

Sit-in for divestment by president's office hits one-week mark

Rare MIT student protest follows
release of Institute's climate plan

By Katherine Nazemi
NEWS EDITOR

Members of student group Fossil Free MIT are staging a sit-in outside of President L. Rafael Reif's office in protest of what they see as inadequacies in MIT's climate action plan.

The sit-in has been ongoing since Oct. 22, the day after MIT's "Plan for Action on Climate Change" was made public, and two to 12 students have been present outside 3-208 around the clock.

On Monday, members of Fossil Free MIT (FFMIT) met to discuss the goals of their sit-in. Prior to the

strategy meeting, the group had still been formulating its demands.

The main objectives of FFMIT's protest include divesting from coal and tar sands companies, establishing an ethics advisory committee, and committing to achieve carbon neutrality on campus by 2040 at the latest.

"We are sitting-in to urge MIT's administration to raise their ambitions," the group wrote in a letter published in this issue of *The Tech*.

Outside Reif's office, students participating in the sit-in have been working on problem sets, listen-



YUANCHENG YU

Following MIT's decision not to divest, Fossil Free MIT organized a 24/7 sit-in outside President's office until their next meeting with Reif on Thursday, Oct. 29.

Protest, Page 11



NINA LUTZ

The Roadkill Buffet ended the night with a laughing audience after its show last Friday.

Cancer research partnership between Harvard and MIT gets \$20 million gift

In the hope of moving more results from cancer research labs into the clinical setting, the Commonwealth Foundation for Cancer Research announced yesterday a \$20 million donation to the Bridge Project, a collaboration between the Koch Institute for Integrative Cancer Research at MIT and the Dana-Farber/Harvard Cancer Center.

Funding will be distributed over five years and will create grants that enable new research teams to form, as well as provide funding to existing teams "on the cusp of making significant advances toward clinical implementation." Both MIT and Harvard are fundraising to match the donation, according to MIT.

The Bridge Project launched in 2011 to connect

current developments in bioengineering, cancer science, and oncology to solve difficult problems in cancer research and care. The project funds cross-institutional research teams that study a wide variety of cancers. Past Bridge project recipients included teams researching the development of a vaccine for lung cancer treatment and targeting chemoresistant disease in leukemia.

"We're looking for the best people, regardless of where they are, to tackle these very important problems," Tyler Jacks, director of the Koch Institute, told the *Boston Globe*.

The \$20 million donation comes after an initial \$4.5 million pledge from the foundation in 2012.

—Anthony Yu

Full release of Stellar's replacement expected next year

Most students searching for class materials or grades have encountered a new interface this semester. MIT IS&T is progressively phasing out Stellar in favor of a new modular learning management system, which will be fully released next year.

There have been mixed opinions regarding the release of the new learning management system. Some students think it is slow, while others prefer Stellar.

"The UI is definitely better and more modern," Donald M. Little '16 said. However, Little also said that the system was released too early, and that it still has "plenty of bugs."

Muneeza S. Patel G said that some aspects of the system could be made more intuitive, especially for graders. Students also commented that the mobile site was difficult to use.

According to a report authored by Daniel Hastings, director of the Singapore-MIT Alliance for Research and Technology, and Dean for Graduate Education Christine Ortiz, Stellar has been MIT's course management system since 2001 and supported 972 classes, 1,244 faculty users

and 8,864 students in Spring 2013.

But over the last few years, Stellar's rigid architecture has made it difficult to extend and adapt to changing requirements such as the need for more collaborative features, the report said. The new system's framework addresses these issues by offering modularity and API integration.

In an email sent to Stellar administrators, instructors, and TAs in June 2015, IS&T explained that each module is a fully supported standalone web service that can be used independently or in conjunction with other modules. This means that instructors can choose which of the modules — which include 'materials,' 'gradebook,' 'calendar,' and others — to activate on their course pages. In addition to a revamped course guide and student portal, the Learning Modules platform provides a unified web interface for managing all modules.

Course instructors and administrators are offered the option to use the new modular learning management system instead of Stellar for the current academic year.

—Henry Nassif

IN SHORT

Celebrate Halloween early with Spooky Skate at 8 p.m. Friday, Oct. 30. Head to Johnson Ice Rink for skating, cookies, and costumes!

The annual Pumpkin Drop will be take place at 11 p.m. Satur-

day, Oct. 31 in front of the Green Building.

The MIT Museum is hosting a 21+ only pre-Halloween party this Friday from 7-9 p.m. Advance ticket purchase required.

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

FOSSIL FREE MIT

The student group responds to MIT's climate plan. Spoiler alert: the activists aren't happy. **OPINION, p. 5**

THERE AND BACK AGAIN

On leaving and coming back to the Institute. **CAMPUS LIFE, p. 3**

ASIAN-AMERICAN IDENTITY

Application essay describes ethnic heritage. **CAMPUS LIFE, p. 3**



BOSTON BALLET

The 2015-2016 season opens with a work by John Neumeier. **ARTS, p. 8**

BREAKING DOWN THE WALLS

A critique of Donoghue's *Room*. **ARTS, p. 9**

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Finn Brunton | Helen Nissenbaum

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Law library to make resources available to the public online

*Harvard library sacrifices its own
collection so that it can be scanned*

By Erik Eckholm
THE NEW YORK TIMES

Shelves of law books are an august symbol of legal practice, and no place, save the Library of Congress, can match the collection at Harvard's Law School Library. Its trove includes nearly every state, federal, territorial and tribal judicial decision since colonial times — a priceless potential resource for everyone from legal scholars to defense lawyers trying to challenge a criminal conviction.

Now, in a digital-age sacrifice intended to serve grand intentions, the Harvard librarians are slicing off the spines of all but the rarest volumes and feeding some 40 million pages through a high-speed scanner. They are taking this once unthinkable step to create a complete, searchable database of American case law that will be offered free on the Internet, allowing instant retrieval of vital records that usually must be paid for.

"Improving access to justice is a priority," said Martha Minow, dean of Harvard Law School, explaining

why Harvard has embarked on the project. "We feel an obligation and an opportunity here to open up our resources to the public."

For many years now, bookcases of legal tomes in law offices have been mostly for show. Rather than spending days poring over book indexes and footnoted citations, as law clerks and associates did in earlier times, researchers find what they need on the Internet in minutes. But that nearly always comes at a price.

Though the primary documents are formally in the public domain, many are not put online in a convenient format, if at all. Many states even rely on commercial services to post court briefs and decisions, which then provide them to paying subscribers.

Legal groups spend anywhere from thousands of dollars a year, for a small office, to millions, for a giant firm, using commercial services like Westlaw and LexisNexis to find cases and trace doctrinal strands.

While Harvard's "Free the Law"

Library, Page 6

Solution to Swimming

from page 12

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

Solution to Ice Skating

from page 12

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

Solution to Basketball

from page 12

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

Solution to Baseball

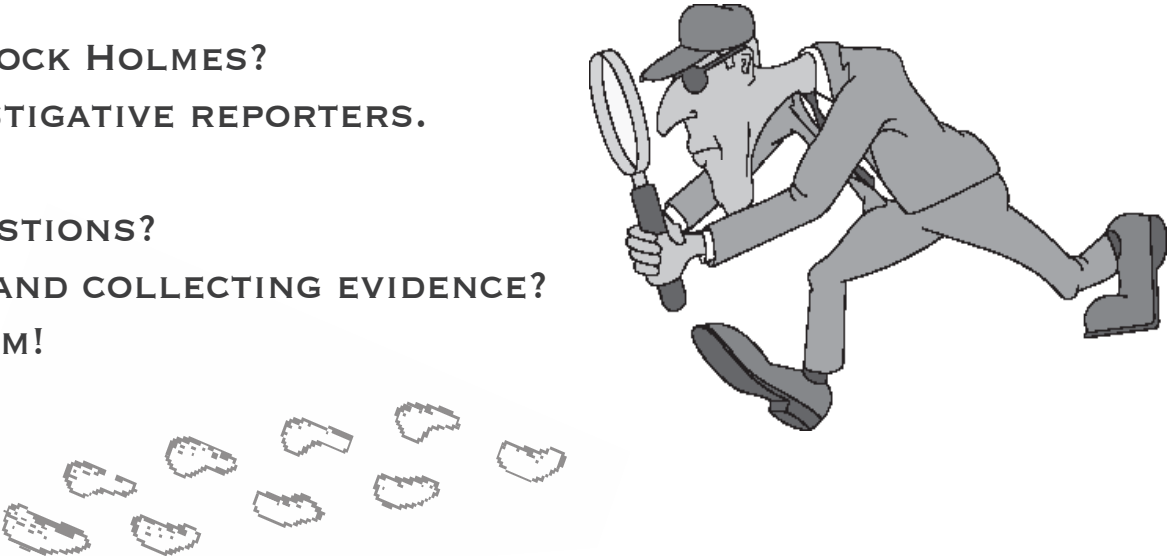
from page 12

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

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Coming back to TFP

When the world is not enough

By Harry Bleyan

It was somewhere along the Pacific Coast Highway, shaded from the setting sun by a row of tall palm trees on both sides, a refreshing headwind wrapping itself around my motorcycle helmet, when it suddenly occurred to me that I'd found what I was looking for. I'd spent the past several months away from school, searching, scouring the vast world outside and within for some elusive purpose, a gem of insight that would justify the profusion of pain and doubt that veiled my time in college up to that point.

And now, surrounded by seemingly perfect tranquility, a paradise of sorts, I finally reflected upon the utter absurdity and futility of my endeavor. I was in a land far, far away from home, a land filled with beautiful sights, sunsets, mountains and forests, but, regardless of all this outward beauty, I suddenly felt the most intense longing for my home back in Cambridge, my little corner of the universe called MIT. Why did I ever leave my home?

Ironically, I Had Truly Found Paradise by being away from it, and the realization was truly disarming. My search had come to an abrupt end, and from that moment on I knew all I wanted to do was to come back.

When I returned, not much seemed to have changed at first. Other than the strange requirement to wear helmets while sailing and my newly acquired ability to see Maseeh from Mass. Ave. over the smoldering ruins of Bexley Hall, MIT went on buzzing with its usual hypnotizing activity.

Classes began, schedules filled up, sleep

mysteriously evanesced into oblivion, and clues to research problems began popping up in my morning cereal. But beneath the layer of familiar patterns and routines, I experienced a fundamental shift in how I related to MIT and what sort of role it began to play in my life.

For the first time since early freshman year, I actively wanted to be here, to engage with all facets of life at MIT, to feel and experience and learn and immerse myself in the rivers of wonder that permeate its halls. There appeared a joyous quality to my everyday experience, a thrill that originated from my exposure to the amazing environment of MIT, a burning happiness that grew and pulsed the more I began to engage with it.

I was so excited by my sudden discovery of this spark that, upon return, I joined the Returning Students Group to connect to more people who've gone through similar experiences, and asked them to share some of their reasons for coming back and the consequent changes they have perceived in their day-to-day lives. I was expecting a homogeneity to their responses.

None ensued.

In fact, the different answers I received were so unexpected that I felt it necessary to write this piece. I was surprised to find that the only thing the returning students all had in common was the fact that we all decided to come back. Beyond that, everyone had a different reason for being here, for putting up with the frequent rides aboard the struggle bus. Some had no reasons and did it out of habit. Some loved it here, some tolerated it, some had a personal vendetta against it.

Some fought, some took the punches. Some swam, and some sank.

I now realize that the lack of a common denominator among all the students here is what makes MIT what it is. Our unique culture is a byproduct, a side effect that naturally arises when amazingly diverse people come together to engage in pure discovery, to probe and explore and fail and attempt again, to triumph in the face of seemingly insurmountable odds.

The outside grandiose façade of MIT comes as a result of the vibrancy, the drive, the sheer momentum and invigorating force of the inside of this place, all supported and perpetuated by the beautiful and brilliant people here — by you and me.

The world outside of these walls is dull and slow. Here, however, there prevails a selfless pursuit of awe-inspiring, intricate things that changes and opens you up to new dimensions of possibility and wonder, that makes you aware and appreciative of things you never even knew were possible. This was what I found on that breezy day on the motorcycle.

Ever since I came back, life here has become one of choice, not one of unchangeable circumstance — I am here because I want to be here, because every morning I wake up and choose to power through the challenges I face and emerge victorious. It occurred to me that MIT is not a separate something that “happens” to you, because you’re not separate from it. Remember that you are a part of MIT: you shape and affect it, you are “happening” to it.

You are MIT.

Every day I encounter people who are

struggling here. It is a hard place, but most of the time the troubles that people have aren't academic — they stem from a somewhat sub-optimal view of MIT and people's relation to it. The point of coming to MIT shouldn't be just to get a diploma, or to ace a class. If it is, then you are choosing to tolerate challenges, to endure them instead of seeking them out. You're unwittingly signing up for a very prolonged, painful existence.

The point should be to spill your curiosity and wonder out onto the world and to develop, direct, and use it. MIT is a means, not an end. A means of achieving things nobody in the world thinks are possible, and that's what makes us different. Each person here is on their own personal journey — one of knowledge, skill, leadership, personal growth, and peace. The success of that journey is the ultimate point, and everything that happens in the process should be seized, cherished, venerated.

People here care intensely. They are passionate and genuine, and I learned that such an environment is not a given. This place is magic, and to continue being magic it needs magical people interested in magical things. People like you and me. You are at the top of the world, and you are able to do great, amazing things. Take pride in that. Marvel at the improbability and nuance hidden in that. Keep doing magic, my friend. You are a part of my experience here, a part of my home, and I am extremely grateful to you for that.

Thank you.

Harry Bleyan is one happy camper.
Mens: 2016. Manus: 2017.

MIT APPLICATION ESSAYS THAT WORKED

'At heart, I am Chinese'

This is part of a series of MIT application essays submitted by students who were later admitted to the Institute. The following prompts are from the 2014-15 admissions season.

Prompt

Describe the world you come from; for example, your family, clubs, school, community, city, or town. How has that world shaped your dreams and aspirations? (200-250)

Response

I am completely Chinese. My parents are Chinese and I was born in China. However, as first generation immigrants, my family and I have been immersed in the French Canadian culture of Montreal.

and the American culture of Kansas City. I spent a measly five months in China after my birth, a seemingly short eight years in Montreal, and an even shorter nine years in Overland Park. At heart, I am Chinese like my background, but my childhood is colored by French influences and my adolescence is completely painted with the exuberant American character. As a result, a lot of my life has been categorized by my three countries and cultures: the languages I speak, the habits I have, and the aspirations I dream.

My college track, as of right now, is to double major in economics and mathematics while also minoring in French, but my ultimate goal is to make a positive and memorable impact on the world. Every subject field has a direct lineation to my different cultures, and the most obvious is my interest in French. While it may sound silly, I feel beautiful when speaking such a beautiful language, and I aim to further develop my linguistic foundation through a minor and studying abroad. My love for mathematics is most primarily rooted in my Chinese culture, as my father's enthusiasm about

little mathematical tricks is contagious. Finally, the opportunities and the boldness I find in American culture are best epitomized in its economic landmark: Wall Street.

Prompt

Tell us about the most significant challenge you've faced or something important that didn't go according to plan. How did you manage the situation? (200-250)

Response

Math had always been the easy, simple subject for me until calculus suddenly turned math into a terribly fascinating new world for me to explore. My paradigm regarding the seemingly rigid discipline shifted from indifference to a desire to learn how the puzzle pieces of the world clicked and fitted together. I hoped to spread that sentiment by establishing Mu Alpha Theta at my school, a chartering process that I expected to last at most two months.

That preconceived notion could not have been further from the truth. After

an arduous month involving hours of research, several phone calls, and admittedly, some pestering, I gained approval to start the chartering process in the second semester of my junior year. Immediately, I wrote the charter application, bylaws, supplementary materials, and student application for the math department to review. Unfortunately, as each error was traded in with another, I realized that my predicted timeframe was an over-optimistic dream. The lag was attributed to the lack of cohesive communication and initiative; I kept pushing my responsibilities to the next week until there was no more time left. Consequently, I took greater measures to accomplish my goals by setting hard deadlines for myself and approaching the math teachers more frequently for feedback.

After seven months, the math department and I have just finished the application process and are reviewing the candidates. Seeing my passion manifest into a tangible organization excites me, and I hope that it does the same for my school's community.

—Judy Wang '19

The Tech is collecting successful application essays (**hint: yours!**).

Email your pieces to *cl@the-tech.mit.edu*!

Judicial decisions to become available

Library does away with stacks to create searchable, online database

Library, from Page 2

project cannot put the lone defense lawyer or citizen on an equal footing with a deep-pocketed law firm, legal experts say, it can at least guarantee a floor of essential information. The project will also offer some sophisticated techniques for visualizing relations among cases and searching for themes.

Complete state results will become publicly available this fall for California and New York, and the entire library will be online in 2017, said Daniel Lewis, chief executive and co-founder of Ravel Law, a commercial startup in California that has teamed up with Harvard Law for the project. The cases will be available at www.ravellaw.com. Ravel is paying millions of dollars to support the scanning. The cases will be accessible in a searchable format and, along with the texts, they will be presented with visual maps developed by the company, which graphically show the evolution through cases of a judicial concept and how each key decision is cited in others.

On Ravel sites currently available to the public, for example, a lawyer planning to challenge the 2010 Citizens United decision, which permitted corporations to make independent political expenditures, can enter “campaign finance” and see in schematic form the major cases at the district, appellate and Supreme Court levels that led up to the 2010 decision and the subsequent cases that cite it.

Enter “separate but equal” and the strands from the 1896 decision justifying school segregation to the landmark 1954 decision declaring it unconstitutional are displayed, along with the dozens of related federal and state decisions ever since.

The company hopes to make money by offering, for a fee, more advanced analytical tools it is developing, like allowing a lawyer to see how a particular judge has responded to certain kinds of motions in the past, Lewis said.

Under the agreement with Harvard, the entire underlying database, not just limited search results, will be shared with nonprofit organizations and scholars that wish to develop specialized applications. Ravel and Harvard will withhold the database from other commercial groups for eight years. After that, it will be available to anyone for any purpose, said Jonathan L. Zittrain, a Harvard Law professor and director of the law library.

In Cambridge, the huge task of slicing and scanning volumes is about one-fourth completed, Zittrain said.

“You can imagine the way your heart skips a small beat when you put a book under a chopper like that,” he said. After the volumes are scanned, workers reattach the spine to the pages, encase the book in shrink-wrap and, he said, “put it back in the depository for the apocalypse.”

The Harvard project comes at a

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Chris Kevin G. Ong '16 performs “Shut Up and Dance” by WALKTHE MOON as part of a medley by the Chorallaries. The Chorallaries performed along with the rest of the MIT a capella groups this past Saturday at the Family Weekend A Capella Concert.

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Free legal reference may reduce costs for lawyers

Existing for-profit references are not anticipating a major impact on their business

Library, from Page 6

time of ferment in legal research, in a commercial market surpassing \$8 billion, said Lewis of Ravel, with the big traditional players and startups like his developing new ways to elicit useful information.

While the Harvard/Ravel project will freely provide case law that is now largely paid for, the companies that now charge for such information say they do not expect to be seriously wounded.

“I don’t anticipate this having a significant impact on our business,” said Andrew Martens, chief of legal products for Thomson Reuters,

which owns Westlaw.

The reason, he said, is that his company now does more than provide court decisions, giving convenient access to a wider range of relevant information and new ways to analyze it.

“Core primary law is only the beginning,” he said, as his company develops new computer tools that help, for example, in drafting arguments and managing legal practices.

Legal aid lawyers and public criminal defenders, though, called the Harvard project a welcome development that may save them money and make the law more ac-

cessible to struggling lawyers, students and even inmates who try to mount appeals from spotty prison libraries.

Alex Gulotta, executive director of Bay Area Legal Aid in Oakland, California, called the project “brilliant” and put it in a wider context of making “government information” more readily available.

“Knowledge is power,” he said. “People will always need lawyers, but having resources available for self-help is important.”

Steven D. Eppler-Epstein, executive director of Connecticut Legal Services in Middletown, Connecticut, said that even with

discounted rates, his organization spends about \$40,000 a year on the Westlaw service.

“Funding for legal aid programs has been tight for years, and saving some of that money would be great,” he said, but added that he would have to see the extent to which the Harvard offering affects his office’s broader information needs.

“Over time, competition in this market has been good for us,” he said. “It has driven prices down steadily.”

Some public defender offices are able to join in on research contracts negotiated by state legal

agencies and courts, holding down the costs. The free access to decisions may prove more helpful to the many private lawyers who are appointed by courts to defend the indigent, for meager pay, said Jim Bethke, executive director of the Texas Indigent Defense Commission in Austin.

He said his lawyers depended on services like LexisNexis to retrieve journal articles and other secondary sources that might otherwise be behind paywalls. But overall, he added, “anything that brings down the costs of attorneys providing indigent defense is a good thing.”

A sampling of people you’ll meet during a typical dinner at *The Tech*:

Justine, Course 2	Lenny, Course 16
Michelle, Course 3	Katherine, Course 17
Jiahao, Course 6	Claire, Course 18
Patricia, Course 8	Jack, Course 19
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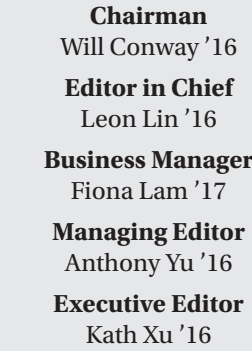
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A student's response to the Plan for Action on Climate Change

When I read the Climate Change Action Plan sent out by President Rafael Reif, I was squarely unimpressed, but I wasn't surprised. In terms of climate change, MIT seems to have a history of grand, empty gestures. This email didn't stray from tradition.

MIT has promised to put \$5 million towards seeding new environmentally-directed research. Wow. That's about the tuition of 25 undergraduates. How many hundreds of undergraduates will be housed in the Metropolitan Storage Warehouse come 2018?

The eight Low-Carbon Energy Centers, with a “low funding barrier for participation,” seem like a good start, but what good are these technologies if they remain unsubsidized? The efficiency of the best and the worst solar cells in practice is no different if they both go unused. Where are the initiatives to develop and enact economic incentives? I’ve had several MIT professors tell me that “the technology is already there”; what’s needed are financial incentives that can only be put in place with proper government policies. Sure, one could argue that if we find the technology to make green energy

economically favorable to fossil fuels we wouldn't need to seek the support of the political system. This entails waiting an unspecified length of time and hoping for a breakthrough. Why not be realistic and do what we can now?

MIT has promised to put \$5 million towards seeding new environmentally-directed research. That's about the tuition of 25 undergraduates.

Now, we could divest. I find President Reif's explanation for the decision to remain invested, that "divestment and its core tactic of public shaming are incompatible with the strategy of engagement that forms the heart of today's plan," flimsy. After all, it is not MIT whose relationship with fossil fuel companies will impact those companies' actions; fossil fuel companies will adapt to the rulings of politicians. They will not refrain from using their enormous financial influence to prevent green legislation just because MIT asked them to. MIT can develop technology to power the entire country without carbon emissions, and it will go unused if no one buys it. And if it is still more expensive than gas, no one will.

President Reif has stated that “divestment would thwart our ability to collaborate and to convene opposing parties and inspire united action.” So we can look forward to MIT as a corporation moderating discussions between politicians and fossil fuel companies? I don’t think so. MIT alumni might play that role, but the influence of MIT as a corporation is mainly economic. If MIT sincerely aims to “Accelerate progress towards low- and zero-carbon energy technologies,” “Educate a new generation of climate, energy and environmental innovators,” and “Share what we know, and learn from others around the world,” the first thing — and simplest thing — to do would be to put out a strong message. This is exactly divestment. Else, these headlines are nice predicates, crafted to sound exciting but ultimately ringing hollow.

MIT can continue to “deplore the practice of ‘disinformation’” and the role that fossil fuel companies play in preventing green legislation, but really this little pout and ‘shame on you’ looks insincere when MIT supports and accepts money from the same organizations. The discoveries that MIT makes now will not matter if within a few decades the world is too preoccupied with food shortages and overpopulation to even conserve the knowledge of humanity’s past. MIT demands that students deliver more and more every day. That’s why we come here. It is high time that MIT step up and deliver for us, and for the world.

Alana Papula, Class of 2017



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MIT's Climate Plan doesn't add up. So we're sitting-in.

Why Fossil Free MIT is urging the administration toward a more ambitious plan

By Fossil Free MIT

We write from the office doorstep of MIT's President, where on October 22, we began a sit-in in response to the President's announcement of MIT's *Plan for Action on Climate Change* (hereafter 'Plan'). As President Reif acknowledged, the Plan originally "emerged in response to" Fossil Free MIT's ongoing call, since April 2013, for MIT to divest its now \$13.5 billion endowment from fossil fuel companies. Here, we share our take on MIT's Plan and explain why it has left us no choice but to respectfully plant ourselves, around-the-clock, along MIT's corridor of power to call for a bolder approach.

We are glad to see our administration's acknowledgement of "the seriousness and urgency of the climate threat, and on the need for MIT to play a public leadership role." However, the Plan has three critical shortcomings: (i) it is *insufficient*, incommensurate with limiting warming to 2°C; (ii) it is *unhearing*, failing to live up to the ambitions of thousands of MIT members; and (iii) it is *unwarranted*, reliant on a theory of change that is little more than business-as-usual repackaged.

Insufficient

On campus sustainability, the Plan pledges to “reduce campus greenhouse gas emissions 32 percent by 2030.” In comparison, other universities have achieved or committed to achieving far greater reductions, including Georgetown (71 percent already), Yale (43 percent by 2020), Cornell (100 percent by 2035), and Duke (100 percent by 2024). If all developed countries followed MIT’s emissions reduction plan, a simulation run by Climate Interactive projects that global warming would drastically overshoot the 2°C danger limit, with a most likely temperature rise of 3.4°C by 2100.

On research, the administration touts a goal of raising \$300 million over five years to fund new low-carbon energy research within the MIT Energy Initiative. We applaud MITEI's efforts to "democratize access to our innovation ecosystem" by accepting money from companies that aren't as rich as the oil and gas companies currently making up MITEI's membership. But this alone is hardly a revolutionary departure from the \$600 million that MITEI raised over the last ten years.

The Plan's remaining steps (like the creation of an Environment and Sustainability minor and an open data repository of campus energy use), while important and wel-

come, are likewise insufficient to address the magnitude and urgency of the climate crisis.

Unhearing

By choosing not to divest from fossil fuels — even from coal, tar sands, and climate-change-denying corporations — our administration has dismissed thousands of MIT voices. This decision was made despite President Reif’s own advisory committee (the *Climate Change Conversation Committee*) having voted 9-to-3 in favor of divestment from coal and tar sands, and having unanimously endorsed the creation of an Ethics Advisory Council to “explicitly combat disinformation and avoid inadvertently supporting disinformation through investments,” with the possibility of “disinformation-based divestment.” And this decision was made despite calls for divestment from more than 3,500 MIT petition signatures, and despite separate open letters from MIT student groups, faculty, alumni, and some of the world’s most prominent climate scientists and advocates.

We still face an industry that spends hundreds of millions lobbying against renewable energy legislation and unknown millions on disinformation tactics that continue even to this day.

Yes, divestment may be polarizing, but so is investment. How can our administration conclude that continued investment in the fossil fuel industry meets their criterion of unanimous campus-wide approval, when so many at MIT are against it? And with zero transparency as to the method or rigor by which campus 'consensus' was measured, for divestment and for everything else, where has MIT's scientific method gone?

Unwarranted

Our administration asserts that a continuation of the same inside-influence it has apparently exerted over the fossil fuel industry for decades will achieve the technological and political revolutions we

need. That through “engagement,” we can convince the world’s fossil fuel companies to leave trillions of dollars of reserves in the ground.

Unfortunately, historical evidence does not support these assertions.

After decades of investor activism on climate change (MIT has notably not even committed to using its leverage as a shareholder), and a century of collaboration between MIT and fossil fuel companies, we still face an industry that spends hundreds of billions of dollars each year searching for unburnable hydrocarbons, hundreds of millions lobbying against renewable energy legislation, and unknown millions on disinformation tactics that continue even to this day.

Rather than changing ExxonMobil's course, MIT's partnership has, to the contrary, been used by the company as an excuse for inaction and to distract from its record of deliberate disinformation. For example, ExxonMobil's board recently recommended that shareholders vote against a resolution proposing that the company "adopt quantitative goals for reducing total greenhouse gas emissions from the Company's products and operations." Its reason? Among others, that "The Company also conducts strategic research with leading universities... Examples include the MIT Energy Initiative."

And just last week, ExxonMobil trumpeted its relationships with MIT in an effort to misdirect attention from revelations that the company has understood the threats of climate change since the late 1970s, yet instead of warning the world, used this knowledge to profit its business decisions while orchestrating campaigns to publicly attack climate science and obstruct political action. Even the Rockefeller Brothers Fund — the philanthropic arm of Exxon's predecessors — were unable to “beg” Exxon to end its climate denial, opting last year to instead divest from fossil fuels.

Our administration claims it is “not naïve about the pernicious role of some segments of the fossil fuel industry in creating the current policy deadlock,” yet responds “by bringing them closer to us.” This inside-politics approach seems oblivious to the overwhelming evidence that the bottleneck to effective climate mitigation is no longer technological capability or policy know-how, but political will. The will, for example, to put a price on carbon and to shift trillions of dollars in fossil fuel subsidies toward renewables.

Divestment offers our administration a

strategy, as part of a comprehensive action plan, to help overcome rather than ignore this bottleneck; helping to create political breathing room for enacting a price on carbon and, ultimately, limiting warming to 2°C. In particular, targeted divestment from coal and tar sands is scientifically consistent, financially prudent, politically effective, and morally right. Oxford, Stanford, and the University of California are among \$2.6 trillion of assets already divesting from coal. As President Reif's committee noted, "Coal and tar sands are among the most carbon-intensive and environmentally hazardous fossil fuels, and their continued large-scale use is incompatible with economically mitigating climate change."

Our administration is failing to align MIT's investments with its mission and morals and is seemingly afraid to speak out against companies undermining our own efforts.

In summary, MIT's Plan is incommensurate with holding warming below 2°C. Our administration is playing catch-up in reducing campus emissions, is failing to align MIT's investments with its mission and morals, and is seemingly afraid to speak out against companies undermining our own efforts. The Plan reflects an unwarranted belief that through an undefined course of engagement, MIT can convince the fossil fuel industry to leave its future profits underground. For all these reasons, we are sitting-in to urge MIT's administration to raise their ambitions, starting by:

1. Committing to divest from coal and tar sands companies.
2. Addressing climate science disinformation by establishing an Ethics Advisory Committee, whose assessments can lead to disinformation-based divestment.
3. Committing to achieve campus carbon neutrality by 2040 at the latest, and striving to achieve this target as far ahead of schedule as possible.

We invite you to join us.

Fossil Free MIT is a student group that advocates for the divestment of MIT's endowment from the fossil fuel industry.

WEATHER

Clear for Halloween Night

By Costa Christopoulos

STAFF METEOROLOGIST

The departing low-pressure system which brought rain to the area this morning is now heading off into eastern Canada. Tomorrow, skies should clear as northwesterly winds blow cooler, drier air into the region and high pressure builds in. For Halloween, the high pressure system will creep up the eastern seaboard and keep skies clear for Boston. Halloween night looks to be a bit chilly, with temperatures

in the low 40s°F through the late evening. As we enter November, we leave the statistically snow-free month of October behind. Students new to Boston have already begun to question the reality of our beloved winter weather, but we're climatologically approaching snowier times. Boston typically sees its first measurable snowfall around November 4, but the first snow day varies significantly from year to year. Snowfall greater than 0.5 inches (1.3 cm) typically arrives around December 5.

Extended Forecast

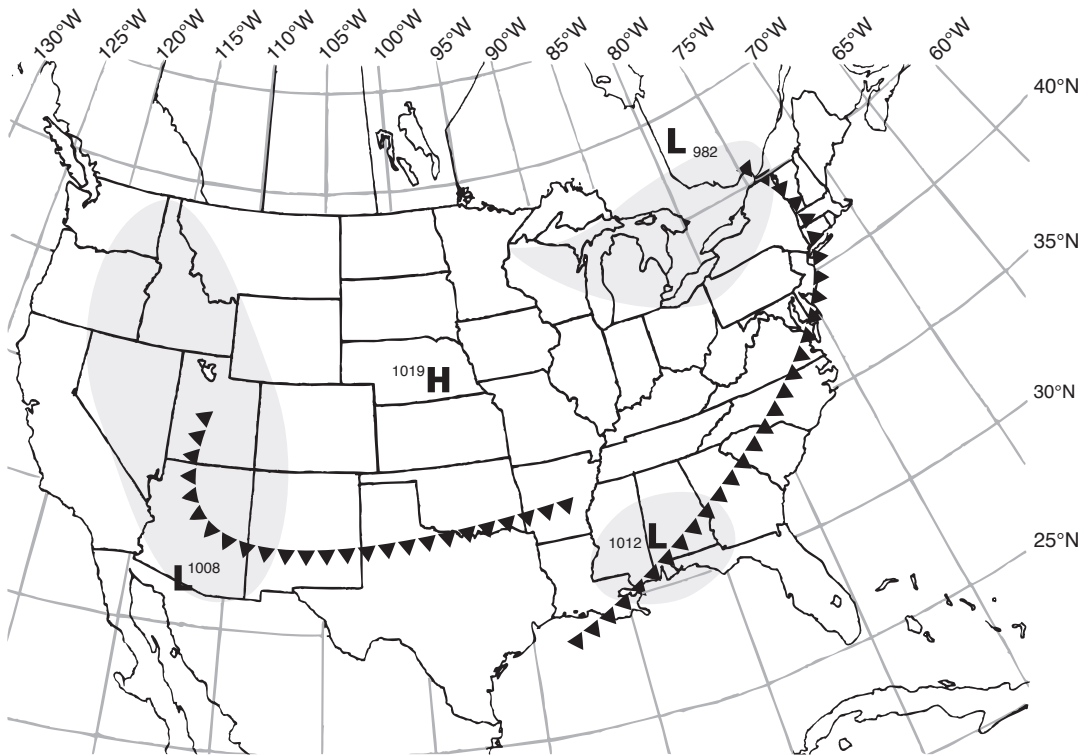
Today: High of 74°F. Winds southwest at 20-25 mph.
Cloudy with rain in the morning.

Tonight: Low of 45°F. Winds west at 10-15 mph, gusting to 30 mph. Partly Cloudy.

Tomorrow: High of 58°F. Winds west at 10-15 mph. Rain increasingly likely.

Saturday: High of 54°F. Winds west at 5 mph. Sunny.

Sunday: High of 60°F. Winds southwest at around 5-10 mph. Mostly Cloudy.



Situation for Noon Eastern Time, Thursday, October 29, 2015

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

Fired up, dumbed down? William F. Buckley and the decline of political discourse

By Josh Cowls

Hendershot's entepôt is William F. Buckley, whose weekly *Firing Line* debate show ran from 1966 to 1999, clocking up literally thousands of episodes. Buckley is a curious, paradoxical anti-hero for the story, the sort of unreconstructed country-club conservative who at first glance seems hopelessly passé, until one considers the contemporary popularity of Kevin Spacey's genteel-tarheel Machiavel on *House of Cards*. Buckley's screen presence in the

Buckley's guest list reads like a who's who of pioneering American thinkers of the era, from Noam Chomsky and Norman Mailer to Germain Greer and Allen Ginsberg. As this list suggests, many of Buckley's interlocutors were radicals of the American left, and herein lies the rub. Buckley was not, at root, a television "personality" in our modern understanding of the term, but rather an intellectual of the Right, willing and (more than) able to debate and defend his own conservative thought in the face of the best that post-'60s American liberalism had to throw at him.

Hendershot is careful not to slip into nostalgia about halcyon days-gone-by: after all, the era Buckley's show covered was replete with seismic strife and division, from the riots in Chicago at the 1968 Democratic Convention, through Watergate in the '70s and Iran-Contra in the '80s. Yet it is hard to dispute the significance Hendershot attributes to *Firing Line* as a platform for sober debate, no matter what the political weather.

Yet even if, as Hendershot argues, a revival of the long-form rigor of *Firing Line* would serve as an antidote to today's lightweight, soundbite-heavy political culture, it's nonetheless possible to see in Buckley some of the seeds of that. The right-wing revival that Buckley helped bring about can trace as one of its ideological success-

The tension between the view of Buckley as a modern-day Socrates, eruditely engaging with opponents and espousing a considered and consistent ideology, and as the fulminating forbear of today's knock-about political culture, is hard to reconcile. Yet Hendershot convincingly argues, without a hint of hagiography, that Buckley's decades-long *Firing Line* project stands as testament to his genuine commitment to furthering rigorous debate, something which feels in desperately short supply today.

October 22, 2015

A visual feast at the ballet

By Carolyn Fu

On Thursday's premiere night, Erica Cornejo proved the most adept at this — infusing the space between each step with a vitality that brought out the dynamic beauty of Neumeier's work. Paulo Arrais, in Saturday's second cast, immersed the audience in the journey of the Central Figure (the lone dancer that traverses all the movements). Where Thursday's Lasha Khozashvili took a more stoic and indifferent approach to the role, Arrais visibly morphed in response to the styles of dif-

October 22 & 24, 2015



Hamburg Ballet in John Neumeier's Third Symphony of Gustav Mahler.

54 SHADES OF



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After Party Only:\$5



Solution to
Saturday Stumper
from page 12

BOILER	ROOM	SPAS
FIVETH	THIRTY	LUSH
FLESH	INESS	ARIA
	INKS	HOWSAD
MEDICO	CAW	EGO
ARENA	SCARE	CROW
AIRPLANE	MODE	
MENU	RERAN	LANA
	TIMETRA	VELER
MISSTOR	SO	ARSON
AGE	ERS	ANYONE
RUNDMC	ISLE	
KATO	LIGHTS	SPEED
UNIT	ARGUES	OVER
PANE	DAY	TRADERS

Solution to
Level with Me
from page 13

NASA	BRAT	BODY
THIN	ROAR	ITEMS
HOLD	NOTHING	BACK
YOYO	SEAT	RAY
	ELMS	STEM
USSTEEL		ONAPAR
NCO	SNOOT	MULE
DONT	SUGAR	COATIT
ERIE	SKULL	TEA
RECESS		SADSONG
	MOOD	TYPE
ERA	ODES	RAMP
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Which will you choose?

FFMIT claims plan does too little to cut carbon emissions

Student group, administration differ on the role of industry collaboration in tackling climate change

Protest, from Page 1

ing to music, and speaking with passers-by. During an interview, a Bertucci’s delivery man showed up with pizza and rolls.

Different participants in the sit-in highlighted different goals for MIT’s climate plan.

Jeremy Poindexter G, a student at the sit-in, hoped that MIT would take on a role of “visible leadership.” Another student wanted to see a “better climate action plan,” arguing that the current one “misses the obstacles to implementation” of existing technologies to mitigate climate change.

“If I have a free moment, I’m here,” Daniel Mascoop ’16, a student participating in the sit-in, said. “If I’m doing work and it’s on a laptop, or if I have an hour break between classes, I’m here.”

Nina Lytton ’84, an alumna from the Sloan School, also participated in the sit-in. Lytton said the shortfalls of the plan were the results of “a failure of understanding between well-meaning people.”

MIT’s climate action plan rejected divestment. The plan also described divestment as a form of public shaming.

Stressing the importance of collaboration, she said that negotiating a better climate plan should be “like interfaith work,” and that to be successful, you have to “know the people and understand what they value.”

Different assumptions, different outcomes

According to FFMIT’s letter, “the bottleneck to effective climate mitigation is no longer technological capability or policy know-how, but political will.” Divestment makes sense, then, as it would “create political breathing room” for politicians to enact legislation to limit warming to 2 degrees Celsius. Divestment would accomplish this by limiting the influence of fossil fuel companies, which the letter

claims, “[spend] hundreds of billions of dollars each year searching for unburnable hydrocarbons, hundreds of millions lobbying against renewable energy legislation, and unknown millions on disinformation tactics that continue even to this day.”

On the other hand, top MIT officials said last week that they see industry engagement as key to tackling climate change.

“Our plan surely agrees that [political will] is essential to progress,” MIT spokesman Nathaniel Nickerson said. However, “it also contends that superb research and the active participation of industry will be required. Climate change, President Reif and Professor Zuber believe, will be best addressed by the combined efforts of research universities, industry, and government.”

Operating on the assumption that industry collaboration will be necessary to tackle climate change, and that divestment is not compatible with industry engagement, MIT’s climate action plan rejected divestment.

The plan also described divestment as a form of “public shaming.”

Mascoop countered that this view is a “simplistic and narrow-minded” take on divestment. Rather, he said, divestment is a matter of “being consistent with our goals, and being public about that.”

Mascoop also said that he doesn’t believe engagement is working.

“The business model of these companies needs to be to eliminate themselves,” Mascoop said.

FFMIT’s letter cited the example of ExxonMobil, which, in its annual report, urged shareholders to vote against a proposal which would require the Board of Directors to “adopt quantitative goals for reducing total greenhouse gas emissions.”

“ExxonMobil is progressing breakthrough, game-changing technologies” in the long term, the company’s annual report said. These technologies span “alternative energy, carbon capture and sequestration, advanced biofuels, life-cycle analysis, climate science and materials science.”

In the report, the company cites its collaboration with the MIT Energy Initiative as an example of its

“strategic research with leading universities around the world.”

FFMIT’s letter points to this report to make the claim that MIT’s partnership with ExxonMobil has not led to the company’s increased engagement with climate issues, and instead has been used “as an

“The business model of these companies needs to be to eliminate themselves,” Mascoop said.

excuse for inaction and to distract from its record of deliberate disinformation.”

In contrast, MIT’s climate action plan cites the recent announcement by 10 fossil fuel companies — six of which are members of the MIT Energy Initiative — to commit to meeting the 2-degree C target as evidence that engagement is productive.

But an FFMIT member at the protest said that announcements without action were not enough.

On the issue of campus carbon neutrality, FFMIT’s letter said that a 32 percent reduction in emissions by 2030 would not be commensurate with the goal of meeting a 2 degrees Celsius target.

“It’s clearly doable,” Mascoop said. “We need to get to net-zero emissions in the future.”

Nickerson noted that the 32 percent figure came from the U.S. federal government’s Clean Power Plan and that MIT hopes to reduce emissions even further.

FFMIT’s letter, on the other hand, says their simulations predict a 3.4-degree C rise by 2100, assuming all developed nations only reduce emissions by 32 percent.

Ultimately, the letter concludes, “the Plan reflects an unwarranted belief that through an undefined course of engagement, MIT can convince the fossil fuel industry to leave its future profits underground.”

“We’re here to show our dissatisfaction,” Mascoop said. “This does not represent what the community requested.”

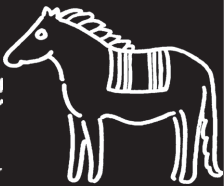
The protestors did not say how long the sit-in would continue.

Solution to Volleyball

from page 13

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

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FROM THE BIOMEDICAL TO THE WOUNDS INSIDE: DEVELOPING A FRAMEWORK AND METRICS RELEVANT TO THE CONTEXT OF POLITICAL VIOLENCE



Friday, November 6, 2015
10:00 am - 12:00 pm
MIT E25-401 (Whitaker College)

Rita Giacaman is professor of public health at the Institute of Community and Public Health (ICPH) at Birzeit University (BZU), occupied Palestinian territory. A founding member of ICPH in 1978, she has also helped establish the Women’s Studies Institute at BZU in 1993 and continues to be affiliated to it. She has chronicled the effects of Israeli military occupation on physical and mental health of Palestinians, and contributed to developing metrics relevant to the context of ongoing warlike conditions. Professor Giacaman has published extensively on women’s health and mental health from a public health perspective, and was awarded an honorary PhD from the London School of Economics and Political Science (LSE) in 2011 for having made an “outstanding contribution to the increased understanding or appreciation of ‘the causes of things’ and their practical application in the social sciences or related fields.”



This talk is free and open to the public. For additional information, please visit the Global Health and Medical Humanities Initiative Website (<https://ghmhi.mit.edu>) or contact Brittany Peters via email at bapeters@mit.edu.

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School of Engineering contact: Tanya Abikof, x3-3293, tabikoff@mit.edu
School of Science contact: Tom Fisher, x3-8900, fishert@mit.edu

by Doug Peterson

up on MTV

- | | |
|-----------------|---------------------------------|
| ot Earhart | 22 One way to properly |
| ed | address Queen Elizabeth |
| g masked | 23 City facing Presque Isle Bay |
| | 24 Nebraska Oscar nominee |
| ivity limit | 25 Television array |
| ose | 26 Mustang competitor |
| | 29 What to expect from Elvis |
| | in concert |
| ity experts | 30 Brand sold in Cinnamon |
| | and Assorted Fruit flavors |
| | 31 Creole staple |
| slangily | 33 Ready to tilt |
| | 37 Plus |
| n | 38 Element obtained only from |
| udes | air |
| s subject | 39 Composer who went to |
| | Eton |
| | 41 Particular |
| coveries | 42 Tennessee called her "the |
| enters, briefly | greatest living actress" |
| rodied by | 43 Create a margin for |
| | 44 One of Darwin's "imps of |
| r, perhaps | darkness" |
| perior | 45 Put to work, as a sub |
| | 49 Tinker with |
| | 51 Word from Middle English |

for "act foolishly"	57 Elongated vessel
52 Azalea from Australia	58 "From noon to dewy ____":
53 Barred	Milton
56 Judy sings his songs in A	59 Continuously contracted
Star Is Born	60 Scrip sources, for short

Ice Skating

Solution, page 2

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

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

Baseball

Solution, page 2

180×		7+		5−	1
		20×			8×
6×	150×		3×		
	4		96×		3
	6				5
120×					6

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.



LENNY MARTINEZ—THE TECH

Amy A. Apostol '19 dribbles the ball during last Saturday's game against Babson College. Apostol scored the opening goal at the 10-minute mark and the MIT Engineers beat Babson 2-1.

Talented Celtics team to aim for playoff berth this season

Addition of savvy veterans Johnson and Lee lends experience to roster and adds dimension to team

By Zachary Collins
SPORTS WRITER

The Boston Celtics open their 2015-16 campaign as they look to return to the playoffs for the second straight year. Although the Celtics were swept by the LeBron James-led Cleveland Cavaliers in the first round of playoffs, they managed to end the regular season on a high.

After acquiring Isaiah Thomas and other key rotation players at the trade deadline, the team went on a remarkable run that had them landing the second-best, post-all star break record in the Eastern Conference. Lacking a star player, much of the success this team has had is due to the pace and space system employed by its talented coach, Brad Stevens. Stevens has done remarkably well at getting the most out of his players' strengths.

Currently, ESPN forecasts the Celtics to end the season with a 40-42 record — exactly the same

numbers they posted last year. The inability to acquire a star player and the anticipated improvement of the Eastern Conference do not bode well for this team. However, it is important to note that they not only retained almost all of their players from last season, but they also added key veterans and rookies that will give them dimensions they previously lacked. They picked up savvy veteran big men in David Lee and Amir Johnson. Together, they should give the Celtic frontcourt a stronger presence in the paint.

They drafted Terry Rozier, Jordan Mickey, and RJ Hunter this past June. Although none of them may make a significant impact this season, they showed flashes of competence throughout summer league and pre-season play. They should at the very least give the Celtics more versatility by providing skills they are currently lacking — particularly shot-blocking and outside shooting from Mickey and

Hunter respectively. With young players like Marcus Smart, Avery Bradley, and Kelly Olynyk getting another offseason under their belts, it is hard to not picture this team improving upon last season's success.

Looking back, it is interesting to note that ESPN prognosticators had predicted the Celtics winning just 30 games prior to last year — a mark 10 wins fewer than what they would actually accrue. Nobody, including the experts, thought that the team would come anywhere near sniffing the postseason, let alone rise up to snatch the seventh seed. Who says they can't shock us again? Are they going to rise to the top of the NBA and challenge the likes of the Warriors, Cavaliers, and Spurs for basketball hegemony? Probably not, but it isn't unreasonable to believe that they can make a significant impact on the NBA landscape and blossom into a team that the rest of the NBA is forced to reckon with.



SKYLER ADAMS

The MIT goalkeeper rises out of water, preparing to block a move by Northeastern at Friday's women's water polo game.

MIT men's soccer seeded first in this year's tournament

Team claims NEWMAC regular season championship once again

By Max Berkowitz
DAPER STAFF

The MIT men's soccer team, ranked No. 21 in the latest National Soccer Coaches Association of

The American Soccer Team (NSCAA) poll, claimed its fifth New England Women's and Men's Athletic Conference (NEWMAC) regular season championship with a 3-2 victory over Springfield College at Brock-Affleck Field.

Sean D. Bingham '16 paced the Engineers offense with a pair of goals, his team leading and conference leading 15th and 16th of the season, respectively. Joe P. Schuman '16 notched his second marker of the season, while Austin E. Freel '16 had one assist in the winning effort.

Pride freshman Christian Schneider got Springfield on the board four minutes into the contest. Schneider took a pass from junior Luke Alvaro and floated a shot over the head of MIT goalkeeper Jake L. Amereno '16 and into the right side of the net to give the hosts an early 1-0 lead.

The Engineers responded

quickly when Bingham took a pass from Wesley M. Woo '19 and placed a shot past Springfield senior goalie Billy Schmid to make the score 1-1 with 29:50 to play in the opening half.

Bingham later registered his league-leading 16th goal of the season after he collected the ball and found the back of the net to give the Engineers a 2-1 lead heading into the halftime break.

Back-and-forth play highlighted the beginning of the second stanza until the Cardinal and Gray took a two goal lead over the Pride with 20:46 left to play. Freel played in a corner kick that snuck its way across the goal-mouth, only to be contained by Schuman, who tapped it in past Schmid to put MIT up 3-1.

Springfield freshman Alex Haji scored with 10:01 remaining in the contest to cut the Pride's deficit to one, but it wasn't enough as the Engineers held on for the eventual 3-2 victory.

Amereno made a pair of saves as his record moved to 12-1-1 in the win for the Engineers, while Schmid finished the game with two stops for the Pride. MIT held a 12-10 advantage in shots and a 8-6 differential in corner kicks.



LENNY MARTINEZ —THE TECH

Carly J. Staub '19 rises to hit the ball during this past Tuesday's game against Emerson College. MIT beat Emerson 25-13, 25-13, 25-15.

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