Engineered education workshop draws nat’l leaders

Elizabeth A. Thomson
News Office

President Bush’s science advisor, the head of the National Science Foundation and other top scientists and engineers from around the country gathered at MIT last Thursday, Oct. 20, to push forward a national conversation on engineering education in the 21st century and the challenges, both here and abroad, that will affect it.

One of the reasons I am here is to let you know that we are listening — my office, and [that of] the president,” said John H. Marburger, science advisor to the president and director of the Office of Science and Technology Policy.

The one-day workshop at MIT grew from issues discussed in the recent National Academy of Engineering report, “The Engineer of 2020: Visions of Engineering in the New Century,” as well as National Science Board (NSB) reports that identified troubling trends such as the low number of domestic engineering students.

MIT President Susan Hockfield said that when she learned of the workshop, she was very excited because “MIT is committed to innovations in engineering education, and that’s really what this workshop is about.”

She noted fundamental challenges that must be addressed, such as the “challenge of interest.” “Kids and Americans today fail to be inspired by engineering, by science, and by mathematics,” she said, noting that only 17 percent of U.S. bachelors’ degrees are in science and engineering compared to 68 percent in Singapore.

She also stressed that to move engineering forward we must “recruit aggressively” women and minorities in this country. “Engineering can’t continue to be dominated predominantly by men — by white men.”

The United States continues to lead the world in science and technology. That said, “the redistribution of

MIT alum nominated to head Fed

Sarah H. Wright
News Office

MIT alumnus and macroeconomist Ben S. Bernanke (Ph.D. 1979), chairman of the President’s Council of Economic Advisers, has been nominated to become chairman of the Federal Reserve. If approved by the Senate, Bernanke will replace Alan Greenspan, Fed chairman since 1987, early next year.


Bernanke has “earned a reputation for intellectual rigor and integrity. He commands deep respect in the global financial community,” Bush said.

With the legendary Greenspan standing beside him, Bernanke said that, if confirmed, his “first priority will be to maintain continuity with the policies and strategies established during the Greenspan years.”

Bernanke, 51, is known for his deliberate, even contemplative, analytic style, his dry sense of humor and his detachment from the political fray. His MIT colleagues were unsurprised at Bernanke’s emphasis on continuity for the Fed.

“He has always been thoughtful, atten-tive, precise. He’s the kind of person you’d want as a surgeon,” said lifelong friend Kenneth Manning, MIT’s Thomas Meloy Professor of Rhetoric and of the History of Science.

Manning and Bernanke grew up in Dil-lus, S.C., a then-segregated town of 6,300 where Bernanke’s father owned a drug store. Both attended Harvard University, where Bernanke received his B.A. in economics in 1974 and his Ph.D. in economics in 1979.

Bernanke’s expertise is in macroeconomics, particularly in the role of monetary policy in stabilizing the economy. He co-founded the Center for Economic Policy Research in London, where he served as chairman.

The appointment of Bernanke as the new Federal Reserve chairman — to replace Alan Greenspan — is a win for MIT. Bernanke is a member of the MIT Board of Trustees, he has taught at MIT, and he is a recipient of the MIT Medal, MIT’s highest honor.

MIT ambulance service a Class One act

Sasha Brown
News Office

MIT has the only Class One, student-run ambulance service in the state, and on Oct. 19, the Institute dedicated a bay and bunk room in the loading dock and basement of the Stata Center to house it.

“This is a very important day in the history of our service,” said Maryanne Kirkbride, clinical director for campus life in the medical department. The bay provides shelter for the ambulance, which by law must be docked indoors. EMTs can sleep in the bunk room when they are on call — and there are people on call every night.

The Class One designation means that the ambulance is certified to transport patients to area hospitals as well as to MIT Medical. All the EMTs receive comprehensive first-aid training.

The Student Emergency Medical Society (SEMS) started in the fall of 2000 to train student EMTs. In the early spring of 2001, SEMS proposed taking over the MIT ambulance.

"Most of our EMTs and patients enjoy working with each other. For the patients it’s a comfort to know that the person taking care of them is a fellow
Institute of Medicine elects 2 from MIT

Anne Trafton
News Office

Emilio Bizzzi, Institute Professor in the Department of Brain and Cognitive Sciences, and Peter Szolovits, professor of computer science and electrical engineering, have been elected to the Institute of Medicine. Bizzzi is one of 64 new members of the Washington, D.C.-based institute. The election was announced on Oct. 24. The Institute of Medicine (IOM) is one of the four national academies, along with the National Academy of Sciences, the National Academy of Engineering and the National Research Council, that make up the National Academies of Sciences and Engineering.

Bizzzi, a principal investigator in the McGovern Institute for Brain Research, focuses his research on how the central nervous system translates brain messages signaling motor intent into muscle activation. He is a member of the National Academy of Sciences and is currently serving as secretary of the American Academy of Arts and Sciences. Szolovits’ research centers on the application of artificial intelligence methods to problems of medical decision making and design of information systems for health care institutions and patients. He is a professor of health sciences technology in the Harvard/MIT Division of Health Sciences and Technology and head of the Clinical Decision-Making Group in the MIT Computer Science and Artificial Intelligence Laboratory.

The Institute of Medicine was established in 1970 by the National Academy of Sciences to honor professional achievement in the health sciences and to serve as a national resource for independent analysis and recommendations on issues related to biomedical, medical sciences and health.

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FEED Continued from Page 1

where Bernanke received the B.A. in economics in 1974, followed by the Ph.D. in economics from MIT. Bernanke was visit-
ing professor of economics at MIT in 1989, an associate professor of economics at Stanford and a professor and department chair of economics at Princeton from 1996 to 2002.

He joined the Fed’s Board of Governors in 2002.

Oliver Blanchard, MIT professor of economics, said, ‘‘Ben combines a keen sense of how to translate theory into actual policy, and an unusual ability to communicate. He will be a great chair-man.’’

Bernanke has already influenced the Fed as governor and in his speeches and has developed a reputation for challenging conventional thinking.

Bernanke and Greenspan differ on inflation targeting, a practice in which the central bank sets an explicit goal for infla-
tion. Bernanke favors targeting, which would hold the Fed accountable for meet-
ing its own goals and make it harder to downplay economic news.

The Fed’s decision this year to begin providing two-year inflation forecasts has been credited to Bernanke’s influence.

In inflation targeting, Bernan-
ke has expressed commitment to greater communication and transpar-
ency for the Fed. Greenspan, while a giant of his time, was known for a certain opac-
y. You want to release information that helps the market and sets more accurate expectations of future pol-
cy and the future state of the economy. Bernanke’s position is more open, he said, ‘‘in an interview published by the Fed.’’

Greenspan’s interest in helping the public to understand and predict eco-

nomic changes through Fed policies is reflected in his 2009 book, ‘‘Essays on the Great Depression,’’ which examines America’s devastating economic col-
lapse of the 1930s. The lessons from that decade, Bernanke has said, include the urgent role of financial stability in main-
taining social and political stability and the importance of international economic cooperation.

Young economists will be glad to learn Bernanke sees an important role for ac-
demic research in sharpening Fed policies.

‘‘Economics is like trying to learn how to repair a car with the engine running. It’s always changing. Having good economists to interpret data and present policy alter-
atives has a beneficial effect on policy-
making. And good policy economics makes a very big difference to the welfare of the average American,’’ he said.

Bernanke and his wife, Anna, have two children.

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Stroock meets Stroock fellow

The MIT community is very familiar with endowed fellow-
ships named for their donors. But when Ray Sidney ’95, an early soft-
ware engineer at Google, decided to make a gift, he established the Stroock-Hertz Fellowship in honor of his MIT math professor, Daniel W. Stroock, the Simons Professor in Mathematics.

Stroock met the recipient of the Stroock-Hertz Fellowship, MIT phys-
ics graduate student Monika Schmitt, at a dinner given by the Hertz Foundation for Hertz Fellows in the Boston area on Friday, Oct. 21. Institute Professor John M. Deut-
ch and Hertz Fellow Alice Gast, who is MIT’s vice president for research and associate provost, were featured as speakers at the dinner, which fol-
lowed a meeting of the foundation’s board of directors.

Also attending were Brett Biehle and Stephen Samonis, both Hertz Fellows studying for their doctorates at MIT. Hertz Fellows receive up to $240,000 each for up to five years of study toward their doctorates.

Chemists garner ACS awards

The American Chemical Society recently announced that several MIT chemistry professors have won awards for research.

Richard Schrock, the Frederick G. Keyes Professor of Chemistry, will be hon-
ored with the F. Albert Cotton Award in Synthetic Inorganic Chemistry. Schrock this month shared the 2005 Nobel Prize in chemistry.

Barbara Imperiali, the Class of 1922 Professor of Chemistry and Professor of Biology, was chosen for the Ronald Bres-
low Award for Achievement in Biomolecular Chemistry.

Stephen Buchwald, the Camille Drey-
fus Professor of Chemistry, won the ACS Award for Creative Work in Synthetic Organic Chemistry, and Alan Davison, chemistry professor emeritus, won the ACS Award for Creative Inorganic Chemistry.

Alice Gast, vice president for research and associate provost, was selected as the winner of the ACS Award in Colloid and Surface Chemistry.

The awards will be presented at the American Chemical Society meeting in March 2006 in Atlanta.

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Faculty member earns tenure

David Darmofal is one of the 25 professors granted tenure in May. His profile and photograph were inadvertently omitted in last week’s issue of Tech Talk. Tech Talk regrets the error.

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Cady Haff</ref>
Author, educator and filmmaker Kalamu Ya Salaam of New Orleans will begin an artist’s residency at MIT tomorrow.

The creator of an online project to document the lives of residents of New Orleans, who was himself displaced by Hurricane Katrina, will begin a weeklong artist’s resi- dency at MIT on Oct. 27.

Kalamu Ya Salaam — author, educator, filmmaker and creator of the narrative archive, ‘Listen to the People: The Neo-Griot New Orleans Project’ — was forced to move to Tennessee following the hurricane and subsequent flooding.

A producer and disc jockey for WWOZ, 90.7FM in New Orleans before the hurricane, Salaam, 58, whose name means “Pen of Peace,” will focus his activities at MIT on discussions of the social, political and cultural impact of Hurricane Katrina and its aftermath.

New Orleans has been divided into wet and dry areas. The dry areas are predominantly white and wealthy. The question of ‘rebuilding’ New Orleans is a question of how many ‘wet’ citizens will be brought back into the city,” Salaam said.

Salaam will also share his experience with how digital technologies can support and enhance community development and intercommunity relations.

Aydia S. Mthembu, associate dean for student support services, and planning visit to MIT.

“With his visit to MIT, we will have someone on campus who will make sure we as a community can talk about the whole effect of Katrina. He will raise awareness of the deeper issues,” Mthembu said.

Salaam will continue work on his project, ‘Listen to the People,' while residing at MIT, Mthembu said. Working with a videographer, Salaam intends to interview anyone at the Institute or in the Cambridge/Boston area who was affected by Hurricane Katrina.

By continuing his work, he will show how artists and scholars rise to the occasion, when so much has been taken away. His presence gives students a chance to see that art is relevant to this particular situation and how an artist can respond by asking, ‘How can I be helpful, using my skills?’” Mthembu said.

Salaam will participate in other events during the week.

On Friday, Oct. 28, in Room 4-231 at 7 p.m., Salaam will join Mthembu’s film-series seminar, ‘Topics in Pan-African Studies,’ speaking on issues of race and class in relation to Katrina, and showing video clips from ‘Listen to the People.’

On Wednesday, Nov. 2, in Room 4-415 at 7 p.m., Salaam will read from his own poetry and prose about New Orleans culture and the impact of displacement.

Salaam is a co-founder (with Kyshha Brown) of Runagate Multimedia, a publishing company, and he is the moderator of e-drum, a listserv of more than 1,600 black writers. His latest movies include ‘On His Way,' a documentary about jazz funerals. The recipient of a 1999 Senior Literature Fellowship from the Fine Arts Work Center in Provincetown, Salaam has published the anthology “From a Bend in the River: 100 New Orleans Poets” (Runagate Press, 1998).

To participate in Salaam’s “Listen to the People” project, please contact Mthembu at mthembu@mit.edu.

Salaam’s residency at MIT is sponsored in part by the Program in Writing and Humanistic Studies.

Professors weigh in on planning for new New Orleans

Sasha Brown
News Office

The destruction of New Orleans was the tip of an ice-berg,” Professor Anne Whiston Spirn asserted at a sympos- ium held Oct. 18.

Through her research, Spirn has found the poorest res-idents of many cities living on buried floodplains, suffering the effects of mold, frequent floods, subsidence and cave- ins. In many cases, people are forced to abandon their homes, Spirn said.

Spirn, an author and MIT professor of architecture and urban studies and planning, penned an award-winning 1984 book about nature’s role in city planning called “The Granite Garden: Urban Nature and Human Design.” Spirn spoke during the third in a series of four symposia explor- ing the “Big Questions After Big Hurricanes.”

Speakers at this symposium, titled “How Can We Plan for a Safe and Sustainable Region?,” focused heavily on the lack of planning evident following Hurricane Katrina.

“It is unconscionable that there was no plan for this occasion,” said Spirn. “This is not a surprise. Why are we scrambling now?”

Spirn is especially interest- ed in city planning that takes nature into account. “Cities are nature into account,” said Spirn. “If we saw them that way, we would design them differently . . . Every city is prone to some sort of natural hazard.”

Professor Chiang Mei of civil and environmental engi- neering drew parallels to other flood-plagued regions, including Venice, Italy, and the Neth- erlands. “They are very differ- ent in nature and scope, but they face a similar problem,” said Mei.

The current solution in Venice is a series of mobile gates across the three inlets that lead to the islands, but the political debates on a number of environmental and other issues have slowed progress. The Netherlands, which lost 1,800 people in the North Sea Storm of 1953, the region was to be a series of dikes, which changed the ecology and morphology of the blocked estuaries. In the more recent projects, movable gates were constructed instead, allowing tidal flow in and out of the estuary and to preserve the natural balance.

Among the lessons Mei gleaned from his explorations is “It is important to have the community and the engineers work together,” Mei said.

Professor Michael Fischer of anthropology and the Program in Science, Technology and Society discussed the social effects of disaster.

Although there has been talk of mega projects in New Orleans, such as super sea walls or “floating city” recon- struction, Fischer argued that the role of the local commu- nities in any reconstruction needs to be fostered if there is not to be mere gentrification or a nostalgic rebuilding.

Fischer called for New Orleans reconstruction to become an experimental urban space for deliberative dem- ocratic planning, drawing upon the black churches, black universities, civil rights organizations, burial and second line societies and new social organizations. At stake, he said, is the Creole, African-American, Cajun and South- ern amalgam that has been a distinctive source of U.S. culture.
**Protein scientists borrow tool from metal research**

Elizabeth A. Thomson

Scientists have discovered that a tool normally used to improve stainless steel and other metal alloys can be applied to a decidedly nonmetallic substance: protein. Researchers at the University of Wisconsin at Madison and DuPont report on their findings in the Sept. 30 issue of Physical Review Letters.

Scientists work with proteins just as they work with metals to design organic materials, designing new substances with enhanced properties, such as the ability to survive at high temperatures. But doing so involves sorting through the nearly endless possibilities of the protein’s constituent components, called amino acids—a task that is extremely time-consuming and computer-intensive.

By applying a computational technique for alloy design called cluster expansion, the MIT researchers and their colleagues were able to search through potential amino acid configurations up to 100 million times faster than with conventional techniques. The work could prove useful in many fields, including medicine and biotechnology, which stand to benefit from the revamped proteins with superior properties.

Authors are UW-Madison Assistant Professor Paul Ceder, who initiated and led the project; a postdoctoral researcher at MIT; MIT postdoctoral fellow Steve Lustig; Ceder’s Whitehead Institute colleague Rudolf Jaenisch, lead author on the paper, which was published in the Sept. 30 issue of Nature; and MIT computational biology professor Amy Keating.

Commenting on the interdisciplinary nature of the work, Ceder noted that “as a researcher used to dealing with crystalline matter such as metals and oxides, the work in biology is pretty intimidating. But piece after piece you start to see that many of the same scientific insights in biology have parallels in other fields.”

Keating said, “It was fun and exciting to work together. We encountered the usual barriers that come up in joint work between different fields—unfamiliar vocabulary and different conventions—but we learned a lot from one another throughout the process.”

The similarities between alloy and protein design first struck Morgan as he attended an MIT computational biology course taught by Keating and others. “Each [protein] molecule contains a number of different elements—such as nickel, iron, and tin—those are arranged on a lattice of sites,” Morgan said. “It’s the same thing with a protein. You have different amino acids occupying various sites in the protein backbone.” The trick is determining exactly how to reshape these components to enhance the properties of the resulting structure, whether it’s a metal or a biological molecule.

Each protein’s function depends on its unique three-dimensional structure, which, in turn, rests on the molecule’s specific linear chain, or sequence, of 20 different amino acids. In protein design, scientists start with a protein of known sequence, structure and function—such as an industrial enzyme that turns a sugar into alcohol. They then hunt for modified amino acid arrangements that augment the molecule’s natural function.

Beginning with an existing protein structure does reduce the resource-intensive task of determining the structure, whether it’s a metal or a biological molecule, and the numbers are still huge. “For a sequence of just 100 different amino acids, you have 20^100 possible configurations,” Morgan said. “My guess is this is more than the number of atoms in the universe.”

“Cluster expansion breaks the design problem into meaningful pieces that you can get your brain and your computer around,” Morgan said.

To demonstrate the ability of cluster expansion to manage this complexity, the team focused on protein stability. Highly stable proteins fold into tight three-dimensional structures; less stable ones tend to fall apart. Because a protein’s stability relates to its energy in the folded, 3-D state, scientists can calculate an energy term to predict whether a particular amino acid sequence will adopt a robust structure.

Cluster expansion breaks an amino acid sequence into small subclusters, consisting of one, two, three or more amino acids. An effective energy term is then determined for every possible amino acid sequence within each subcluster. Once the energies of each subcluster are known, they can be quickly added to give the energy of the entire sequence.

When the team applied the method to two well-known proteins, they found that it calculated amino acid sequence energies that matched well with those computed by an established technique. The difference? The alternative technique needed more than three minutes to make a single calculation while cluster expansion took just a microsecond.

Keating is excited about the potential contribution of cluster expansion to biology. “It may make some generalizations that we have been dreaming about feasible whereas they really weren’t before.”

The work was funded by the National Institutes of Health and the DuPont-MIT Alliance.

**Whitehead research opens door to new stem cell work**

David Cameron

Scientists at MIT and the Whitehead Institute for Biomedical Research have successfully demonstrated that a theoretical technique could be used to generate embryonic stem cells in individuals who are unable to implant embryos in a uterus and therefore cannot have their own genetically altered children. Because the embryos cannot implant, they are a staple for recombinant DNA studies; Plasmids are usually found in bacteria, and they are a staple for recombinant DNA studies.

The procedure theorized by Hurlbut and Hurley is similar to SCNT, but with one crucial twist: Before the donor nucleus is transferred into the egg cell, its DNA is altered so that the resulting blastocyst has no chance of ever becoming a viable embryo. As a result, a “potential human being” is not destroyed once stem cells have been extracted.

Jarnisch—a firm supporter of all forms of human embryonic stem cell research—has shown that concerns about this approach can be overcome.

Jarnisch and Alexander Meissner, a graduate student in his lab, focused on a gene called Cdx2, which enables an embryo to grow a placenta. In order to create a blastocyst that cannot implant in a uterus, the researchers disabled Cdx2 in mouse cells.

They accomplished this with a technique called RNA interference, or RNAi. Here, short interfering RNA (siRNA) molecules are designed to target an individual gene and disrupt its ability to produce protein. In effect, the gene is shut off. Jarnisch and Meissner designed a particular form of siRNA that shut off this gene in the donor nucleus and then incorporated itself into all the cells comprising the blastocyst. As a result, all of the resulting mouse blastocysts were incapable of implantation.

However, once the stem cells had been extracted from the blastocysts, Cdx2 was still disabled in each of these new cells, something that needed to be repaired in order for these cells to be useful. To correct this, Meissner deleted the siRNA molecule by transferring a plasmid into each cell. A plasmid is a unit of DNA that can replicate in a cell apart from the nucleus. Plasmids are usually found in bacteria, and they are a staple for recombinant DNA studies.

The success of this procedure resulted in a new “reprogramming” technique in which the researchers disabled Cdx2 in mouse cells.

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Hire opens new chapter for LBGT community

Sarah H. Wright
News Office

Suppose they posted a support group meeting for lesbian, bisexual, gay and transgendered students and nobody came. Abigail Francis, MIT’s first program coordinator for LBGT services, resources and outreach, had the experience when she was a college sophomore, and it’s one she hopes no one seeking support in the Institute community will ever encounter.

“Just remember drawing up the courage to attend that meeting. When I did show up, I was devastated. How much easier it would have been to face the world with a support group offered at MIT,” she said.

In her role at MIT is a pioneering one in the academic community — there are only 193 LBGT coordinators nationwide — and her goal is to expand the Institute’s current resources to create an environment where LBGT students and faculty can have a more positive living and learning environment,” she said.

In addition to posting the “Welcome” cards, “be a good ally” Take a moment to visit our website, come see the Rainbow Lounge, or, better yet, join us at one of our events. It is so important to have a faculty and staff presence at LBGT events on campus, because LBGT students are already at a loss for positive adult role models and supportive allies as mentors,” Francis said. They are also at higher risk for depression and drug use, so the involvement and support of others can make a real difference in their lives, she said.

Upcoming LBGT events include:

Events on Women’s Week “True Diversity” Workshop: Exploring Race, Gender, Sexuality and Programming on Sunday, Nov. 6, 11 a.m. to 1 p.m., Room 10105. Workshop (with brunch) is free and open to all students. RSVP to: abigail.francis@mit.edu

The 24-Hour Multicultural Movie Marathon, Dec. 2 at 6 p.m. in Lobdell.

Queer and Faithful: LBGT/MIT is partnering with the Lutheran Episcopal Ministry to present a dinner and panel discussion. The event is free and open to all MIT affiliates.

Series examining ‘Future of Water’

Sarah H. Wright
News Office

The Technology and Culture Forum at MIT is exploring the crucial global challenge of water resource management in a four-part series titled “The Future of Water.”

The series will explore social, environmental and political aspects of how water is appropriated and regulated internationally and how access to drinking water and sanitation produces inequitable patterns of consumption, health and development.

On Oct. 27, Vandana Shiva, author of “Water Wars: Privatization, Pollution, and Profit” and “Earth Democracy: Justice, Sustainability and Peace,” will present a talk on “Hydro-politics and Earth Democracy” in Room 6-120 at 7 p.m.

Shiva will discuss the politics of water consumption, focusing on the victims of water scarcity and presenting the social and political landscape that frames the debate over water resources in developing countries.

On Nov. 3, Marcia Brewer, U.N. task leader on gender and water, and Shamina Currey, director of international operations and development at the Center for Affordable Water & Sanitation Technology, will discuss “Women and Water” and the health, educational and economic implications of the burden on women and children of collecting water, in Room 6 120 at 7 p.m.

On Nov. 10, Susan Micourt, research engineer in civil and environmental engineering, will discuss the U.N. millennium goals for clean water and how to achieve them with current and future technologies. Micourt’s talk, “Innovating for Clean and Affordable Water,” will be held in Room 6-120 at 7 p.m.

“Water” began Tuesday, Oct. 25, with a world premiere screening of “Water No,” a documentary on the arsenic crisis in Bangladesh and Nepal.

Rob Kramer, filmmaker and co-founder of the Global Water Trust, discussed his work with Arsenic Ventures, and associate professor of civil and environmental engineering.

“We Please No” includes a segment of the Kanchan Arsenic Filter, an affordable arsenic filter system developed by MIT researchers including Micourt. The Kanchan Filter won a 2005 Wall Street Journal Innovation Technology Award.

The series is free and open to the public; seating is first come, first served.

For more information, please visit web.mit.edu/tac or call x3-0108.

This series is co-sponsored by the Department of Civil and Environmental Engineering, the Office of the Dean of Graduate Students, the Program in Women’s Studies and MIT Sanga.

Reif gives finance report to faculty

At the October faculty meeting, Provost L. Rafael Reif reported on the state of the Institute’s finances, noting that MIT’s endowment increased to $6.7 billion last year, surpassing the peak achieved in fiscal 2000.

Looking at the Oct. 19 meeting, which was held in Room 141 in the Stata Center, the provost said that in fiscal year 2004, the value of the endowment had been $5.87 billion. The endowment value increased by 14.4 percent during fiscal 2005, up to $6.71 billion. The $842 million growth in the value of the endowment was the result of a 17.6 percent market return, combined with additional contributions from gifts and after netting out distributions to support the Institute’s operations. According to a 2004 report by the National Association of College and University Business Officers, MIT’s endowment is sixth among American universities, trailing Harvard, whose endowment recently surpassed the $25 billion mark, Yale, the University of Texas system, Princeton and Stanford.

“Despite our relative financial strength, the Institute uses the endowment to strengthen in the 2005 fiscal year, President Hockfield commented that in fiscal year 2004, the Institute received $34 million from endowed funds to meet MIT’s financial aid commitments.

In other business, Hockfield announced that a review panel has been formed to explore why a particular case of alleged research misconduct at the Lincoln Laboratory has been so difficult to resolve. She commented that MIT’s policies and procedures have, time and again, effectively dealt with such allegations.

The particular case in this instance has been more difficult to resolve, and “it is important to look at the process to determine where it has not worked well in this case,” she said. The panel will “make recommend recommendations about factors that might have complicated the resolution of the case, and how we might extract lessons learned about our processes, to help avoid similar problems going forward,” Hockfield said.

The panel’s work will be limited to a review of procedures and will not examine
An MIT program designed to identify early signs of cancer and nanotechnolo-
gies has been named one of 12 national Cancer Nanotechnology Platform Partner-
ships of the Department of Defense (DOD).

The partnerships, announced Oct. 17, are tightly focused programs to develop the
technologies to underpin new products in the
fight against cancer. MIT's program, led by Associate Pro-
fessor Scott Manalis of biological and
mechanical engineering, will be funded
with a five-year, $3.2 million grant. It will
develop microfluidic devices whose nano-
channels are capable of concentrating rare
proteins that may serve as early signs of
cancer. Together with another chip-based
device, they will detect and quantify the
proteins.

The initial focus of the program will be
cancer prostate.

"The timing for this award couldn't be
better because we are ready to go with
our technology. We are ready to solve the
hard problems that will remain for us to cre-
ate a clinically useful fluids device that
will impact medicine in a real way," said
Manalis.

The Cancer Nanotechnology Platform
Partnerships are part of a $144 million,
five-year NCI initiative for nanotechnol-
ogy in cancer research. Earlier this month
the NCI announced that MIT and Harvard
will receive a five-year, $20 million grant to
form the MIT-Harvard Center of Cancer
Nanotechnology Excellence.

"The creators is one of several multi-
stitutional hubs across the nation that will
integrate nanotechnology across the can-
cer research continuum and provide new
solutions for the diagnosis and treatment
of cancer," it will be led by Institute Pro-
fessor Robert Langer and Professor Ralph
Weissleder, M.D., of Harvard Medical School
and Massachusetts General Hos-
ital.

MIT cancer program granted $3.2 million

FACULTY

Continued from Page 5

ine the specific allegations in the case.
Hockfield further said that, in addition to
the review panel, resolving the manner in
which an investigation of the allegations
in the case will be conducted is being
pursued at a very high level with the U.S.
Department of Defense (DOD).

Associate Provost Claude Canizaris
will chair the panel. The charge to the
panel is to (i) identify the factors that have
resulted in the specific allegations in the
case; (ii) determine their resolution of this
particular allegation of
research misconduct, (iii) recommend any
changes in policy and/or
practice that would help avoid a recur-
rence. The panel has been requested to pres-
et its findings by the middle of January.

In addition to Canizaris, panel members
are Institute Professor Mildred Dressel-
haus, physics Professor David Lister, for-
er vice president for research, and Dr.
Gerald Dinneen. Dinneen was director of
Lincoln Laboratory from 1970-77 and was
a professor of electrical engineering at
MIT from 1971-1981. He has held senior positions in the DOD and the
National Academy of Engineering.

The faculty also heard a report on
deloped changes to the Institute's disci-
plinary system.

Chair of the Faculty Lorna Gibson,
Matoula S. Salapatas Professor of Mate-
rials Science and Engineering, chaired a
committee that reviewed MIT's disciplin-
ary procedures for fairness and consis-
tency.

Currently, cases of alleged misconduct
filed with the Office of Student Conflict
Resolution and Discipline (OSCRD) are
sometimes pursued through Dean's panels
and sometimes through the Committee on
Discipline (COD).

Gibson said the committee recom-
mended a "single pathway" that funnels all
cases through the COD. The chair would
decide if an alleged infraction should be
handled by a full COD hearing, a smaller
COD panel, or, in cases where the stu-
dent admits culpability, an administrative
review.

In addition, complainants and res-
dents appearing before the COD would,
upon request, be provided with complimentary
faculty or student advisor who would help
them investigate and present their case.

Another significant change recom-

men
ded is that appeals of COD deci-
sions involve a hearing, expulsion or
revoking a degree should be made to the
chancellor, rather than the provost.

The chancellor would decide whether
to bear an appeal, and his decision would be
final. The committee also recommended
Chairman Robert E. Brown, Harvard, Princeton, Stanford and
Caltech, said the panel should be
allowed to appeal to the chancellor.

"The chancellor is the person
who oversees the lives and education of students and faculty, and it makes sense that
he would be the one to decide about issues that may come to bear on them,"
Brown said.

The proposed change in the appeal
process will be put to a vote at the November
faculty meeting.

Following the formal business of the meeting, there was opportunity for faculty
to informally raise issues or ask questions of the president, provost and chancellor.
MIT fetes New Orleans with ‘Bayou Bash’

Fall Festival concert planned to benefit victims of hurricane

Paul Crocetti
Office of the Arts

MIT’s annual Fall Festival will take on a different flavor this year. Titled “Bayou Bash,” the weekend will culminate in a benefit concert for the victims of Hurricane Katrina on Sunday, Oct. 30, in Kresge Auditorium. The event will feature numerous acts from the New Orleans area, including blues and gospel singer Marva Wright, also saxophonist Donald Harrison and special guests the Wild Magnolias, a group at “Mardi Gras Indians.”

Known for elaborate costumes designed to resemble Native American dress, the Wild Magnolias are actually, according to their web site, “black working-class groups that are part secret and spiritual society and part neighborhood social club.”

During Mardi Gras, the group parades in costume while chanting, singing and playing percussion. Folk, funk and jazz are some of the many different styles that make up the Magnolias’ sound.

While the group was able to escape New Orleans before Hurricane Katrina hit, its members lost nearly everything in the flooding. “They were able to save their current suits,” said Barbara Louviere, a residential scholar at Simmons Hall. Louviere, a New Orleans jazz expert who spearheaded the Bayou Bash weekend, has connections with many musicians from the hurricane-ravaged city. “But the old costumes from previous years were lost. They live in the Ninth Ward. I don’t know of one who didn’t lose his home and everything in it.”

Many musicians, including pianist Dave Holland, who will perform at Sunday’s concert, lost equipment and instruments. “Crawford is the musical director at a church,” said Louviere. “Someone from the church called him and said he saw his piano floating down the street.”

This concert will help these New Orleans musicians not only financially but also psychologically. Louviere said: “The whole effort is to help the culture and show the culture by bringing it to MIT,” he said.

The “Bayou Bash” weekend will feature numerous other events, including other tributes to the New Orleans music scene. On Friday, Oct. 28, there will be a parade through the MIT campus that ends with a jazz concert in the Stata Amphitheater featuring the Wild Magnolias and the Stoopers Brass Band. On Saturday in the Kresge Pit, there will be a barbecue and concert featuring the Christian McBride Big Band and the University of Tennessee chemical engineering major and saxophonist Louis Fouche, who was forced to evacuate his home in New Orleans.

Cuban architecture on view

Revolution brought a new social order to Cuba and with it a new way of looking at buildings. Following the overthrow of Fulgencio Batista’s regime in January 1959, the new Cuban government, led by Fidel Castro, launched an ambitious national building program designed to support the socialist agenda of the new regime.

The results can be seen in “Architecture and Revolution in Cuba: 1959-1969,” an exhibition of digitally restored period photographs and drawings focusing on these state building projects, on view at the Wolk Gallery (Room 7-338) through Dec. 22.

Cuba’s building campaign during the 1960s was part of a national effort to reapportion resources across a tradition-ally stratified society. Focusing on the construction of housing, educational facilities and public works, new federal agencies were created to translate the revolutionary mission into the built environment.

The task fell to a younger generation of architects, since many of the more established architects had gone into exile following the revolution. This new generation of architects included such figures as Ricardo Porro, Mario Girona, Walter Betancourt, Hugo D’Acosta and Mercedes Abreu, experimented with forms and materials to extend the tradition of modernism beyond the prerevolutionary domain of private development and the single-family house.

“Many of the designs for schools, hospitals, office blocks and other structures expanded a modernist vocabulary with new forms and meanings and appeared amazingly fresh to us today, like a circular housing complex or a pinwheel plan for a hospital,” said Gary van Zante, MIT Museum’s curator of architecture and design.

Architecture and Revolution was curated by Eduardo L. Rodriguez, a practicing architect, critic and historian who was born in Havana, and organized by the Storefront for Art and Architecture, New York. The Wolk is open weekdays from 9 a.m. to 5 p.m. For more information, call x8-9106 or visit web.mit.edu/sap/www/ wolk.
**MIT EVENT HIGHLIGHTS OCTOBER 26-30**

**MUSIC**
- **MIT Tech Talk**
  - Date: October 26
  - Time: 6 p.m.
  - Location: Building 22, Room 32-123
  - Speaker: Christian Jankowski
  - Title: "Four Tables: Projects by Lira Nikolskaya"
  - Description: Exhibit by Nikolskaya, a Ph.D. candidate at the Design and Computation program at the School of Architecture.

**TECHNOLOGY**
- **“MACBETH”**
  - Date: October 26–29
  - Time: 8 p.m.
  - Location: Wiesner Theater
  - Description: Classic Film Series: $3.

**BUSINESS/FINANCE**
- **Money & Markets**
  - Date: October 27
  - Time: 3:30–5:30 p.m.
  - Location: Kresge Auditorium

**KIDS/FAMILY**
- **HALLOWMINT**
  - Date: October 31
  - Time: 8 p.m.
  - Location: Kresge Little Theater
  - Description: Halloween party for the entire MIT community, with parade, face painters, jugglers, costumes, candy and fun.

**MUSEUMS**
- **List Visual Arts Center**
  - Date: October 26
  - Time: 6 p.m.
  - Location: List Visual Arts Center
  - Description: "Christian Jankowski: Everything Fell Together."

**EXHIBITIONS**
- **"Christian Jankowski: Everything Fell Together."**
  - Date: October 26–29
  - Time: 10 a.m.–5 p.m.
  - Location: MIT Museum
  - Description: Exhibition "Christian Jankowski: Everything Fell Together."

**WORKSHOPS**
- **"Luyeyuan Campus"**
  - Date: November 4
  - Time: 4–6 p.m.
  - Location: 3-133

**ARTS**
- **"MACBETH"**
  - Date: October 26–29
  - Time: 8 p.m.
  - Location: Wiesner Theater
  - Description: Classic Film Series: $3.

**SCIENCE/TECHNOLOGY**
- **"Close-Up (Nama-ye Nazdkizl)."**
  - Date: October 26
  - Time: 6 p.m.
  - Location: List Visual Arts Center
  - Description: "Close-Up (Nama-ye Nazdkizl)."

**EDITOR'S CHOICE**
- **"MACBETH."**
  - Date: October 27
  - Time: 8 p.m.
  - Location: Kresge Little Theater
  - Description: Shakespeare Ensemble fall production. $8, $6 students. Oct. 27-29 and Nov. 3-5.

**MIT EVENT HIGHLIGHTS OCTOBER 31–NOVEMBER 6**

**MUSIC**
- **Trinity Night at The Thirsty Ear**
  - Date: October 31
  - Time: 9–11:30 p.m.
  - Location: The Thirsty Ear Pub

**SPECIAL INTEREST**
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