Volume 49 – Number 26
Wednesday – May 4, 2005

TechTalk
SERVING THE MIT COMMUNITY

Hockfield inauguration

May 2-7, 2005

- ‘White Noise/ White Light’ opens festivities
- Academic procession demystified
- Ceremonial music previewed

See Pages 4-6

PHOTO / **DONNA COVENEY**

Langer wins top medicine prize

Elizabeth Thomson
News Office

Institute Professor Robert S. Langer has won the $500,000 Albany Medical Center Prize in Medicine and Biomedical Research, America's top prize in medicine.

"The world owes an infinite debt of gratitude to Dr. Langer for his pioneering work in the field of drug delivery systems that has improved the lives of more than 60 million people each year," said James J. Barba, chairman of the board, president and chief executive officer of Albany Medical Center.

"Dr. Langer's work has spawned revolutionary advances in cancer treatment, has given birth to an entirely new field of biotechnology known as tissue engineering, and most recently has fueled the development of cardiac stents that have virtually eliminated the risk of restenosis in patients undergoing treatment for cardiovascular disease.

"On a personal note, this is a particularly exciting day for all of us with ties to the Capital Region, as this is the first time the Selection Committee has chosen an outstanding scientist who also happens to be an Albany native, a true hometown hero," said Barba. Langer was born at Albany Hospital, the forerunner to the Albany Medical Center for which the Albany Prize is named.

The Albany Medical Center Prize is one of the largest prizes in medicine worldwide, second only to the Nobel Prize in Physiology and Medicine.

Langer reported being "thrilled and shocked" when he learned of the honor. "It's humbling to be in the company of the people who've already won this prize," Langer said. Previous recipients include Dr. Anthony S. Fauci, a scientific leader who was recognized for his seminal work on AIDS and other diseases of the immune system, and Dr. Arnold J. Levine, who co-discovered the p53 protein, described as perhaps the most important tumor suppressor gene in human cancer.

Langer was selected for the Albany Medical Center Prize for his entire body of scientific work, most notably his seminal research on polymer-based drug delivery systems, which has allowed clinicians to control the release of large molecules in a slow, steady and controlled manner. Prior to Langer's groundbreaking discovery, many large molecules could not be used therapeutically because they could not be given orally nor could they be delivered via injection since the body's enzymes attacked and destroyed them.

The practical application of Langer's work has led to the development of an array of plastic devices that are surgically implanted to deliver medicines and hormones in precisely regulated amounts over long periods of time.

Langer's research is credited with paving the way for the advent of a radical new discipline called tissue engineering, which scientists hope will one day obviate the need for donor organs. He is also credited with helping to develop the concept of local chemotherapy.

The Albany Medical Center Prize was established in November 2000 following a $50 million gift commitment to Albany Medical Center from Morris "Marty" Silverman, a New York City businessman and philanthropist who was born in Troy, N.Y., and educated in nearby Albany.

Dresselhaus honored with Heinz Award

Institute Professor Mildred Dresselhaus has won the 11th Heinz Award for Technology, the Economy and Employment in recognition of scholarship that has helped keep the United States on the cutting edge of nanostructures and other technologies.

Dresselhaus, an advocate for increased opportunities for women in the sciences for more than four decades, is among five distinguished Americans selected to receive the $250,000 awards, presented in five categories by the Heinz Family Foundation.

Dresselhaus

"Throughout her career, Dr. Mildred Dresselhaus has combined significant scientific accomplishments and prominent leadership roles with an abiding commitment to support the advancement of women in the sciences," said Teresa Heinz Kerry, chairman of the Heinz Family Foundation.

"Amid public debate over the capacity of women to thrive in a scientific environment, Dr. Dresselhaus' esteemed career provides a decisive and resounding answer. Her quiet leadership, serving as a generous mentor and role model to countless women over the years, has had a profound impact on the scientific opportunities that are available to women today. We are pleased to recognize her life's work with the Heinz Award for Technology, the Economy and Employment."

Said Dresselhaus, "Among my greatest satisfactions—in addition to a marriage of 47 years and the raising of four wonderful children—has been empowering the young women who have been inspired to pursue a scientific calling. I hope that this award will provide additional inspiration, and I thank the Heinz Family Foundation for this tremendous honor."

Dresselhaus is one of the nation's foremost experts in the multifaceted field of carbon science. Her investigations into superconductivity, the electronic properties of carbon, thermoelectricity and the new physics at the nanometer scale have helped yield numerous discoveries.

Dresselhaus is the fourth member of the MIT faculty to receive a Heinz Award. The others are Institute Professor Robert Langer, Institute Professor Mario Molina and Institute Professor John Harbison.

Since 1993, the Heinz Family Foundation of Pittsburgh has recognized individuals whose dedication, skill and generosity of spirit represent the best of the human condition—qualities that the late Sen. John Heinz (R-Pa.), for whom the award is named, valued. The Heinz Awards will be presented at a private ceremony in Washington, D.C., on May 24.

Women share success stories

Nancy DuVergne Smith
MIT Alumni Association

When chemical engineer Elisabeth Drake '58 entered MIT 50 years ago, there were 15 women in her class, yet women's leadership and community were already vital. Katherine Dexter McCormick, a 1904 graduate and a leader in the movements for women's suffrage and birth control, played a large role in Drake's era. She invited female students to white-gloved teas and asked important questions.

Speaking at the Women's Leadership Conference held April 30 at the Hotel@MIT in Cambridge, Drake described her first tea: McCormick graciously turned to the students and said, "Young ladies, I assume you know about birth control, but I wonder if you have thought about how you are going to manage your career and your reproductive life?"

McCormick's question broke the ice that day, and she proceeded to fund a women's dormitory, which helped increase women's enrollment and build community. McCormick's leadership, drive and clear focus on balancing professional development and personal life exemplified themes that recurred throughout the day of panels and conversations among some 200 alumnae at the conference. The event, subtitled "Innovating Success," was sponsored by the MIT Alumni Association.

Leading alumnae shared stories about the challenges they had overcome in their fields through determination and hard work. Some incidents, related in breakout sessions on topics ranging from "Corporate Leadership" to "Medicine/Health Care," were overt. A skilled physician was denied board certification in San Francisco because, she was told, they only accepted one woman every other year—and it was the wrong year. Some challenges are ongoing, such as balancing work with raising children.

PHOTO / **DONNA COVENEY**

Mind and hand

Martin L. Demaine, shown with an example of his glasswork, was recently named artist-in-residence in the Department of Electrical Engineering and Computer Science. "I believe it's important for students to be able to express themselves visually as well as technically," said Demaine. "Being both an artist and a researcher, I'm eager to help bridge the communication gaps between the two groups, as both groups have much to gain by understanding one another." Demaine has been a visiting scientist in the Computer Science and Artificial Intelligence Laboratory since 2001.

Stata Center earns Grand Award for 'green' engineering

The Ray and Maria Stata Center has won a Grand Award from the American Council of Engineering Companies.

Judith Nitsch Engineering of Boston, which worked on the site design for the Stata, was honored at the council's 39th annual gala in Washington, D.C., on April 11.

The ACEC's annual Engineering Excellence Awards recognize innovation, expertise and ingenuity in engineering achievement. The council's top honor is its Grand Conceptor Award, which this year went to an Everglades restoration project. The council gave out seven Grand Awards and 16 Honor Awards.

Designed by architect Frank Gehry, the Stata Center includes many environmentally friendly features. To complement these features, the site's landscape design used a "biomimicry" concept that reintroduces natural systems such as varied topography and vegetation into the built environment.

Judith Nitsch Engineering designed the infrastructure systems that made this concept both feasible and functional. Stormwater runoff is naturally treated through a series of constructed wetlands, and some of the stormwater is harvested for toilet flushing, which saves water and sewer costs.

Last year, Simmons Hall, the first major building in the country to use a mixed-mode system for ventilation, received an Honor Award from the ACEC.

HOW TO REACH US

News Office
Telephone: 617-253-2700
E-mail: newsoffice@mit.edu
http://web.mit.edu/newsoffice

Office of the Arts
http://web.mit.edu/arts

Printed on recycled paper

Publisher
Arthur Jones

Editor
Kathryn O'Neill

Photojournalist
Donna Coveney

Production
Roger Donaghy

News Office Staff

Director ..... Arthur Jones
Senior Communications Officer/
Science Writer ..... Denise Brehm
News Manager/Editor ..... Kathryn O'Neill
Senior Communications Officer ..... Patti Richards
Assistant Director/
Science and Engineering News .... Elizabeth Thomson
Assistant Director/Photojournalist ..... Donna Coveney
Senior Writer ..... Sarah Wright
Web Developer/Editor ..... Lisa Damtoft
Reporter/Writer ..... Sasha Brown
Operations/Financial Administrator ..... Myles Crowley
Administrative Assistant II ..... Mary Anne Hansen
Administrative Assistant II ..... Patti Foley
Computer Support Assistant ..... Roger Donaghy

Tech Talk is published by the News Office on Wednesdays during term time except for most Monday holiday weeks. See Production Schedule at http://web.mit.edu/newsoffice/techtalk-info.html. The News Office is in Room 11-400, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA, 02139-4307.

Postmaster: Send address changes to Mail Services, Building WW15, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA 02139-4307.

Subscribers may call 617-252-1550 or send e-mail to mailsvc@mit.edu.

TechTalk is distributed free to faculty and staff offices and residence halls. It is also available free in the News Office and the Information Center.

Domestic mail subscriptions are $25 per year, non-refundable. Checks should be made payable to MIT and mailed to Business Manager, Room 11-400, MIT, 77 Massachusetts Avenue, Cambridge, MA 02139-4307.

Periodical postage paid at Boston, MA. Permission is granted to excerpt or reprint any material originated in Tech Talk.

Biomedical innovation center launched

In the wake of such major blows to the pharmaceutical industry as the recent FDA announcement that many popular pain medications pose serious health risks, MIT has announced it will bring representatives from business, government and academia together to work to transform the industry.

Starting this summer, the MIT Center for Biomedical Innovation (CBI) will begin developing ways to more efficiently and safely move advances in the life sciences from the laboratory into actual public health use. The center will build on MIT's special strengths across the disciplines of science, engineering and management, while also drawing upon expertise from Harvard Medical School.

"At MIT, we have a tradition of collaborating across disciplines to work on important challenges. This is an industry under siege, and it is reacting enthusiastically to CBI," said Richard Schmalensee, dean of the MIT Sloan School of Management. "We don't necessarily promise to be an industry ally, but we offer the promise of neutral ground and unbiased expertise."

Beginning with a two-day "All Stakeholder Summit" set for June 16-17, the center aims to create a "safe harbor" in which professionals across the biomedical spectrum—from medical researchers to federal regulators and payers, to experts in finance and marketing—will be able to better appreciate one another's concerns and needs. Serious challenges created by the recent recalls of widely utilized pharmaceutical products make it especially important to break through traditional "silo thinking," said Dr. Frank Douglas, the former executive vice president and chief scientific officer of Aventis SA, who will lead the new center.

"It is very clear to me that this industry faces serious issues," said Douglas. "The productivity of large pharmaceutical innovation has decreased. We lack the ability to properly predict the side effects of new compounds, and we don't have good ways to monitor and assess them once they are in the market. Pricing models have become untenable. So has the 'blockbuster' mentality. Across the board, a lot of old models really need to be examined, and CBI is where it can happen. We will bring together stakeholders with the common objective to find solutions that will transform the industry."

The center will also focus on emerging biotechnology and medical device issues. Other faculty co-directors include Professors Ernst Berndt from MIT Sloan, Steven Tannenbaum from biological engineering and Anthony Sinskey from biology and the Harvard-MIT Division of Health Sciences and Technology.

CBI is lining up funding from a variety of public and private sources. Douglas, who earned international recognition as a leader in innovation in pharmaceutical research and development, said he chose CBI over other attractive professional options. "It's hard to find a place like the Boston-Cambridge area, with its large hospitals, large life sciences sector, large insurers, clinical research organizations, and institutions such as Harvard and MIT that are excited about working together. No other center has the potential of CBI."

"The CBI has a bold ambition: to make unimagined strides in leading-edge health care, both for patients and society," said MIT Dean of Engineering Thomas Magnanti. "I am delighted that engineering faculty, students and researchers will join forces with others across MIT and in industry and government to address one of the world's most pressing concerns."

MIT Dean of Science Robert Silbey said people involved in scientific, engineering, management and other aspects of the life sciences industry often fail to fully communicate with one another. "CBI is a way to get individuals interested in the science or the engineering talking to people about policy and management," he said. "The real beneficiaries of these kinds of conversations will ultimately be the health-care public."

Added MIT Provost Robert Brown, "By integrating scientific, clinical, economic and regulatory perspectives, CBI has the potential to translate biomedical innovation much more effectively from laboratory to patient."

PHOTO / **DONNA COVENEY**

Entertainers from Acorn Event Productions perform for those who visited the Stata Center lobby on April 28 in one of many events held on campus in celebration of MIT's Earth Day.

Campus events celebrate the earth

Sasha Brown
News Office

Colorfully dressed men on stilts, belly dancers, plants and a clothing swap were just some of the highlights of MIT's own Earth Day, celebrated on April 28 in two locations on campus.

Though Earth Day is celebrated elsewhere on April 22, MIT's Earth Day is celebrated just after spring weekend, which was the weekend of April 23 this year.

For the first time, there were two MIT celebrations, one at the Stata Center Student Street and another at Kresge Oval.

Rain hampered the outdoor activities, but the large tent on the oval and the crowd of bikes on the lawn still drew more than 100 students to the lawn to listen to live jazz and Latin music, attend a bike repair workshop, swap used clothing and eat inexpensive vegetarian fare.

"We had more people last year," said Elke Hodson who organized the celebration along with senior Jessica Lee. Both are members of Students for Global Sustainability, one of the many sponsors of the event.

Hundreds of people also walked through the Stata Center lobby where the Working Group for Support Staff Issues Recycling Committee set up a booth along with Office Depot, which marketed "green" office supplies. Additional activities in Stata included videos on sustainability and the environment as well as raffles and entertainers.

"It has been a good afternoon," said Anne Wasserman of the Working Group, who, along with other members of the team, was busy handing out plantable bookmarks that sprout in water and information on campus recycling. "We have had many people come through."

During the Earth Day celebration, both Random Hall and Westgate received prizes for participating in RecycleMania, a contest to see which of about 40 U.S. universities could collect the most recyclables in two months. MIT finished in the top 10 overall and Random and Westgate were the top finishers among the MIT dorms.

On April 29, Steven Lanou, program manager for sustainability initiatives in the Environmental Programs Office, led a "Walking Green Campus Tour" of earth-friendly campus spots, including the co-generation power plant and the Stata Center's biofiltration installation.

"Earth Day is really about getting the word out," said Lee. "It is just another chance to tell everyone about conservation."

MIT report debunks housing myths

The one thing that everybody close to Boston talks about—besides the Red Sox—is the high cost of housing. But affordable housing can be an even more controversial subject than the Sox. Fortunately, one point of contention has now been authoritatively resolved. A report from the Center for Real Estate (MIT/CRE) debunks the notion that affordable housing developments depress the values of nearby single-family dwellings.

MIT/CRE researchers completed a painstaking study of seven affordable housing projects in six towns in suburban Boston and found that these mixed-income, high-density rental developments—so-called 40B developments—have no adverse effects on nearby property values. The projects studied—two in Littleton and one each in Mansfield, Norwood, Randolph, Wilmington and Woburn—were deliberately chosen because they included "suburbanites' worst nightmares," some of the most dense and controversial 40B projects completed in Massachusetts between 1980 and 2000.

The researchers—Henry Pollakowski, David Ritchay and Zoe Weinrobe—established carefully drawn "impact areas" to delineate the neighborhoods in which developments were located. To define the boundaries of the impact areas, they tapped many different sources of information, including zoning and land use maps, aerial photographs, road atlases, site visits and meetings with local officials. Property values in the impact areas were then compared to values in the rest of the town over a number of years, using data from 36,000 property sales between 1982 and 2003.

The study's findings were presented by Pollakowski, the team leader as well as director of MIT/CRE's new Housing Affordability Initiative, during a briefing and panel discussion on April 27. The results, Pollakowski says, were striking: In all cases, house price movements in the impact areas simply "tracked" those in nearby market areas.

The panelists, representing the full spectrum of state and municipal perspectives on affordable housing, were not surprised by the study's results. Fred Habib, deputy director of the Massachusetts Department of Housing and Community Development, commented, "We never hear complaints about the developments themselves once they're actually built." But he was relieved that independent research could confirm what up until now has been merely anecdotal evidence. As Habib summed up, "I absolutely think [the report] will be viewed with suspicion—all these things are—but it's got MIT behind it."

The panelists quickly moved on, noting that the debate would now shift to other areas. Marc Draisen, executive director of the Metropolitan Area Planning Council, touched a nerve when he said that much of the opposition to affordable housing is expressed in "code." "The arguments [against affordable housing] are arguments of race and class," he said, "but it's no longer polite to say those things, and it's no longer polite for public officials to make the statement I just made." One study won't change things, he noted, but he hoped that "the center's work will chip away at the armor we use to oppose these things; more studies and forceful and dramatic leadership will lead to a gradual turn-around."

The full report, "Effects of Mixed-Income, Multi-Family Housing Developments on Single-Family Housing Values," which includes an executive summary, is available on MIT/CRE's web site, web.mit.edu/cre/.

Academic procession steeped in tradition

Sasha Brown
News Office

The inaugural ceremony on May 6 celebrates not only the beginning of Susan Hockfield's official term as MIT's 16th president, but also marks a new phase for the Institute itself.

Hockfield will be welcomed by more than 60 delegates from the worldwide academic community who will have traveled to MIT from Japan, England, California, North Carolina, Minnesota and elsewhere both to celebrate the Institute's new president and to participate in one of the main traditions of academe—the inaugural ceremony.

The word inauguration is defined as a "rite of passage that marks a formal induction to an office," according to MIT's official inauguration web site. The many delegates from the Academy come to celebrate this start of a new era for MIT.

In accordance with tradition, an academic procession will precede the ceremony. The delegates will march in academic dress from Walker Memorial to Killian Court starting at about 1:45 p.m. Friday. Following the traditional order for an inauguration, delegates of academic institutions will be followed by delegates of learned societies and other associations, followed by faculty, trustees and speakers. The new president processes last.

Delegates march in order of the founding dates of their institutions.

For Hockfield's inauguration, the first delegate to process will be Neil Malcolm of the University of Oxford, which was founded in 1249. David Good of the University of Cambridge, founded in 1284, will follow. The first delegate from an American University will be Lawrence Summers, president of Harvard University, founded in 1636, who will be third in line. Former MIT Chancellor Lawrence Bacow, now the president of Tufts University in Medford, will also process.

The academic robes that delegates wear date back to the 12th and 13th centuries and are a holdover from the days when most academics were also clerics. Black is the standard color of robes for bachelor and master degree robes. Doctoral degree robes can be either black or a special design and color designated by the institution. Since the robes worn by governing board members and other officials are often quite different from the standard, there should be a variety of robes on view Friday.

Hockfield's robe is based on the robe worn by President Emeritus Paul Gray during commencements, which is not the one he wore for his own inauguration. It is described on the official inauguration web site as a "modified doctoral degree robe in silver–gray with silver–gray velvet front panels, extending around the neck to a V–point in the back, and to the bottom of the hem in front. There are five cardinal red bars outlined in silver-gray piping on the left sleeve, representing MIT's five academic schools. A cardinal red stole outlined in silver–gray piping displays 16 decorative horizontal 'figure 8' motifs, representing the number of MIT presidents and is draped over the left shoulder. The sleeves and yoke are lined with red satin. An eight–sided, silver–gray tam with a metallic–silver tassel is worn with the robe." Hockfield chose not to wear the hood of her alma mater as part of her presidential regalia.

There are standards for the hoods worn by the Academy. According to the inauguration web site: "All hoods are black and lined with the color or colors of the institution conferring the degree. The velvet trim is indicative of the subject to which the degree pertains. No hood should ever have its trim divided to represent more than one degree.

"Black mortarboards with black tassels are the standard to be worn by all degree recipients. The only exception is for those with a doctoral degree or officials of institutions who may wear a tam with a gold tassel or of a color coordinated to special design regalia."

Once the procession arrives at Killian Court, an honor guard, made up of members of the MIT Campus Police Honor Guard and MIT ROTC cadets, will head down the center aisle of the ceremony tent, ascend the stage and present flags. Next, the delegates will be led down the aisle by the chief marshal, who will carry a ceremonial mace.

The chief marshal is James Champy, life member of the MIT Corporation. Champy headed the Corporation Committee on the Presidency.

Ceremony centers on MIT charter

For all the pomp and circumstance surrounding inauguration week, the key event is surprisingly simple.

President Susan Hockfield will officially become the 16th president of MIT when she accepts the university charter from Dana Mead, chairman of the Corporation at the ceremony on Friday, May 6.

The Corporation is the supreme governing body of the Institute.

Mead will be assisted in the investiture by Presidents Emerti Paul E. Gray, Howard W. Johnson and Charles M. Vest.

Mead, who is essentially the master of ceremonies for the inauguration, is also going to open the ceremony and introduce Professor Alison Richard, vice chancellor of Cambridge University, who has been chosen to offer greetings to Hockfield on behalf of the Academy. Richard served as the provost of Yale University for eight years just preceding Hockfield's tenure in that post.

After accepting the charter, Hockfield will deliver her inaugural address.

For those interested in learning more, the MIT Museum is presenting a small display, "A Celebration of MIT Presidents and Inaugurations Past," which features photographs and inaugural ephemera from the MIT General Collection. A separate case will highlight Hockfield's inauguration. The display will run through the summer.

—Sasha Brown

Robot contest puts design into action

Sarah H. Wright
News Office

MIT's 35th annual festival of anguish, elation and extreme engineering —the 2.007 Mech E Design Contest–takes place on May 12 and 13 at 6 p.m. in Johnson Athletic Center.

The mother of all robot contests, 2.007 has been replicated worldwide in engineering schools and on television. This week, visitors and robot contest fans have a unique chance to view a video history of 2.007 and to get an insider's preview of the 2005 contest in an inauguration week event, "Learning by Design," to be held Thursday, May 5, from 1 to 3 p.m. in Building 10-250.

Alexander Slocum, professor of mechanical engineering and MacVicar Fellow, emcees the two-night elimination tournament every year. For "Learning by Design," Slocum will comment on the 2.007 experience and on the types of contest entries he's seen—from "bulldozers" to "extendo lazy-tongs bifurcated doo-hoppers." The event will open with a video of contestants from past competitions biting their nails and shouting for joy.

Meanwhile, down in the Pappalardo Lab (Building 3-030), students are revving up for the final rounds of this year's contest on May 13th. The annual 2.007 contest concludes the mechanical engineering course Design and Manufacturing I, taught by MIT faculty and staff under Slocum's direction. The contest is a final exam, "two evenings of reality-meets-theory. This is when physics hits the road," said Slocum.

Inside 2.007

Course 2.007 begins in February, when each one of 130 students in the class is given a kit of nearly 100 items ranging from electric motors to structural elements (wooden slats, aluminum sheets, steel rods, plastic tubing, rubber bands) to springs, gears and bearings.

Machines designed and built for 2.007 must fit into a box roughly the size of a picnic hamper. On contest night, each machine has 45 seconds to complete certain tasks—gathering plastic bottles, ping-pong balls or hockey pucks, moving glass marbles, or playing tug of war—while a competing machine does the same tasks within the playing area. The final rounds of 2.007 are invariably crowd-pleasers.

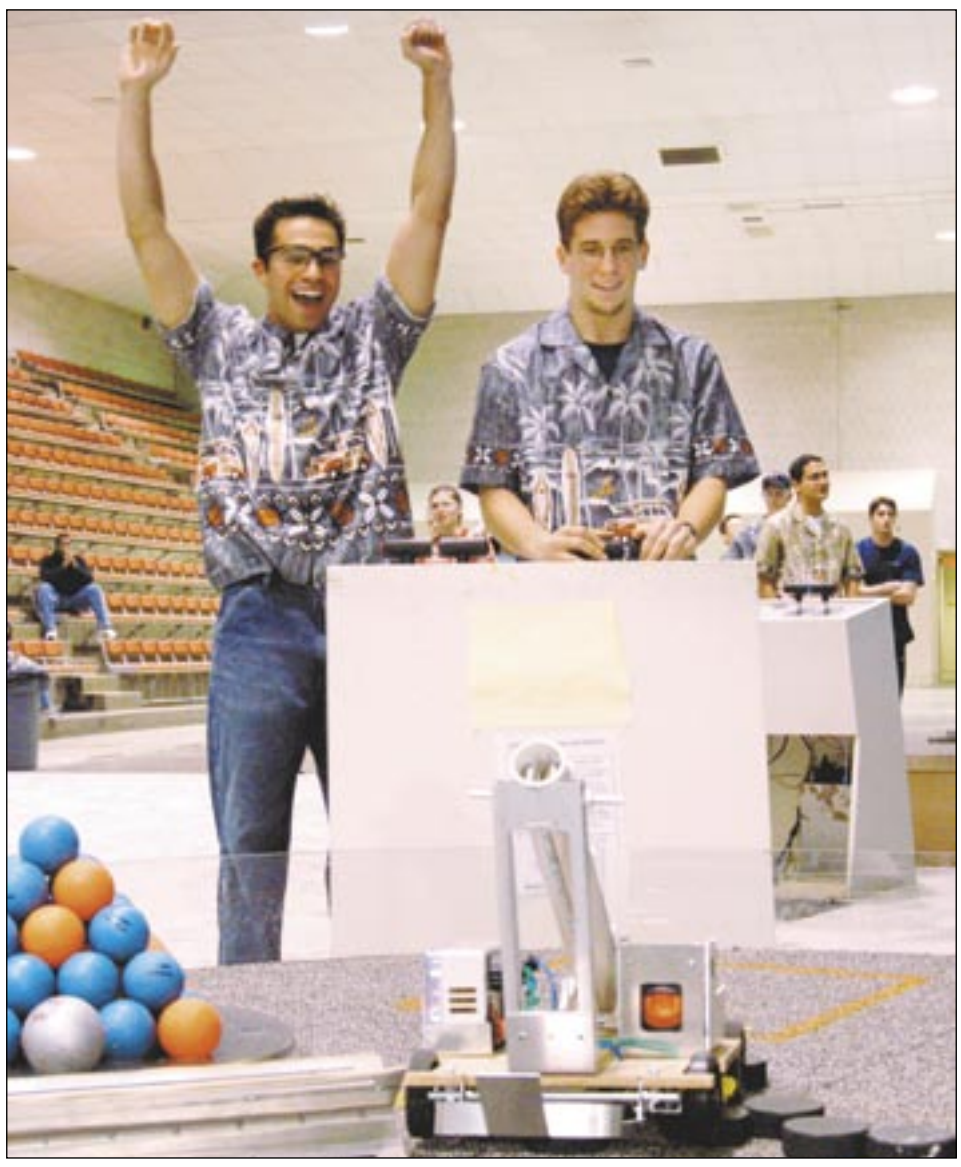

PHOTO / **L. BARRY HETHERINGTON**

Dean Ljubicic, right, scores the winning shot in the 2004 contest, 'The Big Dig.' Co-driver Salvatore Pallante, left, leads a victory cheer.

The 2.007 contest (originally the 2.70 contest) evolved from a 1970 "creativity kit," developed with the help of then-graduate student Woodie S. Flowers, now MIT's Pappalardo Professor of Mechanical Engineering.

Contests are named annually. "A Better Mousetrap" occurred in 1972. Since then, 2.007 titles have ranged from the political ("Watergater," 1974) to the pop-cultural ("The Cuckoo's Nest," 1988) to the extreme-environmental ("Ballcano," 1997; "MechEverest," 1998). This year's "Tic Tech Toe" is inspired by the façade of Simmons Hall.

Motor memory

Each round of the contest is a mere sliver of time, but those seconds can affect a lifetime. No one seems to recover from 2.007. Past winners and contestants who returned to MIT to celebrate the contest's 30th birthday in 2000 spoke about the course as if they were still competing. Some keep portraits of their robots handy, like family pictures. Others brood on retooling for victory.

PHOTO / **DONNA COVENEY**

Danielle Chou, left, helps with a machine in its early design phase during the 2002 contest.

"It is the purest form of design you will ever experience. It changed my perception on engineering and design, as well as my own ability and confidence," said Aaron G. Flores (S.B. 1991, S.M., Ph.D.) winner of "Not in My Backyard," 1989.

"I cheer myself up by recalling that I won 2.007, and when I speak to alumni I refer to winning as the highlight of my academic career," said Brian G. R. Hughes (S.B. 1977), Alumni Association president 1999-2000 and winner of "The Great Can Test" in 1976.

"Sometimes I still have nightmares," said George S. Lechter (S.B. 1975, S.M.), winner of "The Great Water Waiter Race," 1972.

Thomas H. Massie (S.B. 1993) returned to compete in an anniversary alumni contest in 2000, seven years after his victory in "Pipe Dreams." Massie and his wife, Rhonda, worked for three days and nights to build a silvery one-armed rock-sweeper for the battle. The Massies' machine was fierce, but not triumphant.

But the spell doesn't wane. As Massie and his family packed up to leave Johnson, the 2.007 veteran surveyed the familiar scene—cables running every which way, elated students shouting, children chasing street hockey balls—with happiness. For an engineer, there's something irresistible about building, rebuilding and starting all over again.

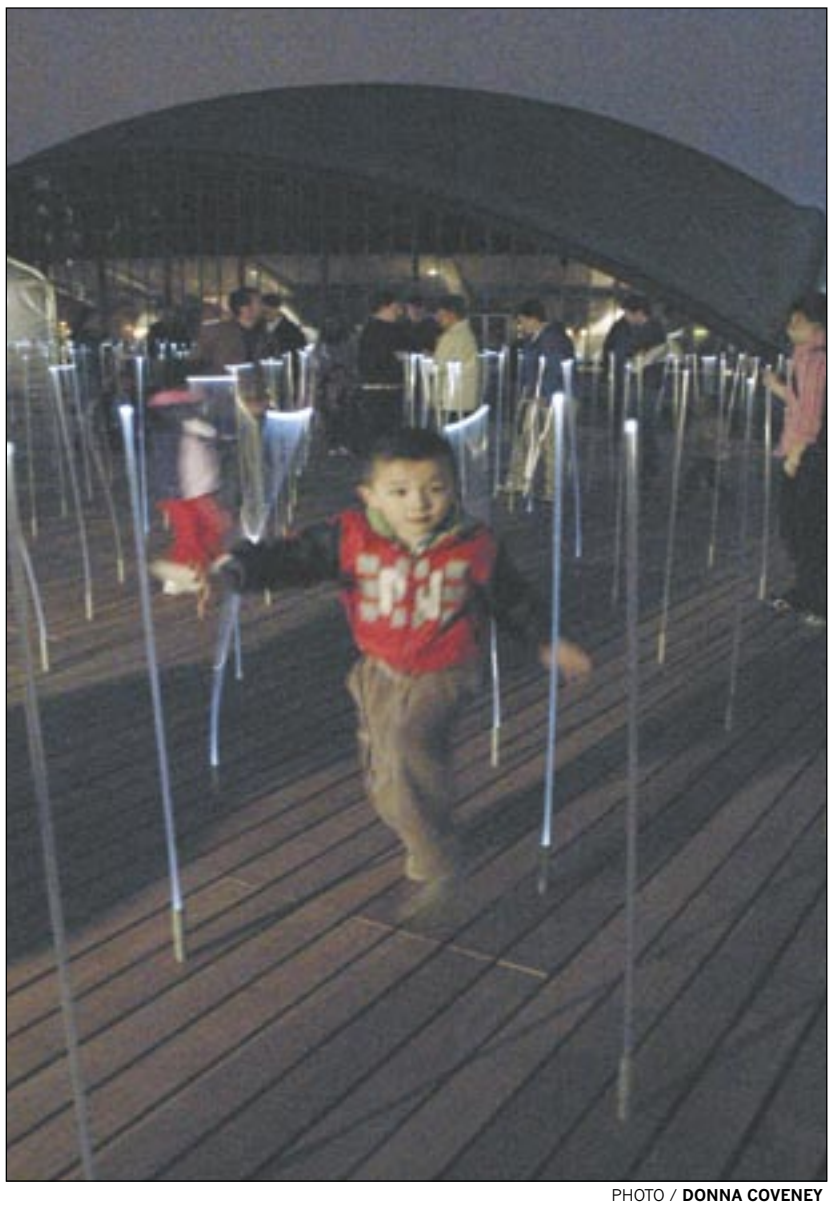

PHOTO / **DONNA COVENEY**

'White Noise/White Light' lights up as Yi Fan runs through the exhibit Monday evening on Kresge Oval. The boy's father is a Sloan professor visiting from Beijing.

Celebration begins with a joyful 'Noise'

Sasha Brown
News Office

President Susan Hockfield and her family became the first at MIT to walk through the "White Noise/White Light" art installation, which opened May 2 before a crowd of more than 100 students, faculty and staff to officially signal the start of the inauguration week.

The installation, designed by J. Meejin Yoon, assistant professor of architecture at MIT and commissioned by the city of Athens, Greece, for the 2004 Olympics, consists of a grid of chest-high rods that light up and emit soft noises as people walk through them. It will be open throughout the week from dusk to 11 p.m.

Monday's opening ceremony stayed true to the inaugural theme, "Uncommon | In common," by providing a variety of "uncommon" desserts, including fried cheesecake, s'mores fondue, flavored crème brulée, build-your-own Napoleons and assorted other miniature treats.

"I came for the food," joked freshman Mike Yee, who was impressed by the variety and the creativity of the desserts. He said he was looking forward to hearing from the new president, adding that he had confidence that she would be a good leader for the Institute.

The evening also featured tap dancing by the MIT Dance/Theater Ensemble, directed by Associate Professor Tommy DeFrantz. The group of three women entertained the crowd in fedoras, MIT T-shirts and black pants while tapping to energizing instrumental jazz.

When she took the podium, to thunderous applause, Hockfield thanked the community for all its support. "It has been one of my great joys to get to know the students of this remarkable institution." She said one of the best features of MIT is the "creative blood that flows through everything we do." And then she signaled for the official opening of the installation: "Let the 'White Noise/White Light' begin."

Physics major Vasudha Shivamoggi said she had heard Hockfield speak before and found her to be both impressive and inspiring. Shivamoggi, a senior, said she is sad to be leaving just as Hockfield begins her time here. "I wish I had more time to find out what will happen," she said. "I am really excited about her."

The tent on Kresge Oval started filling up around 7 p.m. on Monday. Colored balloons were displayed along all the walkways leading up the tent. As the light began to fade, the dancing started.

Professor Steven Lerman of civil and environmental engineering opened the ceremony in his role as chair of the Inaugural Committee.

"Events like these give us all an opportunity to come together and take note of this wonderful institution," said Lerman who called the week "a celebration not just of our new president, but of MIT itself."

Lerman noted that, "All of us at MIT are too often like fish in the ocean—we never stop to enjoy the water." Inaugural week is designed to help people at MIT pause to notice the "things that make MIT uniquely uncommon," he said.

Graduate Student Council President Barun Singh introduced Hockfield, whom he has worked with closely these past few months to help her understand the "student perspective."

"Any unique institution requires a unique leader," said Singh in his remarks. "She is certainly up to the challenge of inspiring this institute and leading us forward."

PHOTO / **DONNA COVENEY**

Tap dancers from the MIT Dance Ensemble add to festivities on Kresge Oval Monday night as a week of inaugural events got under way. From left, Kameka Dempsey, a graduate student at Harvard, is joined by MIT alumna Stephanie Chiesi (currently at Draper) and sophomore Anna Massie.

PHOTO / **DONNA COVENEY**

Susan Hockfield, center, enjoys a performance by the MIT Dance/Theater Ensemble with her husband, Dr. Thomas Byrne, and their daughter, Elizabeth Byrne, at the opening ceremony of inauguration week.

Uncommon music composed to honor president

Mary Haller
Office of the Arts

The live music for Susan Hockfield's inauguration combines multicultural, ancient and modern elements thanks to four diverse works commissioned for the event Friday, May 6, in Killian Court.

"Sabar Gong," featuring MIT's Gamelan Galak Tika and members of MIT's Senegalese Drumming Ensemble, Rambax, will open the ceremony, which follows the inaugural procession.

Gamelan Galak Tika, founded in 1993 by Evan Ziporyn, Kenan Sabin Distinguished Professor of Music and head of MIT's Music and Theater Arts Section, is based on the small orchestra of mostly metallic percussion instruments—gongs, xylophones and hand drums—that is the primary source of all religious and concert music in Bali, Indonesia.

Rambax, an ensemble dedicated to the art of sabar, a vibrant drum and dance tradition of the Wolof people of Senegal, West Africa, is currently directed by Senegalese percussionist Lamine Touré, an MIT artist-in-residence.

Ziporyn and Toure collaborated for the first time in composing "Sabar Gong." Their goal was to "find common ground, build a piece around that and make a joyful noise," Ziporyn said.

The inaugural theme–Uncommon/In common—also inspired Ziporyn, he said. "I thought it would be nice to use it to represent all the non-Western performing traditions at MIT. 'Sabar Gong' also represents the spirit of collaboration and the unusual results that come from putting diverse minds together," he said.

Rambax and Galak Tika share rehearsal space in MIT's World Music Center in Building N52.

"Chorus From Pindar," Institute Professor John Harbison's piece for unison chorus and brass quartet, will be performed by the MIT Chamber Chorus under the direction of Lecturer William Cutter, MIT's Director of Choral Programs, just prior to the presentation of President Hockfield.

Harbison's two-minute piece was inspired by Pindar's odes of two millennia ago and composed especially for the inaugural ceremony. Pindar, renowned lyric poet of ancient Greece, praised victories achieved in the Pythian, Olympic and Nemean games with songs of joy and thanksgiving.

Harbison joined the MIT faculty in 1969 and won the Pulitzer Prize in 1987 in music for The Flight Into Egypt, a choral-instrumental ensemble.

Lecturer Elena Ruehr was also inspired by poetry in composing her piece, "In Time of Silver Rain," a two-minute fanfare to be performed by the ensemble Mass Brass under the direction of Lawrence Isaacson at the opening of the ceremony.

The title comes from a Langston Hughes poem by the same name that Ruehr says is "a celebration of spring and new life and is full of rhythmic energy."

A lecturer in MIT's Music Section since 1992, Ruehr is also composer in residence with the Boston Modern Orchestra Project.

Music Professor Peter Child will also be contributing to the inaugural ceremony. His "Fanfare and Fugue" will mark the beginning of the recessional.

Scored for brass and timpani, the three-minute piece is the composer's second commission for an MIT inaugural ceremony; the first was for the inauguration of President Charles Vest in 1991. Child has composed award-winning music in many genres, and has been a member of MIT's music faculty since 1986.

The ceremony will also feature the a cappella group The MIT Chorallaries singing the national anthem and the school song, "In Praise of MIT."

In reviewing the musical lineup for inauguration day, Associate Provost for the Arts Alan Brody commented, "MIT musicians have always had a significant role to play in major MIT events and in campus life. We are all thrilled at the way in which President Hockfield has embraced and

See **MUSIC** Page 6

MIT pulls out stops for block party

Sasha Brown
News Office

Once President Susan Hockfield has been officially inaugurated, it will be time to party!

Musicians, dancers, magicians and jugglers will entertain the crowds at an Uncommon Block Party, the culminating event of the weeklong celebration held to mark the inauguration. The party will take place on Kresge Lawn and Steinbrenner Stadium from 3 to 7 p.m. on Saturday, May 7.

Students, faculty and staff are invited to wander, sample a rich choice of foods—from the healthy and spicy to the sweet and decadent—and enjoy myriad activities from the artistic to the aerobic.

It is planned as a day filled with "interesting talent that you won't see every day," said Ted Johnson of the MIT Community Services Office and the Uncommon Block Party Committee.

More than 25 different MIT performing groups will be featured at the block party, the largest event of its kind ever held at MIT. Three stages will be set up for music and dance, and guests will get a chance to try origami, juggling and silk screening as well as salsa, Indian classical dance, a cappella singing and much more.

The MIT Muses, Mariachi Internacional del Tecnolugico and Happy the Clown are slated to perform. There will also be entertainment from MIT student and American Idol participant Chris Vu and from the MIT Juggling Club, among others.

Those who enjoy testing their skills will likely enjoy the "Field of Games": Conquer the climbing wall, run an obstacle course in a clear, plastic bubble or play chess with giant pieces. There will also be inflatable games, bungee basketball and other unusual activities.

At least 2,000 people are expected to attend the party, according to Johnson, who added that he hopes the event brings students together with faculty and staff and their families, since the event is designed to appeal to all ages. In case of rain, the party will take place in tents on Killian Court. For more information, visit: web.mit.edu/inauguration.

Concerts showcase MIT's musical talents

Mary Haller
Office of the Arts

Gustav Mahler's Sixth Symphony is not for the faint of heart.

"Exhilirating," "cathartic" and "devastating" are some of the adjectives that listeners and critics have used to describe this famous and powerful piece, to be performed tomorrow night by the MIT Symphony Orchestra (MITSO) under the direction of Dante Anzolini in a special Inaugural Concert.

Yet its nickname —the Tragic Symphony—has never fully stuck, says Larry Rothe of the San Francisco Symphony, perhaps because the term is too limiting. "Mahler said that a symphony should encompass the world," writes Rothe, "giving a sense not just of the sublime and the victorious, but also a sense of the dangers and the struggles."

For MITSO director Dante Anzolini, the piece is noteworthy not only for its drama and "tragic" nature, but because "it happens to be one of the most finished works of art he—or anyone else—ever created."

What's more significant for Anzolini, however, is that MITSO has undertaken this ambitious piece. Given the "great skills our students need in order to actually perform this incredible symphony," its selection "sends a very direct message… that music is alive, well and very healthy at MIT," he said. "It can be used as a very powerful argument for the importance and relevance of the arts here."

The free Inaugural Concert will begin at 8 p.m. in Kresge Auditorium.

PHOTO / **THOMAS MAXISCH**

The MIT Symphony Orchestra, shown last fall, will perform Mahler's Sixth Symphony in the Inaugural Concert tomorrow night.

MITSO will repeat the Mahler 6 program on Friday, May 6, at 8 p.m. in Kresge Auditorium. Tickets for this second performance are $5 at the door; free advance tickets are available to members of the MIT community in Room 4-243 this week between 1 and 5 p.m.

A second Inaugural Concert will be held Saturday, May 7, by the MIT Concert Choir. The performance will feature four MIT student soloists in yet another revered and much-discussed piece of music, Wolfgang Amadeus Mozart's "Requiem." Elisabeth Hon (G), soprano; Elizabeth Smith '05, mezzo soprano; Sudeep Agarwala (G), tenor; and Eduardo Montemayor '07, bass, will perform under the direction of William Cutter.

Considered one of Mozart's most personal and impassioned works, the Requiem—his last composition—has long been shrouded in mystery. Commissioned by an anonymous Austrian nobleman, the work was incomplete when Mozart died; it is said that his widow hired one of Mozart's students to finish it.

The piece has four vocal soloists, but it is the chorus, which is featured in nearly every movement, that is really the star of the piece.

The Concert Choir will also perform Bach's "Cantata No. 50" and Beethoven's "Elegy."

Admission is $5 at the door but members of the MIT community can reserve a free ticket by contacting Vanessa Gardner in the Concerts Office; call 617-253-2826 or e-mail vgardner@mit.edu.

MUSIC

Continued from Page 5

supported all the arts as components of her inauguration week."

Steven Lerman, chair of the Inaugural Committee, agreed. "The wide inclusion of the arts into the inauguration week events reflects the committee's deep interest in showcasing all the talents that are at MIT."

"We're known globally for our world-class research and academic programs in engineering, science and management. What is less well known is the extraordinary strength of the arts programs here. We are privileged to have extraordinary composers on our music faculty, and the Inaugural Committee wanted to honor President Hockfield with some special music composed for this occasion," Lerman said.

Students offer advice to president

Sasha Brown
News Office

After months of meetings, the Student Advisory Board to MIT's 16th President released its final report to the community on April 27, offering insights into students' needs and desires in almost every arena, from academics to extracurricular activities to the future of the Institute.

Back in December, when the group of 21 students first started meeting with President Susan Hockfield, Graduate Student Council President Barun Singh, who co-chaired the board along with Undergraduate Association President Harel Willams, said he hoped that the group would help Hockfield understand the MIT culture. Last week, Singh said that goal has been met. "She's just amazing," he said. "She has been really receptive to students' views and concerns."

Singh and others on the board solicited information from students through a number of open forums and via online feedback. The final 40-page report "represents a snapshot of the many facets of MIT experience, and what we might work toward for the future from the student perspective," the report says.

The group met with Hockfield four times over the course of three months and provided background reports for her on three main topics of concern: academic, research and professional development; community life and extracurriculars; and global connections and long-term and strategic planning.

In the final report, students encouraged the Institute to continue "to recruit the most promising students and strive for an appropriate and well-considered balance." They also suggested MIT "rethink the role and content of core requirements" and pay "close attention to balancing quality and quantity of the student workload."

Students expressed an interest in forming better relationships with their professors and academic advisors, including more mentorship.

The report also touches on the general well-being of students, community resources and personal development. "MIT must be careful not to let organizational bureaucracy or 'professionalization' diminish the powerful experiential learning and risk-taking that are crucial to forging and sharpening our innovative 'MIT Edge,'" the report states.

Additionally, students stressed the importance of orientation to the general well-being of both graduates and undergraduates. Students urged the administration to encourage more student input into planning orientation programs.

Finally, the report talks about students' hopes for their alma mater. From the report: "We urge MIT faculty and administrators at all levels to be more visible leaders, that is, to rally us and the world at large, to voice our core values, and to craft unifying Institute goals and directions."

CLASSIFIED ADS

Members of the MIT community may submit one classified ad each issue. Ads can be resubmitted, but not two weeks in a row. Ads should be 30 words maximum; they will be edited. Submit by e-mail to ttads@mit.edu or mail to Classifieds, Rm 11-400. Deadline is noon Wednesday the week before publication.

FOR SALE

Very good cond. 5 year old Sofa and Loveseat, $300. Maple bedroom set dresser, chest of draws, night stand, $200. 617-253-5977 or nira@csail.mit.edu.

Media furniture. Light wood stereo cabinet, tower style w/smoked glass front, $30. Tall wooden CD rack, $10. Computer desk w/lamp, $20. Computer desk lamp, black, $10. 258-1610.

Hayward Pool Super Pump 3/4 hp. Self priming SP2605x7. Used one season. $275/bst. Laura at 253-3116 or ljtrudel@mit.edu.

Butcher Block table. 3 foot by 5 foot, trestle. 1.75 inch thick top. Oil finish. $300. Pick up in Belmont. 253-7708 or clares@mit.edu.

Next generation iPod mini, 6Gb, 1500 song capacity, PC+Mac, silver, brand new, box still shrink-wrapped, $200. Jennifer at 253-6381 or jlynch@plant.mit.edu.

1998 Honda Civic LX. Single owner, ex. cond. $5,500/bst. 781-938-0053.

HOUSING

Cape Cod Cottage: 2 BR (sleeps 5) on private road, short walk to beautiful bay beaches, deck, BBQ, cable TV/VCR, enclosed outdoor shower, bike paths nearby. June ($800/week), July 9-16 ($1,100/week), some August ($1,200/week), September ($800/week). 617-923-2223 or ganss@rcn.com.

Bedford: 7-minute commute to Lincoln Labs. Mature, non-smoker sought to share historic Bedford home. Off-street parking, storage. Rent and utilities shared (split 3-ways, Rent currently $440). 781.275.5770 or lbirak@csc.com.

Cambridge Sublet: Furnished apt. avail. June 1–Aug 31. $1,375/mo. includes all utils except phone/cable. Free parking. 800 sq. ft. Three mins to Porter T, 15 to MIT. nielsen1@mit.edu.

Provincetown Waterfront Cottage. 3 BR. avail. June, Sept., Oct. ldp@alum.mit.edu or 617-497-5937.

Vacation cottage, 50' private beach. Sleeps 6; separate studio-house for guests, adolescents. Abuts conservation-land. Avail. Aug. $800/week. Andy at 617-876-6257 or Steve at 617-876-6121.

Castine, Maine: 2 BR cottage in ocean-side village on Penobscot Bay. Walking distance to harbor, golf and tennis. $650/week. btarlin@mit.edu.

Brookline: room and bath, June, July, August, available in exchange for 8–10 hrs. per week of work. Must be responsible about watering plants. Near BU. farmthe@opifice.com.

Ocean front summer cabin, Mount Desert Island, ME: 2BD/1BA w/living/kitchen area; picture windows, deck overlooking water; stairway to beach. Mins from Acadia National Park, Bar Harbor. $1,000/week June–Sept. Steve at 253-5757 or chorover@mit.edu.

Admiral's Hill, Chelsea: 1 BR condo for sale in beautiful historic bldg. Hdwd floors, 10-foot ceilings, arched windows. Pool, pkg, storage. Easy commute to MIT. $235,000. 617-887-1985.

WANTED

Flagstones and whole bricks for small yard improvement project. Donations only, please. Will pick up within 25 miles of Acton. siggia@mit.edu.

STUDENT POSITIONS

Positions for students with work study eligibility.

"College prep" program seeks Residential Assistants for male floor and Science Teacher. M–F. Salary depends on experience, can earn up to $3000. upwardbound@mit.edu.

The Adaptive Technology for Information and Computing Lab seeks student consultant for summer/fall, 2005. Info and desc.: http://web.mit.edu/atic/www. kcahill@mit.edu. $12.50/hr, 5–15 hrs/week during term, 10–20hrs/wk during summer.

Physicists serve up the 'perfect' liquid

Elizabeth Thomson
News Office

Physicists working to re-create the matter that existed at the birth of the universe expected something like a gas and ended up with the "perfect" liquid, four teams of researchers reported at an April 18 meeting of the American Physical Society. One of the teams is led by MIT.

"These truly stunning findings have led us to conclude that we are seeing something completely new—an unexpected form of matter—which is opening new avenues of thought about the fundamental properties of matter and the conditions that existed just after [the Big Bang]," said Raymond Orbach, director of the U.S. Department of Energy's Office of Science, the primary supporter of the research.

Unlike ordinary liquids, in which individual molecules move about randomly, the new matter seems to move in a pattern that exhibits a high degree of coordination among the particles—something like a school of fish that responds as one entity while moving through a changing environment. That fluid motion is nearly "perfect," as defined by the equations of hydrodynamics.

Picture a stream of honey, then a stream of water. "Water flows much more easily than honey, and the new liquid we've created seems to flow much more easily than water," said Wit Busza, leader of the MIT team and the Francis Friedman Professor of Physics. Other MIT faculty involved in the work are Professor Bolek Wyslouch and Associate Professor Gunther Roland, both of physics.

Busza notes that the results don't rule out that a gas-like form of matter existed at some point in the young universe, but the data do suggest "something different, and maybe even more interesting, at the lower energy densities created at RHIC (Relativistic Heavy Ion Collider)."

The research has also led to several other surprises. For example, "there is an elegance we see in the data that is not reflected in our theoretical understanding—yet," said Roland.

Birth of the universe

About ten millionths of a second after the Big Bang, physicists believe that the universe was composed of a gas of weakly interacting objects, quarks and gluons that would ultimately clump together to form atomic nuclei and matter as we know it.

So, over the last 25 years, scientists have been working to re-create that gas, or quark-gluon plasma, by building ever-larger atom smashers. "The idea is to accelerate nuclei to nearly the speed of light, then have them crash head-on," Busza said. "Under those conditions the plasma is expected to form." The current results were achieved at the Relativistic Heavy Ion Collider located at the DOE's Brookhaven National Laboratory.

RHIC accelerates gold nuclei in a circular tube some 2 kilometers in diameter. In four places the nuclei collide, and around those sites teams of scientists have built detectors to collect the data. The four instruments—STAR, PHENIX, PHOBOS and BRAHMS—vary in their approaches to tracking and analyzing particles' behavior. The work reported at the APS meeting summarizes the first three years of RHIC results from all four devices. Papers from each team will also be published simultaneously in an upcoming issue of the journal Nuclear Physics A.

MIT is the lead institution for PHOBOS, a collaboration between the United States, Poland and Taiwan. "We are very small," said Busza, who developed the concept for the device. "STAR and PHENIX each cost about $100 million and have some 400 staff. We cost less than $10 million and have about 50 people," he said. (BRAHMS is also small.)

Nevertheless, the PHOBOS team got the first physics results from three of the five RHIC experimental runs and tied for first on a fourth. (The fifth run is still being analyzed.)

For one of those runs, the team collected the data, analyzed them and submitted a paper on the work all within five weeks. "That's unheard of in high-energy physics," said Busza, who credits Roland with the fast turnaround. "He was the person who managed the extraction of the physics from the data."

What's next?

Although the larger RHIC detectors will continue to collect data, PHOBOS has been retired. "From a cost-benefit perspective, we feel we've extracted as much knowledge as we can from such a small experiment," Busza said.

MIT research staff currently involved in PHOBOS are Maarten Ballintijn, Piotr Kulinich, Christof Roland, George Stephans, Robin Verdier, Gerrit vanNieuwenhuizen and Constantin Loizides. Six graduate students are also on the team; the research has already resulted in five theses, with two on the way.

PHOTO / **DONNA COVENEY**

Engineering success story

Adjunct Professor Ernesto Blanco of mechanical engineering displayed some of his inventions in the department's first-floor lounge earlier this week. Blanco, who first came to MIT in 1960, has taught Elements of Mechanical Design (2.72) since 1996. In that time, seven patents have come out of the course, including one used in the push-button operated "disappearing seats" in the Cadillac SRX. Blanco has 200 patents, but is best known for his Flip-It pancake flipper. His safety trocar (above) would prevent surgeons from accidentally puncturing internal organs during endoscopic surgery.

MIT scientists improve detection of explosives

MIT researchers have announced a scientific breakthrough that could greatly improve explosives detection for military and civilian security applications.

Scientists have developed a new polymer that greatly increases the sensitivity of chemical detection systems for explosives such as trinitrotoluene (TNT). In the April 14 issue of Nature, scientists describe a polymer that undergoes lasing action at lower operating powers than previously observed, and they demonstrate that the stimulated light emission from the lasing modes of the polymer displays inherently greater sensitivity to explosives vapors.

"What we have done is add another layer of amplification to the most sensitive TNT sensor available," said Professor Vladimir Bulovic.

Bulovic (electrical engineering and computer science) and Professor Tim Swager (chemistry) led the team that designed the novel semiconducting organic polymer (SOP) and invented the new chemosensing method. When exposed to ultraviolet light above a threshold intensity, the material undergoes a stimulated emission or a lasing process, manifested by a directed beam of light emanating from the thin SOP film. When TNT is present, it binds to the SOP surface and quenches the beam.

Because the new polymer undergoes stimulated emission at lower thresholds than earlier SOP materials, the intensity of the ultraviolet light needed to start the lasing action (pump power) is reduced by more than tenfold. This lowers the optical damage usually caused to organic molecules under intense illumination in air. By adjusting the pump power to just over the threshold needed for lasing, it is possible to dramatically attenuate the lasing emission with parts-per-billion doses of TNT vapor. The result is a thirtyfold increase in the detection sensitivity when the system is operating near the lasing threshold.

"This amplification method is extremely general," said Swager, who has previously developed a range of polymeric explosives detection systems. "I predict there will be many new fluorescent sensory schemes based on this principle."

Swager and Bulovic's invention is part of a larger program in sensing technology at MIT's Institute for Soldier Nanotechnologies (ISN), a research center devoted to improving soldier survivability through nanotechnology. New technologies for explosives sensing could help protect soldiers from improvised explosive devices, one of the greatest threats facing coalition forces in Iraq. Enhancing the sensitivity of these detection systems could increase the distance at which explosives can be identified.

Swager's previous work in explosives detection systems has been licensed from MIT and commercialized by Nomadics Inc., an Oklahoma-based company working with the ISN. Their Fido explosives detection system, which rivals the detection ability of a trained dog, is currently undergoing tests by the U.S. Army and Marine Corps in Iraq and by the U.S. Air Force for cargo screening operations.

"The ISN has been very helpful in bringing this technology to the attention of senior leaders of the Army and Marine Corps," said Dr. Larry Hancock from Nomadics. "We are very excited by the successes we have had in field demonstrations and we are working hard with the Army, Marine Corps and Air Force to meet their operational needs."

According to Bulovic, the present innovation can greatly increase the sensitivity of the Fido device.

Dr. Aimee Rose, a member of the team who made the discovery, predicts it will save many lives, both military and civilian. "To turn a laboratory discovery into a potentially lifesaving device has been an extremely gratifying experience," she said. "As a scientist, that is about as good as it gets."

Major building project in works

A special Town Hall Meeting will be held on Thursday, May 12, from 11 a.m. to noon in Room 6-120 to provide the MIT community with information about a major renovation project in Buildings 2, 4, 6, and 8 of the main group. This project will provide new and renovated space for the departments of Physics, Material Science and Engineering, and Spectroscopy as well as significant infrastructure. The project is scheduled to begin in June and will last 18 months. Jim Collins, president of Payette Associates Architects, will provide details of the project and the Facilities Department staff will review the schedule and construction impacts. Dean Robert Silbey from the School of Science, Marc Kastner, chair of physics, and Bill Anderson, chief facilities officer, will be present to provide additional information and answer questions. All interested MIT community members are strongly encouraged to attend.

AWARDS & HONORS

Michael M. J. Fischer, professor of anthropology and science and technology studies, is one of 16 new Carnegie Scholars. Carnegie Scholars receive up to $100,000 over a two-year period to pursue research. This year all 16 of the new scholars will study themes focusing on Islam and the modern world. The title of Fischer's Carnegie research project is, "Emergent Forms of Life, Deep Play and Ethical Plateaus in the Social and Technoscientific Infrastructures: Shaping Muslim Democratic Futures."

Professor **Klaus-Jürgen Bathe** of mechanical engineering received the Jacob P. Den Hartog Distinguished Educator Award during a meeting of the department's faculty on April 22. The citation reads, "For excellence in teaching mechanical engineering which has served as an inspiration for students and has fostered the development of physical insight and engineering judgment." The award includes a $5,000 honorarium and requires the winner to deliver a talk. Bathe will present the Den Hartog Memorial Lecture in the fall.

MIT EVENT HIGHLIGHTS MAY 4–8

Science/ Technology · Performance · Architecture/ Planning · Humanities
Music · Exhibit · Reading · Special Interest
Business/ Money · Film · Sports · Featured Event

Hidden Jewels

This painting by Zekiye Karaca will be presented in the "Hidden Jewels of Our Community Art Exhibit," which features professional and amateur paintings, drawings, ceramics, photography and textiles by spouses and partners of MIT graduate students. The exhibit will be in the Bush Room on May 10, 2–6 p.m. and May 11, 9 a.m.–1 p.m.

WEDNESDAY May 4

Inaugural K-12 Midway
Meet colleagues who manage K-12 outreach programs on campus and learn about their activities. 11 a.m.–2 p.m. Walker Memorial.

"An Assessment of Iraq Two Years After the End of Major Combat"
Talk by Professor Roger Petersen. Noon. Room E38, 6th floor conference room. 253-8092.

Artist Behind the Desk
Classical flutist Bonnie Cochran, office assistant, MIT Card Office. Noon. Killian Hall. 253-9821.

Inaugural Art and Technology Symposium
Inaugural symposium moderated by Alan Brody. Part of a week-long celebration of the inauguration. 4–6 p.m. Kirsch Auditorium. 253-4796.

THURSDAY May 5

Yom Hashoa—Holocaust Memorial Day "Reading of Names"
Public reading of names of the 6 million Jewish victims of the Holocaust. 10 a.m.–4 p.m. Lobby 10. 253-2982.

"Zheng He's Seven Voyages"
Professor Jin Wu of National Cheng Kung University, former Chinese minister of education, discusses the mariner's 15th-century voyages of discovery. 6:30 p.m. MIT Museum. 253-5297.

HTC Forum
Talk by Gwendolyn Dubois Shaw, Harvard University. Sponsored by History, Theory and Criticism of Architecture and Art, Department of Architecture. 6:30 p.m. Room 32-144. 258-8438.

Inaugural Concert
MIT Symphony Orchestra plays Mahler's Symphony No. 6. 8 p.m. Kresge Auditorium. 253-9800.

FRIDAY May 6

Media in Transition Conference
Explores storytelling as a cultural practice. Info and registration: web.mit.edu/comm-forum/mit4/

Symposium: Islamic Cities in the Classical Age
Special event of the Aga Khan Program for Islamic Architecture at MIT. May 6 from 2–5:30 p.m. May 7 from 10 a.m.–12:30 p.m. and 2–6 p.m. Room 6-120. 253-1400.

Inaugural Community Reception
Reception for Susan Hockfield. 3:30 p.m. Killian Court.

MIT Symphony
Dante Anzolini, music director. Mahler's Symphony No. 6. $5. 8 p.m. Kresge Auditorium. 253-9800.

"Yeoman of the Guard"
MIT Gilbert & Sullivan Players production. $12; $10 MIT community. May 5–8. 8 p.m. Sala de Puerto Rico. 253-0190.

SATURDAY May 7

"COLLISION-box"
New mergings of art and technology with a duo of interactive video-based displays. MIT Museum. Noon–5 p.m. 253-4444.

Walking Tour of Stata Center
A "point and talk" tour of the Stata Center by representatives of the companies that built it. 1 p.m. Stata information desk. 253-5297.

Memorial Reading for Robert Creeley
Celebration of the life of Robert Creeley (1926-2005). 4 p.m. Room 10-250.

Inaugural MIT Concert Choir
William Cutter, music director. $5. 8 p.m. Kresge Auditorium. 253-9800.

Resonance Spring Concert
A cappella group. 9 p.m. Room 10-250.

SUNDAY May 8

Harpsichord performance
Noon. MIT Chapel.

Two-piano performance
1:30 p.m. Kresge Auditorium.

DanceTroupe Spring Concert
2–4 p.m. $7 in advance, $10 at door. Little Kresge Theater.

MIT Women's Chorale Spring Concert
Program includes Vivaldi's "Gloria," Moravian duets by Dvorak and American songs. 3 p.m. McCormick Hall. 484-8187.

MIT Chamber Music Society Student Concert
Mendelssohn's Piano Quartet. 5 p.m. Killian Hall. 253-9800.

MIT Chamber Music Society Student Concert
Moszkowski's Suite. 7 p.m. Killian Hall. 253-9800.

Go Online! For complete events listings, see the MIT Events Calendar at: http://events.mit.edu.
Go Online! Office of the Arts website at: http://web.mit.edu/arts/office.

INAUGURATION WEEK HIGHLIGHTS

LEARNING BY DESIGN 2.007 — *May 5*
A retrospective exhibit on MIT's famous robot design contest.
Room 10-250
1–3 p.m.

INAUGURAL CEREMONY — *May 6*
President Susan Hockfield is handed the MIT charter. Music by Gamelan Galak Tika, Rambax and others.
Killian Court
2 p.m.

UNCOMMON BLOCK PARTY — *May 7*
Food and music to celebrate MIT.
Kresge Oval
3–7 p.m.

MIT EVENT HIGHLIGHTS MAY 9–15

MONDAY May 9

MIT Atmospheric Science Seminars
Talk by Robert Talbot of the University of New Hampshire. Noon. Room 54-915. 253-3715.

MIT Chamber Music Society Student Concert
Mendelssohn's Piano Quartet, Bach's Sonata in G Minor and Reicha's Quintet. 7 p.m. Killian Hall. 253-9800.

Trivia Night at the Thirsty Ear
Every Monday is Trivia Night. 21+. ID required. 9 p.m. The Thirsty Ear Pub.

TUESDAY May 10

Depression: Diagnosis and Treatment
Annual Symposium. 1-4 p.m. The Bartos Theater. 253-3091.

Physical Mathematics Seminar
Niles Pierce talk. 2:30 p.m. Room 2-338. 253-1713.

2005 Awards Convocation
4 p.m. Room 10-250. 253-7546.

MIT Chamber Music Society Student Concert
Brahms' Fünf Gesänge. 5 p.m. Killian Hall. 253-9800.

MIT Chamber Music Society Student Concert
Debussy's Sonata. 7 p.m. Killian Hall. 253-9800.

Chicks Make Flicks
Stephanie Higgins, "The Gay Marriage Thing." 7 p.m. Room 1-190.

WEDNESDAY May 11

Spring Pottery/ Ceramics Sale
9 a.m.–4 p.m. Lobby 10. 253-7019.

"Hidden Jewels of Our Community Art Exhibit"
Works by spouses and partners of MIT graduate students. 9 a.m.–1 p.m. Room 10-105. 253-1614.

MIT Chamber Music Society Student Concert
7 p.m. Killian Hall. 253-9800.

EAPS Department Lecture Series
Talk by Benjamin Lane, "Detailed Studies of Extrasolar Planets." 4 p.m. Room 54-915. 253-3382.

Opening Reception: "Sturtevant: The Brutal Truth"
Reception for the Paris-based American artist. 5:30–7:30 p.m. List Visual Arts Center. 253-4680.

THURSDAY May 12

Artist Talk: Sturtevant
Presented in conjunction with "Sturtevant: The Brutal Truth." 6 p.m. List Visual Arts Center. 253-4680.

Course 2.007 Competition, "Tic-Tech-Toe"
Robotic competition. First night of a two-night event. 6–9 p.m. Johnson Athletic Center Ice Rink. 452-2275.

IFILM Seminar
Movie based on Marguerite Duras' "L'Amant." 8–10 p.m. Room 4-237.

"Composing a Life: Explorations of Self Through Photography, Art and Writing"
Mixed media autobiographies by Experimental Study Group students, self-portrait in books and clothes by senior Teal Guidici. Weisner Gallery, Stratton Student Center second floor.

FRIDAY May 13

Harold & Arlene Schnitzer Prize in the Visual Arts Award Winners Exhibit
Through June 30. 24 hours. Wiesner Student Art Gallery. 253-7019.

4th Annual Pappalardo Fellowships in Physics Symposium
Talks by five Pappalardo Fellows. 2–5 p.m. MIT Faculty Club. 253-4800.

MIT Chamber Music Society Student Concert
Nielsen's Quintet and other works. 5 p.m. Killian Hall. 253-9800.

Shakespeare Ensemble Scene Night: Battle of the Sexes
Scenes from "Cymbeline" and "Henry VI" by Shakespeare, and "Rivers of China" by Alma de Groen. May 13–14. 8 p.m. Kresge Rehearsal Room A. 253-2903.

SATURDAY May 14

Walking Tour of Stata Center
A landscape tour of the Stata Center presented in conjunction with "Constructing Stata: Photographs by Richard Sobol" at the Compton Gallery through June 15. Meet at Stata information desk at 2 p.m. 253-5297.

MIT Ballroom End of School Dance
Evening of social dancing including ballroom and latin dances, along with favorites such as salsa, hustle and merengue. 8 p.m. Morss Hall. Yana Averbuck. 686-0823.

SUNDAY May 15

"The Clipper Ship Era"
19th-century lithographs, rare plans, photos, clipper ship cards and exceptional models. Exhibition focuses on the design, construction, speed and social experience of the clipper ship era. Noon–5 p.m. MIT Museum. 253-4444.

MIT Swapfest
MIT's electronics and ham radio flea market. $5. 9 a.m.–2 p.m. Albany Street Garage. 253-3776.

International Folk Dancing (participatory)
8 p.m. Lobdell Dining Hall. 253-FOLK.