THE KATHARINE DEXTER MCCORMICK SOCIETY

Your Society News for Fall 2010
In This Issue

A Personal Message 2
Bonny Kellermann ’72

KDMS Appreciation Day Event 4

Upcoming Events 11

Remarks 12
Claude Brenner ’47

Under the Dome 15

Welcome to MIT150 18

Features of the Electronic Edition include:
✓ Foremost access to McCormick Society news
✓ Embedded links to related content online
✓ Table of contents navigation (click to go)
✓ High resolution color images
Once again, an outstanding group of students entered MIT as freshmen in the fall of 2010. Admission was more competitive than ever before, with only one out of ten applicants admitted. The vast majority of these young people, over 62 percent, would not be able to afford to attend MIT without scholarship support. With great thanks to many of you who provide scholarship aid, and many who have gone before you whose bequests and Life Income Funds have supported scholarships, MIT is able to continue to attract the best and the brightest students without regard to their ability to pay for their educations.

This newsletter will bring you news of physical changes on the MIT campus and information about the upcoming sesquicentennial celebration. You will also see information about the annual Katharine Dexter McCormick Society Appreciation Day event held at MIT on Sunday, October 24, some information about upcoming events of interest to KDMS members, as well as a column from KDMS chair Claude Brenner ’47.

I would also like to share with you the news that after nearly 10 years of service as Chancellor of MIT, Phillip Clay PhD ’75, will be stepping down from this role. A search will be underway for a new chancellor. If you would like to send ideas or suggestions of possible candidates, you can send this information to chancellorsearch@mit.edu. In the words of President Hockfield in a message that she sent to the MIT Community, “Chancellor
The Katharine Dexter McCormick (1904) Society was founded in 1994 to recognize those donors who provided for MIT’s future through legacy gifts—gifts through estates or life income funds, to be utilized after the donor’s lifetime. MIT is extraordinarily grateful to members of the McCormick Society for providing for MIT’s future excellence.

Clay has been an exceptional leader, overseeing the offices of Undergraduate Education, Graduate Education and Student Life, and playing a critical role in MIT’s engagements regionally and internationally. His insight and judgment on a wide range of issues, as well as his wisdom and experience, have benefited all of us at MIT.” My own personal connection to Chancellor Clay goes back to 1971, when I was a senior taking an Introduction to Urban Studies class, and he was a first year doctoral student teaching the class. I am particularly grateful to Chancellor Clay for serving as an exemplary host for two of the KDMS annual Appreciation Day events, and thank him for his support of our society as well as the many ways that he has served MIT.

To follow up with questions or requests for additional information, contact: Bonny Kellermann ’72,  
P: 617-253-9722  E-MAIL: bonnyk@mit.edu
Katharine Dexter McCormick Society

Appreciation Day 2010

October 24, 2010, marked the third annual Katharine Dexter McCormick Society Appreciation Day at MIT. The event coincided with the annual Corporation Development Committee (CDC) and Alumni Leadership Conference (ALC) meetings, bringing MIT alumni from around the country and around the world back to campus.

KDMS Chair, Claude Brenner ’47, opened the morning with a fascinating history of the life of Katharine Dexter McCormick (1904). He noted that although everyone in attendance knows the purpose of the society, many are not aware of the woman for whom it is named. Claude then read a letter from President Susan Hockfield, who regrettably was unable to join us. President Hockfield thanked the members of KDMS for their commitment to the Institute, noting that planned gifts account for 20 percent of MIT’s endowment.

After a brief welcome from KDMS Director Bonny Kellermann ’72, Chancellor Phillip Clay PhD ’75 asked the group to consider what the “undergraduate experience” means. First, it means transition. MIT helps turn kids into young adults. Second, it means transformation. MIT also transforms these young adults into young professionals. MIT does this by providing undergraduates with transformative experiences. Providing international experience is just one example of this.

Professor Eric Grimson PhD ’80, Head of MIT’s Department of Electrical Engineering and Computer Science and Bernard M. Gordon Professor of Medical Engineering, our first speaker, told us how EECS Is Everywhere.

Today’s graduates face a challenging environment: global competition; a desperate need for technical leadership to address societal challenges in energy, environment, health care, and other areas; and problems and opportunities that cross traditional disciplinary
October 24, 2010

Dear Members of the Katherine Dexter McCormick Society:

Thank you so much for returning for this annual celebration, which now has become a campus tradition!

As members, you know that the Society was established in 1994 to honor those who arrange for gifts to come to MIT after their lifetimes. By definition, then, this is a group with unusual foresight. To express how much we appreciate your ability to look forward, I want to give you a sense of the extraordinary impact such gifts can make.

Well over 20 percent of MIT’s total endowment resources, including almost 44 percent of our endowed scholarship funds, have been established through planned gifts. This is the kind of absolutely critical funding that sustains MIT’s core values, from maintaining the highest standards of academic quality and innovation, to our commitment to need-blind admissions and need-based financial aid. These gifts also give us the nimbleness to seize new opportunities, such as the global educational initiatives you will hear about today. Thanks to donors like you, MIT can adapt to a changing world with an unrelenting commitment to excellence.

It’s particularly gratifying to see how your generosity grows more valuable over time. As just one example, through a pair of bequests in 1954 and 1964, Elizabeth and Howard Noble created the Howard A. Noble Scholarships in Engineering Fund. Their total gifts of more than $1 million would be extraordinary in any era, but because the fund has grown to $23 million, today it pays out more to the Institute each year than the sum of the Nobles’ original gifts. Last year alone, the Nobles’ generosity made it possible for 76 students to attend MIT; now, that is an investment in the future.

For all that you do for MIT and for all that you plan to do, you have my heartfelt thanks and admiration.

With my most sincere gratitude,

Susan Hockfield

SH/bsk
boundaries. To better prepare students to lead in this new world, the EECS department has dramatically revamped its undergraduate curriculum to better integrate context into the learning experience, provide a more flexible degree program that allows students to meet interdisciplinary interests, provide direct training in professional leadership, provide new dual degree opportunities, and provide expanded opportunities for students to obtain a global experience before graduation.

Based on EECS senior surveys, students say the most important things they need to learn in school are the ability to think analytically, the ability to acquire skills independently, and the need to have solid communication skills. To provide a fuller learning experience, EECS began changing its curriculum five years ago to provide more hands-on experience immediately, and structured the courses to provide more flexibility to students.

Two intro courses are required for all students. In these courses, students work in pairs and the work is lab-oriented. Faculty advisors work closely with the students. The students are tasked with getting a robot to perform some type of simple task. This exercise encourages students to problem solve on their own.

Professor Grimson told us about Course 6.UAT, which is taken by seniors, and focuses on strengthening oral and written communication skills. Students learn how to create PowerPoint presentations, deliver an elevator pitch and compose business email. For their final project, students must make a presentation to high school students about their
research. Presenting to high school students, instead of their peers, makes them think about different ways of presenting their ideas to people without a strong background in or knowledge of the subject matter.

**Better preparation for global competition**
To become better citizens and professionals, EECS students are encouraged to take advantage of the growing opportunities for incorporating an international internship experience into their MIT EECS education—now possible in numerous countries across the globe during any phase of their undergraduate or graduate experience.

IAP and summer are optimal times when students can take advantage of international experiences. EECS undergraduates have the opportunity to spend time at partner universities through programs like the Cambridge-MIT Institute (CMI) as well as participate in international offices for companies such as Google, Qualcomm, and Microsoft through the VI-A International program. Last summer, 85 EECS undergraduates participated in one of the MIT International Science and Technology Initiatives (MISTI) programs.

Amy Smith ’84, Senior Lecturer in MIT’s Department of Mechanical Engineering and founder of D-Lab, followed Professor Grimson to talk about *Fostering Innovation at MIT and Beyond*. Ms. Smith presented an overview of D-Lab (Development, Design, and Dissemination). D-Lab is: Real projects for real people. The program began in 2002 with two classes, 20 students, and a focus on one country. Today, the program offers 13 classes, has 400 students, and focuses on more than 20 countries. Student demand is still outpacing class capacity.

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All D-Lab courses share the same values and principles, striving to:

✓ work on real projects for real people
✓ provide experiential learning opportunities in the classroom and in the field
✓ use engineering principles to address poverty, including meeting people’s basic needs
✓ build local creative capacity and promote local innovation
✓ value indigenous knowledge
✓ foster participatory development and co-creation
✓ build sustainable organizations and partnerships.

Ms. Smith provided some examples of D-Lab projects as follows:

Students learn Low-cost Bacterial Water Testing techniques at MIT, and then take this knowledge to Africa, where they teach locals how to do the testing.

In the Himalayas there is a problem with pine needle litter. Pine needles acidify the soil and pose a fire hazard. D-Lab students have developed a Spiral Pine Needle Cookstove that can efficiently burn pine needles. The spiral stove requires about one pound of needles to boil 5 liters of water in 15 minutes. The current cost of the stove is approximately $16, and students are working to reduce this price point. Students who worked on this project were present for the student poster session after our luncheon, where they had a prototype of the stove available to see. For more information about the Spiral
Stove, including a video of the stove in action, go to their blog at: <http://stovepyromania.blogspot.com/>.

We also met students working on the Bicilavadora, a Pedal-powered Washing Machine, and got to see the machine demonstrated during the student poster session.

We were told about the Humdinger Wind Belt, a small-scale wind cell that can be used for lights, charging batteries, and power generation.

In the D-Lab Development class, students learned about a Pedal-powered Corn Sheller designed by a local bicycle technician in Guatemala, which allows corn to be shelled 15x faster than by hand. Students took this idea to Tanzania and introduced it to local farmers. The farmers needed a tool that was easier to transport than the model used in Guatemala. As a result, students created a mobile maize sheller attached to a bicycle. A local Tanzanian obtained one of the shellers and was able to start his own small business travelling from farm to farm and processing corn for the farmers. This work led to a business founded by then student (now alum) Jodie Wu ’09 called Global Cycle Solutions. Jodie now lives in Tanzania running her business. Local Tanzanians have created other products based on the concept of the pedal-powered corn sheller. After learning about the corn sheller, one of Ms. Wu’s collaborators developed a windmill out of bike parts. He has also developed a pedal-powered hacksaw and drill, and a cell phone charger.

Ms. Smith told us, “Students start with a kernel of an idea and develop it in the field.” D-Lab teaches students to consider the resources available in the developing world.

Ms. Smith also told us about the International Development Design Summit that was started in 2007. The summit was held in Ghana in 2009 and the 2010 event focused on dissemination.

We also learned about the Creative Capacity Building (CCB) workshops to encourage people in the developing world to learn how to develop ideas into prototypes. Community workshops are established where villagers can share tools and other resources. Training workshops are a part of this project. A retail store is also attached to the workshop,
so villagers can sell the products they produce. One product developed from CCB was a *rat trap* made from metal extracted from used tires, used by farmers to control pests in their fields. This was in a location where metal is not readily available. We saw this demonstrated during our student poster session.

D-Lab prides itself on research initiatives that have introduced innovative designs and methodologies to the international development field, and that have inspired former students to become social entrepreneurs. The program is designed to provide the necessary support mechanisms and information for students to take an innovative idea from concept to design to prototype to well-conceived business model to mass-produced and distributed product.

Another critical area of research is in the evaluation of appropriate technologies. D-Lab’s approach is that technologies for the poor should do what they say they do, not just generate feel-good media. One of the next major initiatives is the establishment of an Appropriate Technology Evaluation Lab that will serve as something akin to a *Consumer Reports* for development technologies.

The number of students wanting to take D-Lab subjects far outweighs the opportunities available. Additional resources could provide this experience for more students. As little as $10,000 can support a design project in a D-Lab class, and there are many other opportunities to support D-Lab graduate students, classes, IAP field trips, etc. Contact Bonny Kellermann if you would like to receive additional information about ways to support D-Lab.

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**Do you have friends who are not yet McCormick Society members who would like to come to KDMS events?** They can join the McCormick Society by informing MIT of their bequest intentions or by making a gift to MIT for a Life Income Fund. Those who are interested in making any type of planned gift to MIT should contact Judy Sager, Director of Gift Planning, so that they can be included in McCormick Society invitations. Judy can be reached at 617-253-6463 or by e-mail at jsager@mit.edu.
Upcoming Events

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Luncheon with Deborah Fitzgerald</td>
<td>Tuesday, February 1, 2011</td>
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<td>Tuesday, February 1, 2011</td>
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<tr>
<td>San Francisco KDMS/WBRS Reception</td>
<td>Tuesday, February 22, 2011</td>
</tr>
<tr>
<td>Dedication of the Koch Institute, MIT</td>
<td>Friday, March 4, 2011</td>
</tr>
<tr>
<td>Luncheon with Robert G. Urban</td>
<td>Tuesday, March 22, 2011</td>
</tr>
<tr>
<td>“The Next Century” MIT Convocation</td>
<td>Sunday, April 10, 2011</td>
</tr>
<tr>
<td>Dedication of Sloan School Expansion</td>
<td>Friday, May 13, 2011</td>
</tr>
</tbody>
</table>

See information regarding MIT150 on page 18 for information about symposia and FAST Arts Festival events.

Several events are planned for KDMS members and other select guests. Please contact Bonny Kellermann for more information about the following events:

Palm Beach County, FL - Tuesday, February 1, 2011
Luncheon with Deborah Fitzgerald, Kenan Sahin Dean of MIT’s School of Humanities, Arts, and Social Sciences. Dean Fitzgerald will give an overview of the importance of international experiences for MIT students to help them become global leaders and will specifically talk about the MISTI MIT-Israel program.

Dade County, FL - Tuesday, February 1, 2011
Dinner with Deborah Fitzgerald. See above for details.

San Francisco - Tuesday, February 22, 2011
Members of KDMS will be invited to join members of the William Barton Rogers Society (WBRS) for a reception.

Vero Beach, FL - Tuesday, March 22, 2011
Luncheon with Robert G. Urban, Executive Director of the Koch Institute for Integrative Cancer Research at MIT. Dr. Urban will discuss how life scientists and engineers have come together in the Koch Institute to build the future of cancer research at MIT.
Remarks

By Claude Brenner ’47
Chair, Katharine Dexter McCormick Society

Some time ago, on passing through the Building 3 lobby, I paused to read the two bronze plaques on the walls. Blackened by age as they were, their messages, nevertheless, remain bright and compelling. Here is what they say:

**Professor Gaetano Lanza**
Head of the Department of Mechanical Engineering
1888-1911

Under whose leadership the department was developed and by whose foresight the first laboratory for testing full-sized structural specimens was established

and

**Howard Furber Miller**
Professor of Steam Engineering
Head of the Department of Mechanical Engineering
Class of 1886

Through his foresight and direction were developed the Mechanical Engineering Laboratories
Devoted and loyal son of the Institute
Revered by the students
“Revered by the students.” That resonated with me. “What a fine teacher and person he must have been to merit this lasting recognition,” I thought. And then I realized that I had done the same thing for teachers who had made a deep and lasting impression on me, not with bronze plaques but rather with a named fund.

A dozen years ago, when Professor Ed Crawley ’76 was Chair of the Department of Aeronautics and Astronautics, he raised $20 million to reconfigure Building 33 to provide space that would conform to his new pedagogy of Conceive, Design, Implement, and Operate–CDIO. An alumnus of the department, I eagerly joined the committee that planned the grand three-day celebration at the completion of the rebuilding in the fall of 2000. But there was a price. Ed asked me for a gift. He told me that the students needed “stuff” to build their models. So I agreed to a five-year pledge to endow a fund that would throw off enough each year to meet the need. I felt good about doing that. I remembered that when I was working on my master’s thesis, the “stuff” that my partner, Dick Scheuing, and I needed for our wind-tunnel studies was simply there. We took it for granted.

My fund had to have a name, of course. But not mine. I wanted to remember two of my professors—Shatswell Ober ’16 and John R. Markham ’18. So it is the Ober-Markham Fund; and I feel good about that as well. I took a number of courses with each professor. In addition, Professor Ober was my graduate advisor and Professor Markham gave me a part-time job in his lab. I remained ever grateful to both teachers, and often in my early years in industry, I would think, “Professor Ober

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(or Markham) would be proud of me for what I’ve done on this project.”

And then I did it a second time. I have been a member of the Corporation Visiting Committee for Music and Theatre Arts for many years (superannuated as I am, I now sit as an “invited guest” of the Committee). At a biennial meeting of the Committee awhile ago, Bill Fregosi, then a senior technical instructor in theater arts (he has since retired), argued passionately for more resources to buy materials that the students needed for their productions. “Ah!” I thought, “They need ‘stuff’ too!”

Again a five-year pledge to fund an endowment for the department to buy “stuff,” not only for theatre, but also for music and dance as well.

I named the fund for Professor Dean Mattison Fuller, who taught the wonderful course E46, Introduction to Music, that I wrote about in my last article, that had such a powerful impact on me. He also directed Dramashop in which I acted for three years before that, so I got to know, like, and appreciate him very well. On my later return to MIT from England, Professor Fuller was the first person whom I visited. He was in the Homburg Infirmary on the fourth floor of Building 11, cheerfully sitting up in bed smoking a cigarette, recovering from a heart attack. We had a warm chat. He died that night. He was 49 years old. He was a bachelor. But there’s the Dean Mattison Fuller Fund to remember him and his contributions to student life and learning at MIT. And I feel good about that.

Impressive as a bronze plaque may be, it tends to be inert and ignored. An endowed named fund, on the other hand, reminds successive beneficiaries of the person every time it’s used. And maybe they will wonder who Ober, and Markham, and Fuller were, and conclude that they were “revered by the students,” or at least, by one. 😊
Fariborz Maseeh Hall, formerly known as W1 and before that known as (old) Ashdown House, is scheduled to open its doors to students in the fall of 2011 thanks in large part to a $24 million donation by Fariborz Maseeh, ScD ’90, and the Massiah Foundation. Dr. Maseeh was moved to make this extraordinary gift to increase the number of undergraduate students who have the opportunity for an MIT education. The renovated dormitory will hold approximately 460 undergraduate students.

The renovated facility will include a dining hall designed to encourage informal interactions and to support a full meal plan for residents and dining for other members of the larger MIT community. It will create a new gathering place near the geographic center of the campus.

The $24M gift goes a long way towards covering the cost of renovating this building, but there are still unmet costs and naming opportunities within the building. Contact Bonny Kellermann if you would like to receive information about the ongoing needs and the naming opportunities.

Erratum: The spring 2010 newsletter recounting the history of how this building has been used omitted reference to use from 1943-1946 by the Navy V12 undergraduates. Several alumni who lived in the building during these years wrote to advise of this omission. A chapter on this era has now been added to MIT’s history of this building. See <http://ashdown.mit.edu/history.php#section2> for more details.
Sloan School Expansion

The Sloan School has expanded significantly with the completion of E62 during the summer of 2010. The new building opened its doors to students and faculty for the fall 2010 semester with 205 offices, 6 classrooms, over 30 group study rooms, dining facility, an Executive Education suite, lounge areas, and new usable outdoor spaces. For the first time in many years, all of Sloan’s faculty members are in one building, encouraging the sharing of ideas across disciplines. At this time, several recognition opportunities remain available within E62. In addition to the opening of E62, the Sloan School is now renovating E60, the former Arthur D. Little Building. When that renovation is complete in 2011, all of Sloan’s buildings will be connected.

Koch Institute: Collaboration is Key in the Struggle to Cure and Treat Cancer

Today, in a research era defined by the need to share ideas across disciplines and to share highly sophisticated equipment beyond the scope or budget of any single lab, the time has come to provide cancer researchers with a strikingly different new home. With the generous support of individual philanthropists, corporate donors, and foundations, MIT has completed construction of its new advanced research and technology facility, designed specifically to support highly collaborative, interdisciplinary, leading-edge cancer research. On November 5, 2010, the faculty, researchers and staff of the
David H. Koch Institute for Integrative Cancer Research at MIT (KI) began the six-week process of moving into the new building, setting up 26 faculty labs, 13 technology suites, and many offices in preparation for the building’s official dedication on March 4, 2011. Rising seven stories above Main Street between Ames and Vassar Streets, the Koch Institute’s new building serves as a striking new gateway to the MIT campus. Located immediately across the street from the Whitehead Institute, the Broad Institute, and adjacent to MIT’s burgeoning biomedical research community, the Koch Institute serves as the nexus of cancer research at MIT.

The KI’s new facility has been expressly designed to support a high level of interdisciplinary collaboration. Each research floor of the building hosts both engineering and science labs. Shared meeting spaces and technical resources centrally located on each floor encourage constant interaction between disciplines. By the end of December, the KI’s new building will host over 600 people addressing cancer through the convergence of science and technology. While life scientists define the problems that need to be solved and determine how, in biological terms, to approach them, engineers put their analytical and problem-solving skills to work to devise technological solutions to cancer problems. Significant collaborations are already underway, addressing complex biological issues with innovative technology-based strategies. The goal: to develop highly effective new solutions to the problems of cancer, and to shepherd those advances to the clinical setting where, ultimately, human lives may be saved.
Welcome to MIT150

MIT will mark its sesquicentennial with 150 days of celebration beginning on January 7 with the opening of the MIT150 Exhibition at the MIT Museum and running until June 5, 2011. The entire program is open to the MIT community and we hope you will join us to honor a century and a half of innovation, education, and service to the nation and the world. The program includes the Infinite History Project (a collection of more than 100 first-person interviews with people who have shaped—or been shaped by—MIT), an interactive timeline of Institute history, a series of six symposia, an academic convocation, an Open House, and other events and projects to honor the past and imagine the future of MIT. Please visit the MIT150 website for more information and to share your story in the Corridor: <http://mit150.mit.edu/>.

January to May: The MIT150 Symposia

During the spring of 2011, a series of symposia developed by MIT faculty will explore issues and topics of interest to MIT’s community of scholars, students, and staff. Register on the MIT150 website.

✓ Economics and Finance: From Theory to Practice to Policy (January 27 and 28) Registration now open.
✓ Conquering Cancer through the Convergence of Science and Engineering (March 16)
✓ Leaders in Science and Engineering: The Women of MIT (March 28 and 29)
✓ Computation and the Transformation of Practically Everything (April 11 and 12)
✓ Earth, Air, Ocean and Space: The Future of Exploration (April 26 and 27)
✓ Brains, Minds and Machines (May 3-5)
**April 10: The Next Century Convocation**
This academic event is conceived in the spirit of the Mid-Century Convocation. The theme will honor “habits of mind” inherent to MIT’s community of teachers and scholars—integrity, service, creativity, diligence, and social responsibility. The *convocation* will take place on MIT’s Charter Day at the Boston Convention and Events Center; transport will be provided from campus.

**April 30: Open House**
On April 30, we will welcome visitors to an [Open House](#) on campus with tours, mini-lectures, demonstrations, and hands-on activities that will convey what MIT is about: the advancement of knowledge and the excitement of discovery.

**February to May: Festival of Art, Science, and Technology**
The [Festival of Art, Science and Technology](#) (FAST) will celebrate MIT’s culture of imagination, creativity, and invention with performances, exhibitions, discussions, demonstrations, and installations throughout the campus and beyond. FAST will grow during the spring semester of 2011, punctuated by some key dates:

- **February 2–6:** Events showcasing MIT’s tradition of innovation at the intersection of art, science, and technology.
- **March 4–6:** Performances, discussions, and activities about the arts, language, and cognition.
- **March 18–25:** U.S. premiere of Professor Tod Machover’s robotic opera, Death and the Powers.
- **April 15–17:** Contemporary expressions in music, ideas, and more at the intersection of art, science, and technology.
- **May 7–11:** Theater, installations, music, and explorations into the future of art, science, and technology.

**May 2: The Global Challenge awards ceremony**
The [Global Challenge](#) engages teams of MIT students, faculty, alumni, staff, and other collaborators worldwide in innovative entrepreneurship for the public good. We will learn about the projects of the top teams and honor the winners with funding to implement their plans.