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✓ High-resolution color images

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Photography by: Bryce Vickmark, Chad Riley, and MIT
Preparing this newsletter is always a reminder of just how incredibly dynamic MIT is. Delve into any department, lab, or center, and a wealth of information is available about the groundbreaking work of MIT’s faculty and students. As always, don’t hesitate to contact me anytime to learn more about anything you read here or anything else at MIT that may be of interest to you.

The pages ahead will tell you about key changes in MIT’s senior leadership team, new initiatives, where to go online to find faculty presentations and webcasts with President Reif, changes to the MIT campus, and more. A campus story that particularly caught my eye was the announcement that the MIT Cheerleading Team (a club sport) was invited to compete at the National Cheerleading Association Collegiate Cheer and Dance Championship in last month. This story was particularly interesting to me since I was an MIT cheerleader as an undergraduate. It was one of the few athletic opportunities available to women at MIT in the era before Title IX. Fortunately, that situation has changed a lot since then! I constantly marvel at the dedication and accomplishments of MIT student athletes. (More about athletic accomplishments this year on
page 11.) Of course, the fact that MIT students apply their knowledge of physics to their physical activities doesn’t hurt. Let me know if you would like an update on how your favorite team is doing.

Members of MIT Cheer, a coed club sport, in 2012.

**Staying informed about MIT**

Do you know that you can subscribe to a news digest to have the top stories in MIT news e-mailed to you each week? Go to the MIT News web page at [web.mit.edu/newsoffice](http://web.mit.edu/newsoffice) and enter your e-mail address in the gray box that says **Subscribe**. You can also request news releases about specific topics of interest at: [web.mit.edu/press/subscribe](http://web.mit.edu/press/subscribe). Many departments, labs, and centers produce their own publications. Contact me if you would like to be placed on any of these mailing lists.
Scholarship web bio pages:
Important information for those who will be establishing a scholarship fund through a planned gift

Scholarships are one of MIT’s most pressing needs and on behalf of the Institute, we are so very grateful to the KDMS members who have made provisions to establish a scholarship fund.

I know that there are many of you who have made such provisions who have not yet provided your information for the scholarship web bio page. This page is made available to student recipients of a scholarship to tell them about the person for whom the scholarship is named and the donor’s incentive to establish this fund.

Such information helps to make the scholarship come alive for the students, and serves as a wonderful tribute to the person for whom the scholarship is named. I will be happy to provide examples of what others have done and work with you to help develop this information for the bio page.

Please let me know if you have any questions about need-based scholarships and their critical role in bringing the best and brightest students to MIT.

Do you have a personal story you would like to share with others in the KDMS Newsletter? If so, please contact Bonny Kellermann.
Changes in MIT senior administration

**Maria Zuber** has been named as MIT’s new vice president for research, succeeding Claude Canizares in this role. Zuber, the E. A. Griswold Professor of Geophysics, has been a member of the MIT faculty since 1995 and chair of the Department of Earth, Atmospheric and Planetary Sciences (EAPS) from 2003 to 2011. She has held leadership roles associated with scientific experiments or instrumentation on nine NASA missions over the past two decades. KDMS members who attended the first KDMS Appreciation Day event in October 2008 will remember Professor Zuber’s fascinating presentation answering the question: *Why Return to the Moon?* It should be noted that the support for the faculty chair held by Professor Zuber came to MIT as a bequest from Earle A. Griswold ’23.

**Claude Canizares** has been named as vice president with responsibility for international partnerships. Professor Canizares, who most recently served as vice president for research, came to MIT as a postdoc in 1971 and has been a member of the MIT faculty since 1974. He has served as director of the MIT Center for Space Research (now the Kavli Institute for Astrophysics and Space Research). In his new role, Vice President Canizares will oversee MIT’s portfolio of international engagements, which has seen four major additions in the past five years. Canizares will also continue to oversee Lincoln Laboratory.

*For more information:* [web.mit.edu/newsoffice/2012/zuber-canizares-vp-announcements-1127](http://web.mit.edu/newsoffice/2012/zuber-canizares-vp-announcements-1127)
Sanjay Sarma, the Fred Fort Flowers and Daniel Fort Flowers Professor of Mechanical Engineering, was appointed as MIT’s first director of digital learning in November 2012. In his new capacity, Professor Sarma will work closely with the Institute’s faculty, staff, and students to assess how new models of online instruction—such as the edX online-learning platform; MITx, the Institute’s course offerings on that platform; and other online tools that enhance students’ educational experiences—might become integral parts of MIT students’ on-campus education. Comprised of three suboffices, MITx, MIT OpenCourseWare (the online catalog of existing MIT course material), and OEIT (Office for Educational Innovation & Technology, which helps incorporate new technologies into on-campus teaching and learning), Sarma’s Office of Digital Learning strives to not only change the future of residential education at MIT, but also to allow global learners access to MIT-quality instructional experiences.

**News from the president’s office**

**(Institute-wide task force on MIT education)**

Professor Sanjay Sarma, Director of Digital Learning, and Executive Vice President and Treasurer Israel Ruiz SM ’01 have been appointed to serve as co-chairs of MIT’s Institute-Wide Task Force on MIT Education to reinvent what we do and how we do it. Details about this task force may be found at: [web.mit.edu/newsoffice/2013/institute-wide-task-force-future-of-education-0206](web.mit.edu/newsoffice/2013/institute-wide-task-force-future-of-education-0206)

President Reif’s e-mail message to the MIT community about the task force may be found at: [president.mit.edu/speeches-writing/institute-wide-task-force-future-mit-education](president.mit.edu/speeches-writing/institute-wide-task-force-future-mit-education)

President Reif’s charge to the task force may be found at: [president.mit.edu/speeches-writing/presidential-charge-task-force-mit-education](president.mit.edu/speeches-writing/presidential-charge-task-force-mit-education)
New MIT Laboratory

Self-assembly lab
In February 2013, MIT launched the Self-Assembly Lab under the direction of Skylar Tibbits SM ’10, lecturer in architecture. This cross-disciplinary research lab is composed of designers, scientists, and engineers inventing self-assembly technologies to reimagine the processes of construction, manufacturing, and infrastructure in the built environment. Self-assembly is a process by which disordered parts build an ordered structure through local interaction. Tibbits, a 2011, 2012, and 2013 TED Fellow and architect, designer, computer scientist, and artist, is working with collaborators to invent new materials, buildings, infrastructure, and factories that can self-assemble, adapt, and repair themselves for years to come. As an applied lab, the lab is partnering with various organizations on projects that include software/hardware design tools for self-assembly systems, self-adapting water management systems, reconfigurable space infrastructure, 4-D printing, interactive commercial retail, self-assembly toys, and educational devices. These collaborations are aimed at translating the principles of the nanotech revolution to the human scale and tackle major challenges in construction/manufacturing/infrastructure today. For more information, visit selfassemblylab.net.

Multi-material shape change, an example of 4-D printing.
MIT faculty presentations

A number of faculty presentations are available online and can be viewed at video.mit.edu

Here is a recent selection:
Professor Maria Zuber describes looking deep into the moon’s interior to chart its early history when she delivers the 41st annual Killian Award Lecture. See detail and watch the video at:

eapsweb.mit.edu/news/2013/mapping-early-history-moon

Faculty Forum online is a collection of video archives of compelling interviews with faculty on timely and relevant topics that can be found at: alum.mit.edu/learn/facultyforum

Recent additions to the Forum include:

- Professor Kerry Emanuel ’76, PhD ’78 speaking about Forging a New Direction in Climate Research (February 5, 2013). Watch the video at:
  
alum.mit.edu/learn/facultyforum/online/climate-research

- Professor Andrew J. Whittle ScD ’87 speaking about The Challenges of Coastal Flood Protection (December 20, 2012). Watch the video at:
  
alum.mit.edu/learn/facultyforum/online/flood-protection

- Professor Dan Cziczo speaking about Cumulus, Cirrus, Stratus (November 15, 2012). Watch the video at:
  
alum.mit.edu/learn/facultyforum/online/climate-change
Webcasts with President Reif

As part of President L. Rafael Reif’s listening tour of campus and alumni voices, the MIT Alumni Association hosted three half-hour interviews with the president earlier this year. President Reif addressed Transforming MIT’s Educational Experience; Advancing MIT’s Research Mission; and Strengthening MIT’s Global Impact. Watch them at:

alum.mit.edu/news/reif-webcasts

Campus renewal

Performing arts facility

A performing arts facility is now a priority at MIT, says President L. Rafael Reif. “Our students and faculty in the performing arts deserve their own quality space that is as inspirational as their work. This has been a longtime need—and a dream—for many at MIT, and we are exploring how to make this possible,” he says, adding that options range from reimagining an existing building such as Walker Memorial as a performing arts center to building an entirely new facility on campus. The upcoming issue of SPECTRVM explores how the arts are an integral part of an MIT education. Find SPECTRVM online at spectrum.mit.edu for past issues. If you’d like a printed copy, please contact Bonny Kellermann.

Other projects

Plans are underway to renovate Building 2, home of the Mathematics Department, Building E52, home of the Economics Department and administrative offices of the MIT Sloan School of Management, Building 66, home of the Chemical Engineering Department, and the Institute for Medical Engineering and Sciences (IMES) in Building E25.
Super UROPs

The Department of EECS has developed a new Advanced Undergraduate Research Program, also known as the “Super” UROP, in which juniors and seniors can commit to a year-long research project working with both faculty and industry mentors and earning a certificate in advanced undergraduate research. Department Head Anantha Chandrakasan has spearheaded this effort to help students connect with faculty and build a deeper research experience for EECS undergraduates to better prepare students who want to continue in graduate school, enter industry, or join a start-up. The new “Super” UROP experience became available last fall.

2013 Commencement speaker: Drew Houston

Drew Houston ’05, cofounder and CEO of Dropbox, the popular Web-based file-transfer service, will deliver the address at MIT’s 147th Commencement exercises on Friday, June 7, in Killian Court. “Drew Houston has made cloud computing available to people everywhere,” says MIT President Reif. “His experience offers a powerful example of how a young MIT graduate can give the world something truly useful. I am delighted that he will share his story, and some of the lessons he has learned along the way, with our Class of 2013 and their families and guests.”

“At MIT, we teach students to identify problems and propose their solutions,” says MIT Chancellor W. Eric Grimson PhD ’80, who has long served on the Commencement Committee. “Drew Houston and Arash Ferdowsi took that approach, as many before them have, and turned it into the basis of a business. I’m thrilled that Drew will share his insights and experience with the next wave of MIT’s graduates as they go forth and change the world.”

For more information, visit:

web.mit.edu/newsoffice/2012/dropbox-ceo-alumnus-drew-houston-commencement-speaker-1113
Admissions more competitive than ever
Admission to MIT has become more competitive than ever. Almost 19,000 students applied for admission to the Class of 2017. 1,548 were offered admission, for a record low acceptance rate of 8.2%. Students from all 50 states and 58 countries were admitted. Forty-eight percent of the admittees are women; 24% are underrepresented minorities; and 16% are first generation to college. Regarding the effect of online learning, a number of admitted students indicated that they had explored classes on MITx, giving them an insight into a rigorous college experience.

MIT varsity sports accolades
MIT’s varsity athletics teams had a highly successful year. In the fall, MIT won six of the seven New England Women’s and Men’s Athletic Conference championships (men’s and women’s cross-country, field hockey, men’s soccer, women’s tennis and volleyball), a feat that has never been achieved in NEWMAC. Six teams went to NCAA post-season play (women’s cross-country, field hockey, men’s and women’s soccer and volleyball), with the women’s soccer team winning a pair of games to advance to the Sweet 16, their best-ever showing.

In the winter, men’s basketball shared the regular season NEWMAC title and was selected for the NCAA Tournament for a fifth straight year. Men’s and women’s swimming and diving won their NEWMAC titles again.

So far this year MIT has won eight NEWMAC titles, made nine NCAA championship appearances (with at least five more scheduled), had 7 NEWMAC Players of the Year, 4 Rookies of the Year, 3 Coaches of the Year, 125 all-conference selections, 16 All-Americans, and 6 Academic All-Americans. Football player Ethan Peterson ’13 was named a Scholar-Athlete by the National Football Foundation, 1 of 15 players selected from all divisions nationally. Finally, cross-country runner Dacie Manion ’15 won the NCAA Elite 89 award for having the highest GPA among the competitors at her national championship. MIT athletes are truly amazing.
Upcoming Events

Koch Institute with/in/sight SOLUTIONS Lecture Series
This public lecture series features the insights that emerge when powerful forces come together. We explore the intersections where science meets engineering, clinical practice meets urgent patient need, entrepreneurial drive meets venture capital, and imaging technology meets artistic vision. We invite you to explore new vistas with us as we work together to bring cancer solutions within sight. Information about upcoming programs can be found at: ki.mit.edu/news/events/withinsight

Tech Reunions
Tech Reunions can be a wonderful experience even if you are not participating in a reunion. There are many interesting programs that have been planned for the weekend and all KDMS members are invited to participate. Of particular note, below are some events you may wish to explore.

Friday, June 7, 2013:

Cardinal and Gray Academy
8:30 am–1:30 pm | Hyatt Regency Cambridge Hotel

Dr. Joseph F. Coughlin, Director of the MIT AgeLab, is the keynote speaker. Breakout sessions with Dr. Bryan Reimer and Dr. Lisa D’Ambrosio, both of the MIT AgeLab; Professor of Planetary Sciences Richard Binzel, and Professor Suzanne Corkin of the Department of Brain and Cognitive Sciences. Cost is $60, which includes breakfast, luncheon, and workshops. Please contact Bonny Kellermann if you are interested in attending and have not already registered.

Koch Institute Program
10:00–11:00 am & 3:30–5:30 pm
Koch Institute for Integrative Cancer Research Auditorium (Bldg 76)
Faculty from the Koch Institute will present their innovative research.
Public Service Center 25th Anniversary Panel
3:30–5:00 pm | MIT Stratton Student Center

For the past 25 years, the MIT Public Service Center (PSC) has enabled the Institute to realize its mission to serve the nation and world. Here, alumni panelists will share how the PSC helped them apply innovation and humanitarianism in serving communities in need.

MIT Energy Initiative (MITEI) program
3:30–5:00 pm | MIT Room 10-250

Hear from faculty and administrators from the MIT Energy Initiative about their research and development of green energy solutions.

You can find a complete listing at: alum.mit.edu/networks/Classes/TechReunions/Preliminary_Schedule?destination=node/17045

Contact Bonny Kellermann for more information about these events.

Alumni leadership conference
Friday and Saturday, September 27-28, 2013

There will be many sessions that you may find informative. Even if you are not an alumni volunteer, you are welcome to participate. Contact Bonny Kellermann if you would like to receive information about this and are not currently an alumni volunteer.

Katharine Dexter McCormick Society annual appreciation event
Sunday, September 29 at 10:30 am

Chancellor W. Eric Grimson will host a celebratory brunch at MIT. Please mark this date on your calendar. More information will be sent at a later time.
**Remarks**

**From Sherwin Greenblatt ’62**

**KDNS Chair**

**M** ens et Manus—“Mind and Hand”—was the motto William Barton Rogers bestowed on the institution he envisioned: MIT. His idea was to distinguish his university from the others of the day by not just creating ideas, but putting them into practice as well. That was my interest when I came to MIT.

When I was a student in the late 50s, MIT seemed like a haven in an otherwise very rough area. We would cross Main Street in Kendall Square at our peril and we all knew that we would never venture across Broadway after nightfall. The area was almost entirely factory buildings, many closed and abandoned. It wasn’t pretty. In the early 60s, Kendall Square became an urban renewal project. Most of the structures along the east side of Broadway were torn down to make way for the new—but that didn’t happen. Construction began on a building that was to be the NASA mission control center. However, the politics of the day moved mission control to Houston. The building, when finished, became a Department of Transportation research center. It remained the only building on the parcel for decades.

After I left MIT, I rarely returned to campus. When I retired in 2002, my volunteer work brought me to MIT several days each week. I was amazed by the changes that had taken place. MIT was a much larger institution with many impressive new buildings and a much bigger footprint. But what really caught my attention was the spectacular revitalization of
the entire Kendall Square area. Beginning in the 1990s, this area had
developed as one of the world’s premier IT and biotech locations. With
office and R&D complexes like Technology Square and Cambridge
Center, industries were able to move operations closer to the source of
new technology ideas—MIT. Companies like Draper Labs and Akamai
Technologies established themselves there as well as research centers like
the Whitehead and Broad Institutes, which found the talent they needed
to carry out their work. Start-ups grew from the hotbed of discovery and
innovation that spun out of MIT. Today it is said that in Cambridge there
are more than 100 biotech companies, many located within the Kendall
Square area. That in turn has attracted others to move there as well. A good
number of the venture capital investment firms that grew by servicing the
companies in the suburbs along Route 128 opened offices or relocated
to the Kendall Square area. Later many of the large pharmaceutical
companies opened R&D facilities in the area to take advantage of the
flow of new ideas. Big names like Novartis and Pfizer and homegrown
companies like Genzyme and Biogen Idec all have large facilities there.

Kendall Square has become one of the best places in the country to start
a technology-based company. At One Broadway in the heart of Kendall
Square is the Cambridge Innovation Center (CIC), a place where
companies can find all the facilities that they need to start their venture.
Under one roof are over 500 start-ups, reportedly more than anywhere
in the world. It’s no wonder that companies like Google, Microsoft, and
Amazon started their East Coast operations at the CIC and subsequently
located their offices in Kendall Square.

Best of all, all of these activities have reinvigorated the neighborhood.
Restaurants, shops, and apartment buildings populate the area,
transforming what was once a wasteland into a vibrant and still growing
community, a real asset to life at MIT. It’s truly miraculous. William
Barton Rogers would be proud to see the pipeline of invention and
innovation that emanates from the institution that he created extending
so directly to practice.