s going to last. Enjoy every day.” Ludwig recalled.

“That’s what we’ve done ever since.”

---

Do you HATE how you LOOK?

Are you concerned that you look WEAK or that your MUSCLES are too SMALL?

If so, call us for information on treatment options and research studies.

Body Dysmorphic Disorder Clinic & Research Unit:
(877)4MGH-BDD bdd@partners.org mghocd.org/help4bdd/

---

We invite all Juniors and Seniors to attend:

**Fall Presentation**

**Date:** Tuesday, September 13, 2011  
**Time:** 8:00 pm  
**Place:** Le Meridien Hotel

**MIT Career Fair**

**Date:** Wednesday, September 21, 2011  
**Time:** 11:00 am – 5:00 pm  
**Place:** Johnson Athletics Center—Building W34

We remind you that the resume submission deadline is **October 3rd**. First round interviews will be held at career services on **October 13th**.

*Applicants must apply via [www.joinbain.com](http://www.joinbain.com) AND Career Development Center. Please include a cover letter, resume and unofficial transcript.*

---

**Follow us on Twitter @BainMIT**

---

**We People. Passion. Results.**
The new Henri and Belinda Termeer Center for Targeted Therapies will be aimed at bringing the emerging field into the forefront of treatment and research. It’s initial focus will be on drugs tailored to the genetic makeup of tumors, especially breast cancers, lung cancers, and leukemias.

"In a way, Henri has been a precursor of this [Mass. General] research and innovation," he said. "His push for more personalized medicine is motivated by his work at Genzyme, which pioneered out-of-the-ordinary programs in other areas. His hope is that by doing this and doing it better, "we can develop resistance to the new drugs so researchers may have to understand genetics well enough to outfit the tumors with additional treatments or drug combinations."

"By doing this and doing it better, "he said. "By doing this and doing it better, the money will also be used to buy medical equipment, recruit new employees, and offset the cost of clinical trials it will host. Initially, the center will have about 25 staff members, including new hires and current hospital employees who will be reemployed. Doctors and scientists working in the Termeer Center hope to test new generations of molecular-based targeted drugs that could transform cancer care.

"In the future, we’re going to see cancers defined not only by their site of origin but by the molecular alterations that are the drivers of particular cancers," Beselga said.

"Mass. General already is among the most advanced hospitals in the world in testing personalized medicines. Over the past year alone, the number of clinical trials it sponsors using targeted therapies has roughly tripled," Beselga said. "In the spring, Dr. Alice Tsang Shaw, a Mass. General thoracic oncologist, presented data to the American Society of Clinical Oncology showing promising results from a Pfizer Inc. drug that works by inhibiting a genetic mutation in non-small cell lung cancer cells."

Doctors and scientists working in the Termeer Center hope to test a new generation of molecular-based targeted drugs that could transform cancer care.

"In the future, we’re going to see cancers defined not only by their site of origin but by the molecular alterations that are the drivers of particular cancers," Beselga said.

"In the future, we’re going to see cancers defined not only by their site of origin but by the molecular alterations that are the drivers of particular cancers," Beselga said. "In the spring, Dr. Alice Tsang Shaw, a Mass. General thoracic oncologist, presented data to the American Society of Clinical Oncology showing promising results from a Pfizer Inc. drug that works by inhibiting a genetic mutation in non-small cell lung cancer cells."

"In the future, we’re going to see cancers defined not only by their site of origin but by the molecular alterations that are the drivers of particular cancers," Beselga said.

"In the future, we’re going to see cancers defined not only by their site of origin but by the molecular alterations that are the drivers of particular cancers," Beselga said.
Contra Dance to Live Music!
Group theory + banjos + twirling your partner = fun
Tuesdays, 8 - 10:30 pm
Beginner’s Night Sep. 13, W20 Lobdell.
Music by Nor’east’er!

Israeli Dancing
Wednesdays, 8 - 11 pm
Beginner’s Nights @7:30: 9/14 Sala, 9/21 W20-491

International Folk Dancing
Circle dances from the Balkans & more, in time signatures you’ve never heard of!
Sundays, 8 - 11 pm
Beginner’s Night Sep. 11, Sala de Puerto Rico.
Live electric Balkan music by Rakiya!

Free for MIT and Wellesley students!
Beginners are always welcome.

MIT Folk Dance Club http://mit.edu/fdc

<table>
<thead>
<tr>
<th>Solution to Sudoku</th>
<th>Solution to Techdoku</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 8 1 6 3 4 2 7</td>
<td>3 5 1 4 2 6</td>
</tr>
<tr>
<td>2 3 7 8 4 5 1 9</td>
<td>4 6 2 5 3 1</td>
</tr>
<tr>
<td>9 4 6 1 2 7 5 8 3</td>
<td>2 4 6 3 1 5</td>
</tr>
<tr>
<td>4 2 9 3 1 6 5 8 7</td>
<td>1 3 5 2 6 4</td>
</tr>
<tr>
<td>3 6 9 7 8 2 1 4</td>
<td>5 1 3 6 4 2</td>
</tr>
<tr>
<td>1 7 8 4 5 2 3 9 6</td>
<td>6 2 4 1 5 3</td>
</tr>
</tbody>
</table>

Fall Career Fair
Wednesday, September 21
11 a.m. - 5 p.m.
U.S. CITIZENSHIP REQUIRED

MASSACHUSETTS INSTITUTE
OF TECHNOLOGY
Johnson Athletics Center
Building W34

Meet and talk with recruiters to discover excellent career opportunities in these fields:
- Computer/Electrical Engineering
- Computer Science
- Information Assurance
- Mathematics
- Foreign Language
- Intelligence Analysis
- Cryptanalysis
- Signals Analysis
- Business & Contracting
- Finance & Accounting
- Paid Internships, Scholarships and Co-op
- Plus other opportunities

Fall Career Fair
Wednesday, September 21
11 a.m. - 5 p.m.
U.S. CITIZENSHIP REQUIRED

MASSACHUSETTS INSTITUTE
OF TECHNOLOGY
Johnson Athletics Center
Building W34

Meet and talk with recruiters to discover excellent career opportunities in these fields:
- Computer/Electrical Engineering
- Computer Science
- Information Assurance
- Mathematics
- Foreign Language
- Intelligence Analysis
- Cryptanalysis
- Signals Analysis
- Business & Contracting
- Finance & Accounting
- Paid Internships, Scholarships and Co-op
- Plus other opportunities
PAINT PICTURES.

If you’re going to change the world, you have to understand how it works. We’re in the business of knowing what’s going on in the world, understanding reality and figuring out what to do about it next. That’s what empowers our people to make big decisions and have real impact. Don’t just see the bigger picture – create it.

Tuesday September 20th, 7pm-9pm, 32-141:
Technology Associate Information Session

Wednesday September 21st, 11am-5pm Johnson Athletic Center, Building W34:
Career Fair
Six-year old Angie and her four-year old brother Joel were sitting together in church. Joel giggled, sang, and talked out loud. Finally, his big sister had had enough. “You’re not supposed to talk out loud in church.”

“Why? Who’s going to stop me?” Joel asked.

Angie pointed to the back of the church and said, “See those two men standing by the door? They’re hushers.”

Two other mementos Vossmer has from the trips include a police mourning badge, with a black stripe and “NYC 9/11,” which she wore on Sunday’s 10-year anniversary memorial, and a humble metal cross, a token of their appreciation from New York firefighters. It was cut by the steel workers at Ground Zero, and is made from one of the last steel beams from Ground Zero.

With each trip, Vossmer says she experienced less and less shock at the sight of Ground Zero. The third and final trip to New York occurred near Easter in 2002, when volunteers brought Easter baskets assembled at MIT.

“The MIT community was phenomenal in assisting with donations,” Vossmer said.

Community

Indeed, the story of MIT’s response was one of community; individuals came together to use whatever skills they had to help the campus cope.

On the day after the attacks, Professor John Fernandez was contacted by Kirk D. Kolenbrander of the President’s Office to help create a tangible memorial for MIT. Fernandez, who taught “Materials and Construction” and “Building Systems” in the department of Architecture, had given a talk about the collapse of the World Trade Center within a day of the attacks; he also used to work as an architect in New York City.

“Back then I had only been at MIT for two years,” he said. “I still counted New York City as my home.”

During the rapid design period, it was agreed that the memorial had to bring the community together. Within 30 hours, Fernandez’ design, a scale replica of an exterior wall of the World Trade Center, came to life with the help of the Department of Facilities.

“They were ready to build anything,” Fernandez said of Facilities. The “Reflecting Wall,” as it was called, stood along the brick wall near the MIT chapel for a year. On the one-year anniversary of the attacks, Fernandez was out of the country, missing the unveiling, and retirement, of the wall.

But he was okay with that. “The most solace I gathered from the

CONQUER THE CLASSROOM.
Learn and play with the latest technology powered by America’s Largest and Most Reliable High-Speed Wireless Network.

NEW! Samsung Galaxy Tab™ 10.1
• 1 GHz dual-core processor for maximum speed
• Just 4” thin and only 1.23 pounds
• Android™ 3.0 Honeycomb OS for tablets

DROID X2 by MOTOROLA
• Super fast 1 GHz dual-core processor
• Brilliant 4.3” hi-def display
• 8 MP camera and 720p HD video capture

BUY ANY SMARTPHONE, GET $50 OFF ANY TABLET.

Members of the MIT community pause to take pictures of the flag hung underneath the dome after the Sept. 11 reflection ceremony Sunday.
whole experience in being involved in putting up the memorial was that it was not about the author and not about any single voice," Fernandez said. "I never really had a feeling of authorship, really."

The architect said he purposefully did not get involved in further memorials for 9/11. "I feel too close. It was a really hard day. For my friends and my family, at least for a solid year if not two years afterwards, you felt as if that was not anywhere below the surface. It was right there on top of everything. It was a part of people's daily lives."

His contribution became his own coping mechanism: "I derived a lot of personal solace, and that was enough."

In true MIT fashion, Fernandez became heavily involved in research related to the twin towers' fall. His work followed advanced egress systems, studying how evacuation routes could be improved in developing skyscrapers. The original towers' stairwells were almost entirely made out of steel with a core of regular sheet rock. Only two people could fit abreast on each step.

"In fires, that's really not a good approach," Fernandez explained. Extra wide stairs and a completely concrete core, for example, would make tall buildings safer.

Baker Housemaster Guillermo Trotti, also an architect, always admired the twin towers' design since he first saw them when he was a grad student. It was 1978, and the young architect took a picture of the towering marvels. The rails were like train tracks running right...
shortly after 9/11, MIT dedicated the “Reflecting Wall,” representing a piece of the WTC exterior. Community members left flowers and prayers, as seen in this Sept. 18, 2001 file photo.

The MIT Family is known to have lost 14 members on September 11, 2001

David Morrison Berray, SM ’00, Millbrook, NY
John R. Fisher, Beachwood, NJ (father of Kyle Fisher ’13)
Kristin Gould, New York, NY (wife of alumnus James P. Gould ’46)
Linda Gronlund, Greenwood Lake, NY
Charles E. Jones, SM ’80, Bedford, MA
Frederick Kuo Jr., SM ’70, Great Neck, NY
Judith Camilla Larocque, Framingham, MA (former speaker of the MIT Enterprise Forum)
Daniel M. Lewin, SM ’98, Brookline, MA
Michael B. Packer, SM ’78 and PhD ’80, New York, NY
Donald A. Peterson ’57, Spring Lake, NJ
Jean H. Peterson, Spring Lake, NJ (wife of alumnus Donald A. Peterson ’57)
Heather Smith, Boston, MA (fiancée of alumnus Michael T. Jammen ’97)
Thomas F. Theurkauf ’79, Stamford, CT
John J. Wenckus ’77, Torrance, CA

Coatue Management Software

http://mit.coatue.net

(Our lawyers won’t let us say more)
get involved
career-fair.mit.edu

CAREER FAIR
FALL 2011

JOHNSON ATHLETIC CENTER
WEDNESDAY, SEPTEMBER 21
11 A.M. - 5 P.M.
Remember, remember, the rule of November

Tuesday, September 13, 2011

The Tech

By Lourdes D. Bobbio, Joanna Kao, and Ryan Normandin

On Sunday morning, over 200 members of the MIT community gathered to remember those lost a decade ago on September 11th and honor the heroes of that day. Speakers included President Susan J. Hockfield, MIT Director of Facilities and Security John Difava, Chancellor Eric Grimson, and Chaplain Robert M. Randolph. The ceremony started in Lobby 10 with an invocation and moment of silence, and moved outside to Killian for the flag lowering ceremony and benediction. A fitting tribute to those who died and those who selflessly gave their lives. Watch the video at http://tech.mit.edu/V130/926/september11/videos.html.

Remembering September 11th

Editor: Lourdes D. Bobbio, Joanna Kao, Ryan Normandin

Videographer: Quentin Smith

A feast for your eyes

Carrots might not improve your vision, but they can be improved with this recipe

By Christine Yu

Hello freshmen.

Some of you — hopefully most of you — have heard of the November Rule. For those who haven’t, it is as follows, in its strictest and simplest form: you should not have sex prior to November 1 of your freshman year. It’s a good rule of thumb, and here’s why:

In this coming year, your self-esteem is going to take a pretty big beating. In your high school, you were one of the smartest students and breezed through most of your classes. Here, things will be different. You won’t be the smartest students and made me avoid carrots for a decade. I started wondering if there was any way to make carrots palatable, and then I remembered that I usually eat carrots in tapas restaurants. (While glazed carrots at southern-style restaurants can be tasty, I shy away from anything with too much sugar.) The carrots at tapas restaurants aren’t usually peeled, so they’re served cold after being cooked and marinated in a simple mixture of spices, olive oil, and garlic. After much culinary experimentation, I finally settled on a tapas-style recipe.

Tapas-style carrots:

(Salad dish; serves two. Prep time: 10 minutes. Cook time: 30 minutes, with 15–60 minutes devoted to chilling the end result)

• 8 ounces of baby carrots, chopped in half
• Butter or Pam — you can skip this step if you’re impatient
• 2 cloves of garlic, minced
• 2 tablespoons of olive oil
• 1 teaspoon of Tajin’s Complete Seasoning
• Water

First, I brown the carrots before boiling them. Add water after the carrots are tender. In a separate glass bowl, add:

• 1/4 cup of Rajas’ Complete Seasoning
• 1 cup of water

Mix well and let the sauce simmer for 10 minutes, or until the sauce thickens. Add salt to taste. Add water after the carrots have cooled a little bit. You can skip this step if you’re impatient. Add salt to taste. Add water after the carrots are browned (about 30–20 minutes).

Let simmer for 10 minutes or until the carrots are tender. In a separate glass bowl, mix together olive oil with minced garlic and complete seasoning. Drain carrots and mix with seasoning. Chill in a fridge for at least one hour or in a freezer for 15 minutes before serving.

A note on spices: I usually use Tony Chacher’s Circle Seasoning instead of salt to give the carrots a little extra kick with less sodium. Rada’s Complete Seasoning is sold in the Mexican aisle of Shaw’s, but it contains MSG. MSG-free alternatives include a dash of fresh, finely chopped cilantro or dried cilantro; cumin; and onion powder.

By Keith Yost

There will probably be a point during the semester when you feel stupid, fat, and friendless. You aren’t — not really — but that’s how it will feel.

In short, there will probably be a point during this semester when you feel stupid, fat, and friendless. You aren’t — not really — but that’s how it will feel.

Remember, remember, the rule of November

Some important advice for the Class of 2015

Editor: Lourdes D. Bobbio, Joanna Kao, Ryan Normandin

Videographer: Quentin Smith

Adherence to the November Rule avoids these problems — it gives you a fighting chance of building the sort of stable platonic friendships that can buoy you through MIT’s grimmer periods.

By Lourdes D. Bobbio, Joanna Kao, and Ryan Normandin

In this coming year, your self-esteem is going to take a pretty big beating. In your high school, you were one of the smartest students and breezed through most of your classes. Here, things will be different. You won’t be the smartest students and made me avoid carrots for a decade. I started wondering if there was any way to make carrots palatable, and then I remembered that I usually eat carrots in tapas restaurants. (While glazed carrots at southern-style restaurants can be tasty, I shy away from anything with too much sugar.) The carrots at tapas restaurants aren’t usually peeled, so they’re served cold after being cooked and marinated in a simple mixture of spices, olive oil, and garlic. After much culinary experimentation, I finally settled on a tapas-style recipe.

Tapas-style carrots:

(Salad dish; serves two. Prep time: 10 minutes. Cook time: 30 minutes, with 15–60 minutes devoted to chilling the end result)

• 8 ounces of baby carrots, chopped in half
• Butter or Pam — you can skip this step if you’re impatient
• 2 cloves of garlic, minced
• 2 tablespoons of olive oil
• 1 teaspoon of Tajin’s Complete Seasoning
• Water

First, I brown the carrots before boiling them. Add water after the carrots are tender. In a separate glass bowl, add:

• 1/4 cup of Rajas’ Complete Seasoning
• 1 cup of water

Mix well and let the sauce simmer for 10 minutes, or until the sauce thickens. Add salt to taste. Add water after the carrots have cooled a little bit. You can skip this step if you’re impatient. Add salt to taste. Add water after the carrots are browned (about 30–20 minutes).

Let simmer for 10 minutes or until the carrots are tender. In a separate glass bowl, mix together olive oil with minced garlic and complete seasoning. Drain carrots and mix with seasoning. Chill in a fridge for at least one hour or in a freezer for 15 minutes before serving.

A note on spices: I usually use Tony Chacher’s Circle Seasoning instead of salt to give the carrots a little extra kick with less sodium. Rada’s Complete Seasoning is sold in the Mexican aisle of Shaw’s, but it contains MSG. MSG-free alternatives include a dash of fresh, finely chopped cilantro or dried cilantro; cumin; and onion powder.

By Keith Yost

There will probably be a point during the semester when you feel stupid, fat, and friendless. You aren’t — not really — but that’s how it will feel.

In short, there will probably be a point during this semester when you feel stupid, fat, and friendless. You aren’t — not really — but that’s how it will feel.

Remember, remember, the rule of November

Some important advice for the Class of 2015

Editor: Lourdes D. Bobbio, Joanna Kao, Ryan Normandin

Videographer: Quentin Smith

Adherence to the November Rule avoids these problems — it gives you a fighting chance of building the sort of stable platonic friendships that can buoy you through MIT’s grimmer periods.
Tennis sweeps opener

MIT women easily beat Smith College, 9-0

By Michelle Dutt

The MIT Women’s Varsity Tennis team swept in their first meet of the fall season with a 9-0 official score against Smith College. In doubles, returning athletes Lauren C. Quisenberry ‘14 and Stacey Vishnevetsky ‘12 were off the court first with a speedy 6-3 victory at first doubles. Soon to follow were Julia C. Hsu ‘14 and, in her first varsity match, Michelle M. Dutt ‘15 with another 8-1 win at second doubles. No doubles players fell to Smith as doubles teams Vinyette J. Kong ‘15 and Juana Becerra ‘15 won 8-4. In unofficial doubles play, Engineers Alexandra C. Hall ‘12 and Hillary E. Jenny ‘12, as well as Caitlin B. Pomeroy ‘13 and Maddie B. Aby ‘15, experienced victories of their own.

In singles, Quisenberry defeated her opponent at first singles in record time, dropping only one game in the second set. Michelle M. Dutt ‘15 was soon to follow with a second singles victory of 6-1, 6-8. The team acquired their next two victories due to the efforts of Hsu at fourth singles (6-1, 6-0) and Kong at fifth singles (6-2, 6-0). The mental toughness of athletes Vishnevetsky (third singles) and Becerra (sixth singles) shone as they pulled through close matches with 6-3, 6-3 and 6-1, 3-6, 10-1 victories, respectively. At seventh singles Hall won 6-2, 6-2, at eighth singles Jenny won 6-2, 6-1, at ninth singles Pomeroy fell to her opponent 6-1, 6-3, and Aby had a tough 6-2, 6-2 loss at tenth singles. The team is looking forward to maintaining its strong start to the season next Saturday against Clark University.

UPCOMING HOME EVENTS

Wednesday, September 14

Field Hockey vs. Gordon College

6 p.m., Jack Barry Field

SPOrTS SHOrTS

Football beats Becker College in opener

MIT football kicked off its 2011 season with a 35-13 win against Becker College, its second straight season-opening win. The 35 points MIT put up on the scoreboard was the most since its 48-15 win against Westminster College in 2009. John C. Wennert ’14 passed for 224 yards, and Justin R. Wallace ’15 started his college career with an impressive 170 rushing yards, the young duo created a foundation for a strong, balanced attack. Offense wasn’t the only outstanding aspect MIT displayed during the game.

The Engineers shut out Becker for the first three quarters, only allowing 74 rushing yards. Becker scored their only points during the last six minutes of the game. Wennert and Wallace, along with Alexander E. Chumbley ’15, Benjamin D. Hessels ’14, and Justin A. Kresz ’12 — the latter showing his season prowess with 104 receiving yards — each scored a touchdown for the team. Kicker Harry A. Reit ’15 started his collegiate career perfectly, hitting all five of his point-after attempts.

—Shri R. Gameiram

Field Hockey suffers first loss of season

The Field Hockey team fell to Johns Hopkins at home on Sunday, 3-1, for their first loss of the season. The loss was the first of the season of the Engineers, who had outscored their opponents 36-4 in their previous five games. The Engineers opened the scoring in the 35th minute on a goal by Anaa H. Teruya ’12, assisted by Molly K. Duffy ’14. This would be the only goal in the first half, despite the 23 total shots taken by the two teams. It would also be the only goal for the Engineers in the game, however, as Johns Hopkins scored three times within a period of just over three minutes in the second half. MIT outshot their opponents 21-18, and took 15 penalty corners to Johns Hopkins’ 9. Kameron L. Klauber ’12 led the team with nine shots, and Teruya had five.

The team will look to rebound from the loss on Wednesday, when they host Gordon College.

—David Zhu, Sports Editor

NEW PLAYERS TRY TO REPLACE ROLES OF DEPARTED VETERANS

Overview of this year’s Patriots

New players try to replace roles of departed veterans

By Nidharshan Anandasivam

A fter being knocked out in the first round of the playoffs the last two seasons, the Patriots hope to return to their championship-winning mode that fans have become familiar with over the last several years. Although many of the former Patriot stars who were a vital part of the Patriots’ winning mode. familiar with over the last several years. Although many of the former Patriot stars who were a vital part of their championship teams are now either retired or on other teams — defensive backs Ty Law and Asante Samuel, safety Rodney Harrison, linebackers Tedy Bruschi and Mike Vrabel, running back Corey Dillon, and wide receiver Troy Brown — the Patriots will show promise for this upcoming season. Randy Moss may be gone, but Chad Ochocinco is here. This year the Patriots should have a spectacular receiving corps with the addition of wide receiver Ochocinco, who accepted a three-year contract during the offseason. With a combined 29 years of NFL experience among entering receivers Deion Branch, Wes Welker, and Chad Ochocinco, Tom Brady should not have too much trouble finding someone to pass to. As long as Brady stays free of injuries and the offensive line offers decent pass protection, the Patriots’ passing game will be extremely lethal. This promise — combined with a respectable running game centered on the improving running backs BenJarvus Green-Ellis and Danny Woodhead — is a recipe for offensive success.

On the defensive side, the Patriots are going to have to step it up — especially after the loss of 2010 Pro Bowl defensive back Brandon Meriweather. The acquisition of defensive tackle Albert Haynesworth from the Washington Redskins should improve the pass rushing markedly. Lining up next to Haynesworth will be Vince Wilfork, who averaged close to two sacks per game in 2010. This dynamic duo will hurry opposing quarterbacks and put the Patriots’ secondary in a better position to make some game-changing interceptions.

On the defensive side, the Patriots are going to have to step it up. The Patriots finished with a strong 34-2 record last season but ended their playoff run immediate-ly when they fell to the Jets at Gillette Stadium in the divisional play-offs. With a new season comes new hope and excitement. Patriots fans across the nation are ecstatic, and they have reason to be — not only because there is an NFL season de- spite the threat of lockout, but also because of the winning potential of their team.