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# TechTalk

S E R V I N G   T H E   M I T   C O M M U N I T Y

# MIT celebrates Stata Center

## New building embodies vision – and quiriness

Denise Brehm  
News Office

The speeches ranged from a paean to Frank Gehry's design to admiration for President Charles M. Vest's courage to humorous anecdote at Friday's dedication for the Stata Center, where the mood was celebratory and sweet; the dream had been realized.

The May 7 dedication ceremonies for the Ray and Maria Stata Center for Com-

puter, Information and Intelligence Sciences at MIT included upbeat speakers, tours of the whimsical new building, and demonstrations of some of the research projects it now houses, followed by outdoor music and dance performances in the amphitheater named after the late Michael Dertouzos, longtime director of the Laboratory for Computer Science.

"Computers and ways of thinking and crumpled paper and ideas slowly became a design. We moved from rhetoric to reality. The towers started to rise and so did steel prices," Vest told the audience in Kirsch Auditorium, poetically voicing a bit of angst from the construction phase. "Feet turned cold. Only Frank Gehry's

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## Digital tools went into it; innovation will come out

Sarah H. Wright and  
Elizabeth A. Thomson  
News Office

Two events to celebrate the opening of the Ray and Maria Stata Center for Computer, Information and Intelligence Sciences offered different perspectives on designing, constructing and using the new building.

Stata Center architect Frank Gehry and four MIT researchers now working in the new building addressed the media and the MIT community on Wednesday, May 5. The following day, members of Gehry's office joined the construction manager from Skanska USA to discuss the role of digital technology in the building process.

Gehry described the cultural questions that his Stata design addressed, as well as his own design process. "Cars, TV and computers all tend to alienate people, and there is a yearning in any building for a sense of community. So we needed to create a space where collisions between people occurred by accident," he said, noting with special pride the Student Street, the village center on the fourth floor and the sun-washed steps of the Dertouzos amphitheater.

Gehry's design process balanced an "intuitive" approach for the building itself with a deliberate sense of place among its neighbors, he said. To appreciate this, he suggested the audience go outside, gaze north to see the "collage of buildings"

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PHOTOS / DONNA COVENEY

Architect Frank Gehry (above) in front of his latest design—MIT's Stata Center, named for alumnus Ray Stata (left, at last week's dedication ceremony) and his wife Maria Stata.

## Student straddles worlds of engineering and rap

Sarah H. Wright  
News Office

Marc Graham's new book and CD, "Journey of The Lost Souls," combines rap poetry and music to portray the pressures he felt growing up in East Cleveland, Ohio, the delight and pride he's experienced working toward his doctorate in mechanical engineering, and the bittersweet balancing act of nourishing old and new ties.

An engineer since childhood—"only back then I didn't know that's what it was. I just always invented things and built them," he said—Graham has

already earned two MIT degrees: an S.B. in 1995 and an S.M. in 1997. His research focus is product design.

Graham's artistic focus has been as consistent as his design and engineering. He started break dancing in fifth grade, performing in "shows and on the streets. Break dancing was a form of battle—people didn't fight, they danced—but words could do a lot more than dancing," he said.

Inspired by 1980s rap artists Run-DMC and LL Cool J, Graham started; he can still perform his first rap, which he wrote when he was 11.

As rap evolved, so did Graham's love for creative writing and movies; he

found himself more drawn to story tellers. He was inspired by many artists, particularly Rakim, Public Enemy, Scarface, Tupac Shakur and Notorious B.I.G.

"Tupac and B.I.G. are based in something real—their own experience. They went through the era of Run-DMC and you can hear they're building on that. Many others do what the market wants. That's not what I wanted to do," said Graham.

What Graham does want to do with "Journey of The Lost Souls" (online at <http://www.jotls.com>) is share his gifts,

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### NEWS

#### CONTESTANTS DIG IT

An ingenious strategy spells triumph in "The Big Dig," the title of this year's 2.007 robot contest.

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#### SCIENCE IN AN AGE OF TERRORISM

A forum looks at whether scientists can do anything to limit the spread of dangerous technologies.

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### PEOPLE

#### A BAKER'S DOZEN

Thirteen from MIT are elected to the American Academy of Arts and Sciences.

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#### ACHIEVEMENTS RECOGNIZED

Recent faculty honors include PECASE and Young Investigator awards from federal agencies.

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### ARTS

#### LET THERE BE LUTE

MIT's Gamelan Galak Tika will premiere an Evan Ziporyn work for gamelan orchestra and pipa lute.

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#### PRESERVING A HERITAGE

A documentary to be screened May 12 profiles Cambodian musician Arn Chorn-Pond.

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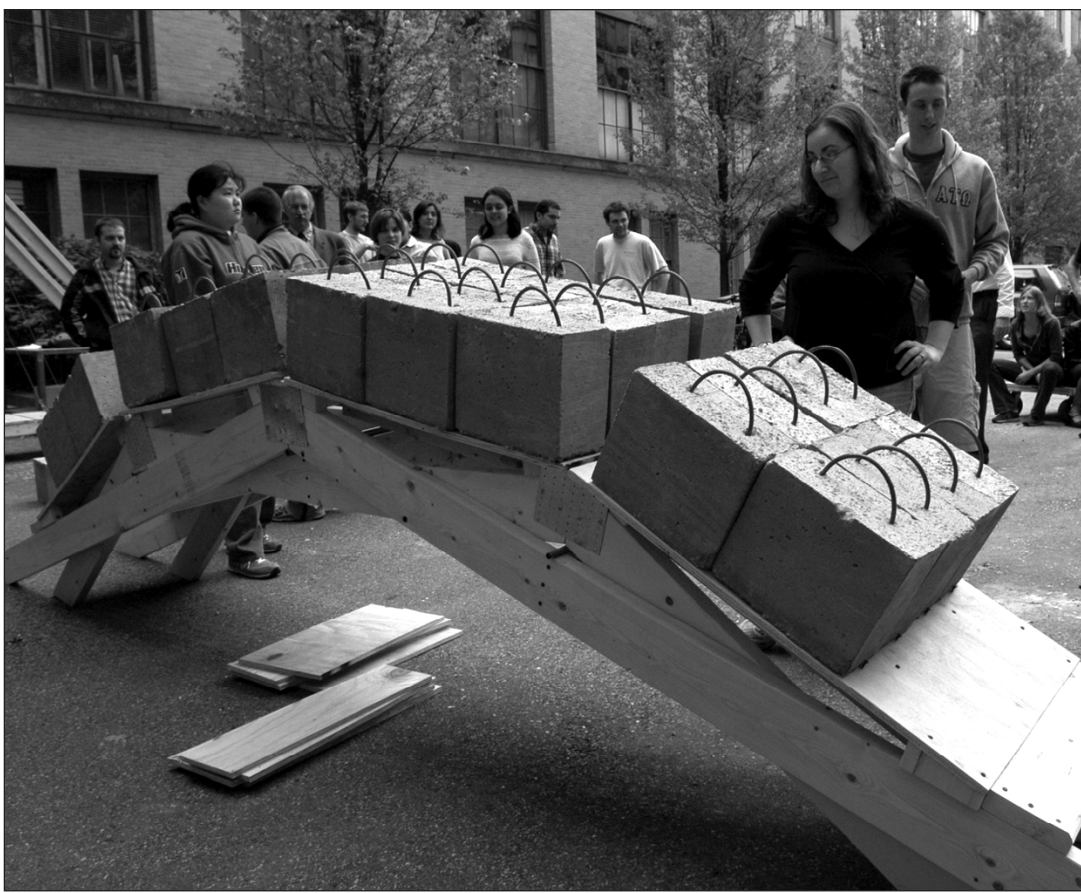


PHOTO / DONNA COVENEY

### Game of bridge

Seniors Roberta Hsu (left, in sweatshirt), Amy Dandola (right foreground) and Lyle Paladin-Tripp watch as weight is loaded onto the bridge they built in Professor Herbert Einstein's Civil

Engineering Design Project class. Students have built bridges that can hold more than a ton of concrete blocks using common and inexpensive building materials.

# Singh remembered in memorial service

Though 24-year-old MIT graduate student Bhuwan Singh was brilliant, his first love was not science but people. His role model was not Einstein, but Mother Teresa, his father said at Monday's standing-room-only memorial service attended by some 300 people in La Sala de Puerto Rico.

The speakers—who included Singh's brother, sister, girlfriend, housemaster, and friend after friend—shared stories about his selflessness, generosity, humor and leadership.

"If kindness were a religion, he spread it with unshakeable conviction. If happiness were a faith, he shared it openly. And if joy were a truth, he proclaimed it to all the world, for in the purest sense, Bhuwan was the incarnation of giving," said Singh's friend Erich Caulfield, like Singh a graduate student in electrical engineering and computer science.

"He was the most caring person I've ever known," said Professor Terry Orlando, Singh's research advisor and housemaster at Ashdown House, where Singh lived. "If there was a student I was concerned about in the house, all I had to do was ask Bhuwan. He would already know the situation, and he would advise me about

what to do."

Orlando also remembered how "every Valentine's Day, roses magically appeared for every woman in Ashdown." He knew Singh was responsible and often asked him to give him the receipts for the flowers. "He always said, 'Oh, okay, I will,' but he never did. It was just something he wanted to do."

Singh's girlfriend, Angela Chow, a student at the University of Massachusetts at Amherst, recalled that on one of their first dates, "a homeless woman approached him and he gave her all the money in his wallet. We had to go back home because he didn't have any money left." When she asked him whether he was concerned about how she'd use the money, he told her, "It doesn't matter. Even if it made her happy for one night, it was worth it."

"Bhuwan's loss constitutes a rip, a tear in the MIT community that won't be easily repaired. His influence here will linger," said Dean for Graduate Students Isaac Colbert.

Singh's body was found Friday, May 7 in a research space at the Center for Materials Science and Engineering. Foul play has been ruled out as a cause of death.

## Obituaries

**Alfredo C. Anderson** of Watertown, a senior staff member at Lincoln Laboratory (Division 8, Group 66), died on April 13 at age 62. He had been employed here since 1979. He leaves his wife, Margaret Ann Guheen. A memorial service was held on April 22 in the MIT Chapel. Donations in his memory may be made to the Boston Health Care for the Homeless Program, 729 Massachusetts Ave., Boston, MA 02118.

**Francis T. Buckley**, 78, a former truck driver in Physical Plant, died on Feb. 9. He retired in 1987 after working at MIT for 36 years.

**Samuel D. Clark**, 92, formerly a physician at MIT Medical, died on Dec. 13. He joined MIT in 1956 and retired in 1975.

**Russell G. Clisbee** of Malden, a custodian in Facilities, died on Feb. 10 at age 57. He had been working at MIT since 1981.

**Cornelia L. Colyer**, 56, an administrative assistant in the Computer Science and Artificial Intelligence Laboratory, died on Dec. 22. She had been working at MIT since 2000.

**Christine M. Cormican** of Everett, 46, a Medical Department staff member, died on Feb. 9. She had been working at MIT since 1984. Cormican leaves her husband, Robert; three daughters, Erica, Ashley and Jessica; and four sisters.

**Carol A. Costa** of Cambridge, 53, an administrative assistant in the Research Laboratory of Electronics, died on March 10. She started working at MIT in 1985.

**Philip J. Gray**, 75, a former technical staff member in the

Center for Space Research, died on Feb. 18. He joined MIT in 1985 and retired in 1996.

**Robert L. Haefner**, 71, a former grounds worker in Facilities, died on Dec. 4. He retired in 1998 after 24 years at MIT.

**Richard Macrelli** of Framingham, a former gardener at Endicott House, died on Jan. 2 at age 74. He retired in 1996 after working at MIT for 13 years.

**Mary Maniccia**, 98, a former counter worker in Dining, died on Jan. 15. She retired in 1972 after 10 years at MIT.

**Alice Markunas** of Cambridge, a financial administrator in the Media Lab, died on April 6 at age 75. She was one of the Media Lab's first employees, moving into the Media Lab in 1985 with a small group of faculty and research staff from the Architecture Machine Group. Markunas started working at MIT in 1979 in the Department of Mechanical Engineering. She retired in 1994.

Markunas is survived by two daughters, Sanda LaChance of Salem, N.H., and Barbara Guillemette of Windham, N.H.; a grandson and two great-grandsons. Memorial donations may be made to the American Lung Association.

**James F. Nash** of Newton, a former lab manager in the Gas Turbine Laboratory, died on March 9 at age 72. He began working at MIT in 1966 and retired in 1992. Survivors include his wife Theresa and eight children.

**Richard O'Connell**, 87, a former houseman in Housing, died on Jan. 24. He began working at MIT in 1973 and retired in 1982.

### DIGITAL TALK: WHERE IT'S AT

#### Evolving IS&T support for Red Hat Linux

Red Hat, Inc. ended support for Red Hat Linux 9 on April 30. Red Hat Enterprise Linux 3 is the successor product. Through a recently signed volume license, MIT is entitled to run Red Hat Enterprise WS on an unlimited number of personally owned systems. In addition, the volume license allows MIT to run Red Hat Enterprise AS, ES or WS on 1,000 systems purchased by MIT or affiliated departments, labs and centers.

IS&T plans to roll out Help Desk support for Red Hat Enterprise 3 some time in June. Support for several Linux applications will follow. For now, IS&T will continue to provide "best-effort" support for Red Hat 9. For more details about Red Hat Linux distribution, updates and support, go to <http://web.mit.edu/ist/news/headlines/redhat.html>.

#### Introducing Ed Tech Times

IS&T Academic Computing has launched Ed Tech Times at <http://edtech.mit.edu/times>. This interactive, online publication replaces The Insider, a print newsletter for MIT faculty and instructional staff. Ed Tech Times covers developments in academic computing in MIT departments, labs and centers. Submissions of educational technology news from campus organizations are welcome, as are reader comments.

To learn more about submitting material, go to the web site above and click on the "About the Ed Tech Times" link.

#### TechTime offered for Palm PDAs

IS&T recently announced availability and

support of Oracle Calendar Sync 9.0.4 for Palm, which lets you synchronize your MIT TechTime calendar with the Date Book on a Palm PDA. The TechTime on Oracle Calendar desktop clients are not required.

Synchronization clients for Mac OS X and Windows 2000 and XP Professional are available at no charge to members of the MIT community. To download these installers, go to the MIT Software page at <http://web.mit.edu/software>.

For details on Palm synchronization, including system requirements, see <http://itinfo.mit.edu/product?vid=616> for Mac OS X users, or <http://itinfo.mit.edu/product?vid=617> for Windows users. For more information on the TechTime service, go to <http://web.mit.edu/ist/services/calendar/techtime.html>.

#### Don't fall for e-mail hoaxes

Junk e-mail (spam) now includes hoax mail that aims to elicit a response from the recipient, such as sending money or opening an e-mail attachment that contains a virus. Hoax e-mail doesn't always appear to come from unknown sources; e-mail addresses can be spoofed.

What if "admin@mit.edu" sends an e-mail requiring you to respond or your e-mail account will be shut off? When in doubt, ask. Contact your local computer administrator to verify the message, or call the Help Desk at 253-1101. Don't think you're wasting someone's time by verifying an e-mail message. It takes a minute to find out whether or not an e-mail is a hoax, but it can take hours to repair a virus-infected system.

For the latest on e-mail hoaxes and viruses, visit <http://vil.nai.com/vil/default.asp>, <http://www.f-secure.com>, or <http://hoaxbusters.ciac.org>. For more guidelines on handling incoming e-mail, read the IS&T article at <http://web.mit.edu/ist/isnews/v19/n04/190404.html>.

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# Forum wrestles with post-9/11 dangers of scientific research

Can scientists do anything to limit the spread of dangerous technologies? If so, can they do so and keep science free and open? What role should MIT students play in addressing these questions, and what responsibilities do they bear as the world's future leaders in science?

These questions were the focus of "A Conversation Among Future Scientists on Science in an Age of Terrorism" in Wong Auditorium on April 21.

Moderating the discussion and drawing on some of the material used in her course "Technology in a Dangerous World" was Professor Rosalind Williams, the Metcalfe Professor of Writing and Director of the Program in Science, Technology and Society (STS).

Professor of Political Science Stephen Van Evera discussed the democratization of the methods of destruction—the frightening fact that dangerous technologies and substances can now be manufactured and disseminated by individuals or small groups, not just states. He urged MIT to address these issues in its courses, and recommended that students read "Our Final

Hour" by Martin Rees, an English cosmologist and astrophysicist.

Three graduate students gave presentations. They were Gregory Koblenz of political science and the Security Studies Program, who spoke about bioterrorism; Julien Bachmann of chemistry, who addressed terrorism and chemistry; and Alexander Brown of STS.

Discussion among audience members and presenters focused on attempts to regulate the development of dangerous materials as well as more basic questions such as whether it's futile or advisable to try to "put the brakes" on science. Many expressed the hope that MIT will find ways to address these questions in its curricula as well as at other public events.

The forum was sponsored by the Kailath International Student Fund, established at the Interna-

tional Students Office (ISO) by Professor of Electrical Engineering George Verghese in honor of his father-in-law, Thomas Kailath, an MIT alumnus and professor emeritus of engineering at Stanford University. The fund aims to foster a sense of global citizenship among MIT's diverse student body in the aftermath of 9/11.



Rosalind Williams

## Age Lab director testifies before Senate committee

Joseph F. Coughlin, director of MIT's Age Lab, testified before the U.S. Senate Special Committee on Aging about technology-enabled innovations to support our aging society.

In his April 27 testimony, titled "Assistive Technologies for Independent Aging: Opportunities and Challenges," Coughlin highlighted work being done at MIT in the areas of transportation, telemedicine and technology development in retail health services.

Coughlin recommends that the government promote innovation by

creating markets through tax incentives for companies that develop and commercialize new technologies, as well as for individuals who purchase technology-enabled services to assist their aging parents.

Among those testifying were researchers and representatives from Intel, the University of Michigan and the Alzheimer's Association.

For more information, including a PDF copy of Coughlin's testimony, go to <http://aging.senate.gov> (click on "Hearings").

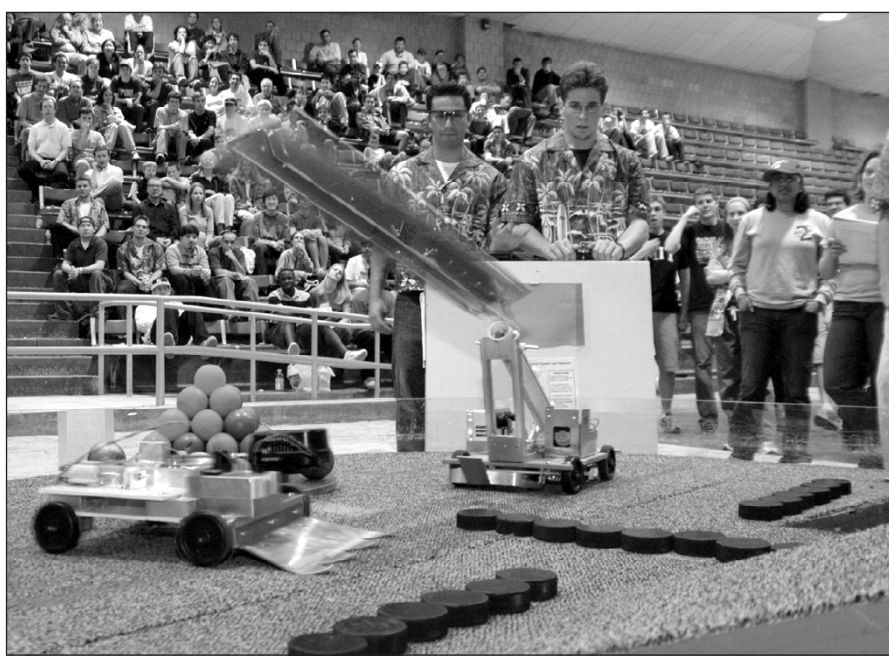


PHOTO / L. BARRY HETHERINGTON

Sophomores Dean Ljubicic (right center) and co-driver Salvatore B. Pallente navigate "The Big Dig."

## Ingenious machine triumphs in 2.007's "Big Dig"

An extreme Boston driving experience unfolded at this year's 2.007 contest, named "The Big Dig" in honor of the city's sprawling Central Artery/Tunnel project. Competing machines designed by sophomores in mechanical engineering faced everything that frustrated commuters face—ramps, bridges, toll booths and piles of obstacles—and, most insidious of all, their fellow drivers.

The winner, Dean Ljubicic triumphed over his classmate Bryan Woodruff in the final round of "Big Dig" thanks to a cunning gambit: In the final moments of the contest, Ljubicic's machine, whose strength had been a Jersey-type metal barrier that blocked other machines' scoring opportunities, suddenly activated an under-street paddlewheel and spun it with mighty abandon.

Neither Woodruff nor Ljubicic's other opponents knew of the secret offensive scoring mechanism, dubbed the "spinnthingy" by contest emcee Alex Slocum, professor of mechanical engineering.

Ljubicic later admitted his ingenuity was fueled by eagerness to travel to Japan this summer for the International Design Contest, which operates much like 2.007. Eight MIT students will participate in that contest, including Ljubicic and Woodruff.

"The Big Dig" featured more complicated machines than in previous years as well as more scoring opportunities, which was in response to students' request, Slocum said. "We're very client-friendly, very responsive to student ideas. The future depends on our kids," he said.

## Library fines to increase in July

On July 1, the MIT Libraries will implement a new fine policy for overdue books and materials.

The daily fine for a 28-day item will change from 25 cents per day to 50 cents per day. The fine for reserve materials will change from \$1 per hour to \$3 per hour. The charge for replacing a lost a book will go from \$125 to \$150.

"Fines haven't increased since 1991, and we've discovered that the current rates are not enough of a deterrent," said Steve Gass, the MIT Libraries' associate director for public services. "This has been particularly problematic with materials put on course reserve.

We need to make sure the information that our users rely on us to provide is readily available to all students, faculty and staff. Fortunately, the vast majority of our users follow the rules and won't be affected."

The Libraries will continue to e-mail courtesy notices to remind users of upcoming due dates on items as well as the new policy. Patrons who can't return materials to the libraries on time are encouraged to renew online by using the "Your Account" feature in Barton. To learn more about managing your library account and avoiding fines, stop by the circulation desk of any MIT library.

### NEWS YOU CAN USE

#### Antitheft window-etching offered today

MIT Police, in conjunction with the Governor's Auto Theft Strike Force, will conduct an automobile window-etching program today (May 12) from 8:30 a.m. to 2 p.m. next to Simmons Hall.

For a fee of \$10 (cash only), participants will have their car's vehicle identification number chemically etched into each piece of glass on the vehicle, deterring car thieves who sell stolen parts to dishonest repair and body shops. Owners then become eligible for a 15 percent antitheft discount on their comprehensive auto insurance. (Anyone whose vehicle already has an antitheft device will not receive an additional discount.)

Car owners should bring vehicles, their registration and \$10 cash. In case of rain, the event will be postponed until Thursday, May 13. Those unable

to attend may call the Governor's Auto Theft Strike Force at (781) 393-1201 to inquire about other locations and times.

#### Get copies for two cents today

Today (May 12) is Two-Cent Copy Day at the Copy Technology centers in rooms 11-004 and E52-045 and at CopyTech Express in the Stratton Student Center. Self-service copying on regular paper (8.5-by-11-inch, 20-lb. white) will be 2 cents per impression. CopyTech also will have extra staff available to help with end-of-term presentation and thesis work. For hours and other information, see <http://web.mit.edu/ctc/www>.

#### Alaska on campus

Take a simulated dogsled ride, see a planetarium-style display on the aurora borealis (northern lights) and explore other interac-

tive, museum-style exhibits about Alaska and the Arctic National Wildlife Refuge (ANWR) through Friday, May 14 in rooms 1-080 and 1-090 (call 253-4074 or e-mail [daczal@mit.edu](mailto:daczal@mit.edu) for hours).

The exhibits are the result of a semester-long class through MIT's Terrascope program in which 28 freshmen learned firsthand about the benefits and pitfalls of drilling for oil in ANWR (see <http://web.mit.edu/newsoffice/nr/2004/alaska-log.html>).

#### Free skin cancer screening

MIT Medical will be offering four free skin cancer screenings at its Cambridge and Lexington locations. Appointments are available from 10 a.m. to 4:30 p.m. on Friday, May 14 and Friday, June 11 on campus (call 617-253-4865) and from 9 a.m. to 4 p.m. on Thursday, June 24 and Thursday, July 22 at MIT Medical in Lexington (call 781-981-7080).

These screenings are open to the entire MIT community and are particularly intended for people who have never had a skin cancer screening, especially men over 50 and others who have had a lot of sun exposure or sunburns.

#### Faculty meeting May 19

A regular meeting of the faculty will be held Wednesday, May 19 at 3:30 p.m. in Room 10-250. Agenda items include:

- Vote on the report of the Committee on Nominations, by Professor Linn Hobbs
- Report of the Killian Committee, by Professor Robert Langer
- Proposal to establish an S.B. degree in archaeology and materials, by Professor J. Mark Schuster
- Report from the ROTC Task Force, by Professor Phillip Clay
- Continued discussion on faculty diversity, by Professor

Rafael Bras

- Resolution concerning under-represented minority faculty and graduate student recruitment and retention, by Professor Wesley Harris

- Election of the members of the faculty ex officio, by Professor Bras

- Recognition of retiring faculty members, by Professor Bras

#### Abandoned bikes will be removed

The Parking and Transportation Office is placing red tags on bicycles which appear to be abandoned on campus. Most of the tagging will take place before Friday, May 14, and bicycle removal will begin on May 17. A bicycle will not be removed until at least two weeks after it has been tagged. Parking and Transportation is also identifying and tagging illegally parked bicycles.

# Stata Center opens its doors – and a new era in campus buildings

## DEDICATION

Continued from Page 1

were warm, as Bob Brown held them closer to the fire.”

“As [my wife] Becky and I left this building last evening, a student was asleep on a couch and another stared into a computer screen. I knew that everything would be well,” said Vest, giving voice to the relief of a project completed after five years of difficult decisions and sleepless nights since Building 20 was demolished.

“Frank,” he said to Gehry, “you exceeded every possible dream we had.”

In his remarks, Institute Professor Morris Halle of linguistics and philosophy described his new office, Dreyfoos A208—which stands nearly exactly over the spot of his old office in Building 20 (20B-201)—as “the best I’ve ever had in all the 50 years I’ve been here.”

Describing the Stata Center’s role as a new face for the northeast edge of campus, Provost Robert A. Brown said, “When you round the corner and see the Stata Center, you will know you’re at MIT.”

“The angles and curves of this building represent our ability to solve problems,” Cambridge Mayor Michael Sullivan said. “It stands as an economic anchor of this community.” He confessed, however, that the first time he saw a model of the new building he commented, “It looks like my kids took a hammer to your model.”

“I was lost many times,” said Vincent Chan, director of the Laboratory for Information and Decision Systems, who moved into the Stata Center in April. The building consists of two C-shaped towers with lower buildings connecting them, many open spaces and atria, but few, if any, traditional corridors. One wall of Chan’s office slants at a 30 degree angle.

“Many times I would go to the bathroom and it would take me a very long time to get back to my office. So a friend gave me a handheld GPS [Global Positioning System device]. He told me to follow the instructions on the system. A nice voice said, ‘Go to outside wall and place in four corners.’ I did that and the voice said, ‘We cannot do the test. The wall is not upright.’

“So I tried it on a window and then on the back wall. And it said, ‘The second wall is not parallel to the first wall.’ Then the voice went on to say I must wait for the



Speaking to a media audience about construction of the Stata Center on May 5 are Professor William Mitchell, head of the Program in Media Arts and Sciences (left), Stata Center architect Frank Gehry (center), and Rodney Brooks, director of the Computer Science and Artificial Intelligence Laboratory (CSAIL), which is housed in the new building.

next software upgrade,” Chan said to much laughter, before thanking the “administration for having the courage to authorize the building.”

On a more serious note, Alex Dreyfoos (S.B. 1954), for whom one tower of the center is named, said the tower is his thanks to MIT and to Professor of Physics Arthur Hardy “for being a great mentor and for being there for me at a difficult time in my life.” Dreyfoos’ father died on Thanksgiving eve of his sophomore year at MIT and Hardy took him under his wing. Dreyfoos, who holds 10 patents, is now chairman of the Dreyfoos Group/Photo Electronics Corp. and a life member of the MIT Corporation.

“For us, it’s an opportunity to express the enormous amount of gratitude to MIT for what it’s meant to our lives and means to us today,” said Ray Stata (S.B. 1957) about

the decision by him and his wife Maria Stata to make the building possible through their financial gift to the Institute. Ray Stata is co-founder and chairman of Analog Devices and a member of the MIT Corporation.

“We are fortunate to have had Chuck Vest as our leader at the outset of this project because he had the courage to approve this bold design. It demonstrates the forward-thinking that is part of MIT,” Ray Stata said.

“Frank’s creation will change the world for people who work here, and stand as a reminder of the incredible creativity and imagination which permeate MIT. The outcome exceeds our wildest dreams of what we thought we would do.”

The other major donor to the project is the Bill and Melinda Gates Foundation. The second tower is named the William H. Gates Building.



A view from the ninth floor of the Stata Center.

## BUILDING

Continued from Page 1

there, then turn and face the Stata Center—another collage of shapes that offers similar visual intrigue.

But don’t let the layering of forms in Stata leave the impression of hopeless complexity, he warned. “It’s simply two C-shaped buildings with a communal thing in the middle. Inside, the natural light makes the same areas seem different at various times of day. There’s nothing precious in it. If the yellow thing no longer serves, they could tear it down and put another piece there,” Gehry said.

Four MIT researchers gave visitors an insiders’ view of research already underway inside the Stata Center. Professor John V. Guttag, head of electrical engineering and computer science (EECS), contrasted the costs of health care (rising) and of semiconductors (falling) to set up a question that drives his research. Improved medical software will make diagnoses more accurate and eventually make health care itself less expensive, he said.

Tim Berners-Lee, senior research scientist in the Computer Science and Artificial Intelligence Laboratory (CSAIL), is popularly known as the father of the World Wide Web. As a huge slide displayed his first drawing of the web, known in 1989 as “The Mesh,” he discussed new frontiers in connectivity, or “getting applications to understand each other so your digital camera’s idea of time of day is the same as your calendar’s,” he said.

Professor Alec Marantz, head of linguistics and philosophy, summarized current research on how the brain uses language and described how linguists use diagnostic technology such as magnetoencephalography to discern which areas of the human brain are activated by certain words.

Victor Zue, professor of EECS and co-director of CSAIL, focuses on how to get computers to understand language, how to get them to behave in a natural, intuitive human way and how to integrate speech recognition with recognition of gestural and expressive cues. He demonstrated a new bilingual speech recognition program, a voice-activated mapping program (it found Boston museums by spoken request), and a woman’s face on a screen perkily delivering flight information and weather news.

At the luncheon following Thursday morning’s session, President Charles M. Vest described an incident early in the construction process. He was touring the work site when several members of the construction crew came up to him.

“We want you to know something,” they told Vest. “Every one of us was working on another job in Boston when [Stata was first announced], but we knew that something important was going on at MIT so we dropped everything and knocked on the door to work here.”

Provost Robert Brown, CSAIL co-director Rodney Brooks and Professor William J. Mitchell, head of media arts and sciences

and architectural advisor to President Vest, also gave introductory remarks at Wednesday’s events.

On Thursday, seven key managers of the Stata Center project described how the latest digital technologies were key to the building’s design and construction but also noted that pen, paper and personal interactions were still vital.

“We got into this with the full intent of making it a paperless project,” said Ron Lee of John A. Martin & Associates, but software limitations and human nature got in the way. For example, he found it more efficient to review some designs on paper rather than using their corresponding 3-D models alone. The latter remained important, however, “to see more complicated connections.”

Paul Hewins, the construction manager from Skanska USA, said he started the project “open to coming at it from a different perspective,” but knew that convincing colleagues might be challenging. “I can’t tell you how many times in my career I’ve heard, ‘That’s the way we’ve done it for 20 years and that’s how we’re going to continue to do it.’” But he added it was clear that business as usual wasn’t going to work for the Stata Center.

Computer literacy also affected use of the technology. When the project began, one contractor didn’t yet have e-mail.

Marc Salette of Gehry Partners explained how his team developed physical models of the building, collected 3-D data on those models and put that information into forms a computer could use. The resulting computer models allowed the designers to simulate shadows, daylight and room acoustics and also to show how the building would respond to high winds.

“This building itself is an experiment,” said Jim Glymph of Gehry Partners. “The people brought together to build and design it are all pioneers.”

At the luncheon following Thursday morning’s session, President Charles M. Vest described an incident early in the construction process. He was touring the work site when several members of the construction crew came up to him.

“We want you to know something,” they told Vest. “Every one of us was working on another job in Boston when [Stata was first announced], but we knew that something important was going on at MIT so we dropped everything and knocked on the door to work here.”



At the program to celebrate the opening of the Stata Center, held in the outdoor amphitheater after the dedication, Cathy Dertouzos, widow of Michael Dertouzos, former director of the Lab for Computer Science, and Victor Zue, co-director of CSAIL, let out a yell to the heavens, as they said Michael would have done.

### STATA CENTER FACTS

#### CONSTRUCTION:

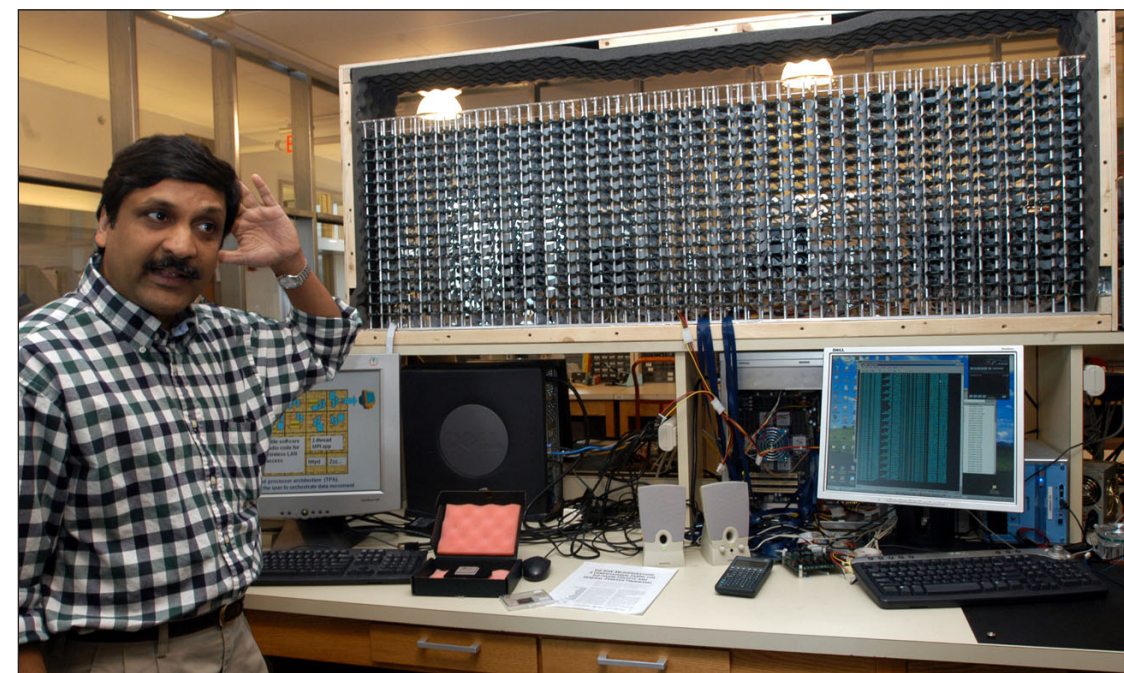
- 720,000 square feet
- 2.8-acre site
- Materials used on exterior:
  - 12,800 stainless steel panels (brushed and polished)
  - 1,000,000 bricks
  - Painted aluminum
  - 70,896 square feet of glass
- 2.6 million pounds of steel in framework
- 120,000 tons of concrete in foundation and floors
- 200,000 cubic yards of soil removed from site in 10,000 truckloads

#### THE RESULTS:

- Two C-shaped, nine-story towers
- One amphitheater
- One indoor Student Street
- Two two-story neighborhoods in the towers
- One fourth-floor town center in between
- Whimsically named sections: Giraffe, Lucky, Wind Dam, Kiva, Achilles, Pisa, Nose, Star
- One 350-seat lecture hall/auditorium
- Two 90-seat tiered classrooms
- Two 50-seat flat classrooms
- Lounges and social spaces
- Pub
- Café that seats 250
- Faculty dining room
- Fitness facility linked to Alumni Pool
- Child care center for 65 children
- Two levels of underground parking for 700 cars



Aron Edsinger, a graduate student in electrical engineering and computer science, demonstrates some of the robot research going on in the Stata Center.



Professor Anant Agarwal, associate director of CSAIL, demonstrates another piece of Stata Center research: a 1,020-node microphone array utilizing the RAW tile parallel processor architecture for computation. The device is designed to make a clean recording of speech in computing environments characterized by much noise and crosstalk.



Architect Frank Gehry (left) and Ray and Maria Stata celebrate the opening of the Stata Center.

Photos by Donna Coveney

# American Academy elects 13 from MIT

Twelve faculty members and one Corporation member are among the 178 new Fellows and 24 new Foreign Honorary Members recently elected to the American Academy of Arts and Sciences.

The Academy was founded in 1780 by John Adams, John Hancock, and other scholar-patriots "to cultivate every art and science which may tend to advance the interest, honor, dignity and happiness of a free, independent and virtuous people." The organization conducts interdisciplinary studies on international security, social policy, education and the humanities that draw on the range of academic and intel-

lectual disciplines of its members. The current membership of more than 4,500 leaders in scholarship, business, the arts and public affairs includes more than 150 Nobel laureates and 50 Pulitzer Prize winners.

The Academy will welcome this year's new Fellows and Foreign Honorary Members at its annual induction ceremony in October at its Cambridge headquarters.

New members of the American Academy of Arts and Sciences from MIT are:

- Tania A. Baker, the Whitehead Professor of Biology and a Howard Hughes Medical Institute investigator

- Abhijit V. Banerjee, the Ford Foundation Professor of Economics
- Mounji G. Bawendi, professor of chemistry
- Mark F. Bear, the Picower Professor of Neuroscience and a Howard Hughes Medical Institute investigator
- Mary C. Boyce, the Distinguished Alumnae Professor of Mechanical Engineering
- Claude R. Canizares, the Bruno Rossi Professor of Physics and associate provost
- Leonard Guarente, the Novartis Professor of Biology

- Subra Suresh, the Ford Professor of Engineering and head of the Department of Materials Science and Engineering
- Gang Tian, the Simons Professor of Mathematics
- Graham Walker, the American Cancer Society Research Professor in the Department of Biology
- Maria Zuber, the E.A. Griswold Professor of Geophysics and Planetary Sciences
- Alexander W. Dreyfoos Jr. (S.B. 1954), life member of the MIT Corporation and head of The Dreyfoos Group/Photo Electronics Corp.

## GRAHAM

Continued from Page 1

experience and success to encourage and guide others, much as he saw his childhood role model Bill Cosby doing.

"Sometimes the best way to give back to the community is to show others you can make it out," said Graham, who spends countless hours mentoring and teaching urban youth.

"Journey of The Lost Souls" portrays the love and feeling of security a neighborhood provides; it also portrays the difficulty of leaving important relationships behind.

"It's like there's an invisible electric fence around the neighborhood," Graham said. "People are afraid to leave."

"Institutionalized" is a poem about "getting free of the ghetto," a meditation and a call to change. "Penitentiaries, schools, neighborhoods that we live in" are external prisons, Graham writes, but "we're institutionalized and locked inside/Of the prisons of our minds and that's why we stay behind."

The musical version has a refrain, "When will we rise? RISE!" that breaks into the text like a wave.

Graham's sense of humor and pride shine in his poems about his roller-coaster education (he was placed in remedial classes one year and honors classes the next). A gifted student, he attended both prestigious public (Shaker Heights) and private schools (Phillips Andover's MS2 program) and the "worst high school in Ohio."

As for the chances of his ever coming to MIT—well, let him tell it, in "It Never Ends":

*Learned in the fifth grade the world was against me,  
Teacher must have hated me, placed me in LD  
Counselor's words in my head linger  
Take this school's offer it's the best it's gonna be  
You haven't got a chance of being let into MIT  
The jealousy is funny, though it's not from my peers  
It's from the people not content in their elder years*

In "My Home," he writes, "I go to school in the ruins," then goes on to mock the verbal portion of standardized tests:

*I missed the words but don't think I'm dumb 'cause  
They don't get used in the place that I come from  
Words we speak ain't derived from the Greek  
Naw, they been developed in the slang of the streets  
Even the English we study is so basic,  
That if I go to college, I might take it as a second language*

But it is the triumphant "It's Time" that reveals the fullness of Graham's message in "Journey of The Lost Souls." Originally performed at the 2.007 contest, the song is both an autobiography of participation in MIT's annual engineering design challenge and an extended metaphor for Graham's beliefs about what may actually find and even save the lost souls.

"It's a message of hope. It's time to go forward. Success is about setting a goal, completing the work. It's about having a plan, using the tools we've got to design our own future.

And for those who have been successful, 'Journey of The Lost Souls' should be a reminder: there are still lost souls, and if you forget that, you're lost, too," said Graham.



Graham

## AWARDS AND HONORS

Assistant Professor of Chemistry **Catherine L. Drennan** has received a Presidential Early Career Award for Scientists and Engineers (PECASE), the nation's highest honor for professionals at the outset of their independent research careers. John H. Marburger III, science advisor to the President and director of the White House Office of Science and Technology Policy, presented the awards to 57 researchers in a May 4 ceremony.

Each year, eight federal departments and agencies make PECASE nominations for scientists and engineers at the start of their careers whose work shows the greatest promise to benefit



Drennan

the nominating agency's mission. Awardees receive up to five years of funding to further their research in support of critical government missions. Drennan was nominated by the National Institutes of Health.

Three MIT faculty members are among 26 researchers to receive 2004 Young Investigator Program awards by the Office of Naval Research. The program supports basic research by exceptional faculty at U.S. universities who received their Ph.D. or equivalent degree within the last five years. Grants to their institutions provide up to \$100,000 a year for three years; additional funds may be available for purchasing equipment related to the research.

This year's MIT winners are assistant professors **Kimberly Hamad-Schifferli** of mechanical engineering, for "Control of DNA Dehybridization for Antisense Gene Therapy via Nanoparticle Antennas"; **Christopher Schuh** of materials science and engineering, for "Length

Scales Controlling the Mechanical Properties of Amorphous Metal Films and Coatings"; and **Alexandra H. Techet** of ocean engineering, for "Synergistic Experimental Study of Chaotic, Near-Surface Hydrodynamics of High Speed Surface Piercing Vessels."

**Thomas W. Eagar**, the Lord Professor of Materials Engineering and Engineering Systems, was co-recipient of the Charles H. Jennings Memorial Medal from the American Welding Society at the recent AWS Conference in Chicago. He shared the award with his former student, Patricio Mendez, who is joining the faculty at the Colorado School of Mines in August. Eagar also received the award in 1983 and 1991.

**Anette Hosoi**, assistant professor of mechanical engineering, has been awarded the 2004 Doherty Professorship in Ocean Utilization from the MIT Sea Grant College Program. Every year, the program selects one or two new faculty members for a supplemental award of \$25,000 per year for two years.

Hosoi, who specializes in fluid dynamics, will investigate oceanic particle-laden flows. Modeling oceanic flows is often complicated by the addition of suspended particles. This particulate phase can have dramatic and devastating effects on offshore construction, natural processes and the spread of pollutants.

The professorship, endowed by the Henry L. and Grace Doherty Charitable Foundation, encourages promising, nontenured professors to undertake marine-related research that will further innovative uses of the ocean's resources.



Hosoi

## 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. Tech Talk ads are posted on the Internet. Submit by e-mail to [ttads@mit.edu](mailto:ttads@mit.edu) or mail to Classifieds, Rm 11-400. Deadline is noon Wednesday the week before publication.

### FOR SALE

Japanese red maples, 4'-5'. 781-861-6105.

2000 Chaparral 205 SSE boat. 20.5 ft, 195hp, Mercruiser Alpha-1 engine, cabin sleeps 2, porta-potty, AM/FM/CD, swim platform, transom for fishing, red, bimini top, EZ-loader trailer, slip location for season in Charlestown Navy Yard. Tom, 617-605-6630.

1920s clawfoot bathtub, 60" long, white w/black feet, needs refinishing. \$150. 617-666-3736.

Snowblower, self-propelled, 5hp, 30," always starts, \$300. Freezer, 9'3", \$180. Gas lawnmower, \$100. Electric weed whacker, \$35. Bread machine, \$40. Shopvac, 16 gal. \$60. 2 maple trundle beds, 72"x30", \$70/ea. [golay@mit.edu](mailto:golay@mit.edu).

1996 Ranger Bass boat, 16ft, 120hp Jet trolling motor, foot controls, live well, more, \$4000. 978-686-93100 after 5pm (lv msg).

Moving sale, beautiful 3 yr old contemporary furniture: glass dining rm, marble dining rm, king size BR, full size BR, leather living rm set, curio cabinets, entertainment ctr, photos avail, best offer. [rosek@mit.edu](mailto:rosek@mit.edu).

Jeep Grand Cherokee rubber floor mats and cargo mat, for 1999 or later, \$50. Karen, 253-9514 or [kdow@mit.edu](mailto:kdow@mit.edu).

### HOUSING

Cambridge: 2br, 1b condo, 15 min walk to MIT, near West end of campus, new hwd flrs, newly painted, insulated windows, top flr of 3 story brick bldg, porch deck, deeded prkg, low monthly condo fee (ht, hot water, gas incl), quiet neighborhood, nr T. \$379,000. 258-0556.

Cambridge: Apt/twnhse, contemporary open flr plan, 2BR + balcony, 1.5b, deck/patio, Kendall Sq, enclosed area. Avail 9/1, possibly earlier. \$2,000/mo + utils. Min. 1 yr lease. 617-491-4258.

Winnisquam Beach Resort, NH: Gated community: 4-season, 1997 Coachmen trailer, new addition, central air, community water/sewer, mahogany decks, beach, boat launch, snowmobiling, ice-fishing. \$119,900 + \$625/yr condo fee. [nmorrison@mit.edu](mailto:nmorrison@mit.edu)

Medford: Tufts area, nr Davis/Medford Sq/93/T.

6rms, 3br, 1b, 2nd flr, totally renov, lrg apt, w/d in bsmnt. Tom, 617-605-6630 or 781-393-5799.

### VEHICLES

1998 Ford Escort SE Sport 4-door sedan. Vry low mileage (<15K miles), red, 4-spd auto, 6-CD changer, cassette/radio, A/C, keyless driver entry, vry clean, \$6,000. 253-0332 or [missy@media.mit.edu](mailto:missy@media.mit.edu).

### VACATION

New Hampshire: Quiet, traditional log cabin on Squam Lake, max 4 adults, 2 children, grt for swimming, hiking, canoeing. Electric stove, microwave, blender, coffee-maker, toaster. Wks avail in July/Aug. \$1,200/wk. Alfred, 781-646-8618.

Westport, Mass: Waterfront cottage, 2BR, 2b, grt sun deck, boat dock, nr beaches/winery, fully furn, laundry, no pets, \$1,000-\$1,600/wk. 617-876-6977 or [simha@mit.edu](mailto:simha@mit.edu).

Lenox: Timeshare Aug 6-13, nr Tanglewood, theaters, mountains. 2BR, 2b, LR, TV/dining areas, kitchen, balcony, A/C, cable TV, stereo, VCR, fully equipped kitchen, 2 sleep sofas, linens, indoor/outdoor pools, tennis courts, clubhse. \$1,750/mo. [m.tisza@comcast.net](mailto:m.tisza@comcast.net)

### WANTED

House-sit or sublet for July/Aug in Boston area. Retired couple, quiet, responsible, aged 60+ seeking apt/house. [clc@mit.edu](mailto:clc@mit.edu) or 253-5313.

### MISCELLANEOUS

3.5-yr-old Siamese Cat named Vegetta, fixed, up to date with his shots, dark brown hair, blue eyes. Very loving cat, but son is allergic. Danielle, 253-9725.

### COMMUNITY SERVICE JOBS

Positions for students with work-study eligibility.

Seeking market researcher for book to create report with population statistics, the buying market, demographics, sales data and distribution data. 10-15 hours total, \$15/hr. Contact Paige Stover-Hague, 508-577-0271 or [paige@innoport.com](mailto:paige@innoport.com).

Student needed, familiar with ASICs and C+ to examine a large amount of source code for possible patent infringements. Work is in Washington, DC area, 12wks, full time, \$80/hr. Richard Anders, [techjob@rascientific.com](mailto:techjob@rascientific.com).

# Gamelan concert features pipa player Wu Man

Lynn Heinemann  
Office of the Arts

International harmony takes on new meaning when a Balinese gamelan orchestra performs with a Chinese flute.

Gamelan Galak Tika (GGT) concludes its 11th season with the world premiere of "Aradhana," written for Balinese gamelan orchestra and pipa (Chinese lute) by composer and GGT artistic director Evan Ziporyn. Master pipa player Wu Man is the featured artist at the concert on Friday, May 14 at 8 p.m. in Kresge Auditorium.

For both Ziporyn, the Kenan Sahin Distinguished Professor of Music, and Wu Man, this is a first attempt to bring these ancient musical forms together.

Ziporyn uses several unusual techniques in the work, the most important being the use of string bows to make sustained sounds in the gamelan, he says in his concert program notes. The source of the work's title comes from the word 'arad,' the old Javanese word for bowing, he adds.

Since founding GGT in 1993, Ziporyn has brought modern Balinese gamelan music to western audiences through works for gamelan and electric guitars, saxophones, electronics and symphony orchestra. His work as a composer and performer with the group Bang on a Can has led him to collaborate with such artists as Brian Eno, Cecil Taylor, DJ Spooky, Matthew

Shipp, Meredith Monk and Steve Reich.

In addition to writing this pipa concerto, Ziporyn recently completed a piece for the Boston Modern Orchestra Project (to premiere on May 21) and wrote original music for the American Repertory Theater's upcoming production of "Oedipus" (see Arts News on this page).

Wu Man was born into an artistic family in Hangzhou, China and graduated from the Beijing Central Conservatory. In the 1980s, she moved to the United States, where she began building a reputation both in traditional pipa repertoire and as a champion of cross-cultural work.

In 1994, Wu Man performed with the Kronos Quartet and was featured on albums by Henry Threadgill and Sola. She made her debut appearance the following year at the BBC Proms in London. She has performed concerti composed for her by Lou Harrison, Chen Yi and Philip Glass, and she recently toured the world as a featured soloist in Yo-Yo Ma's Silk Road Project.

Also on the May 14 program are traditional music and dance featuring GGT dance director Cynthia Laksawana, and recent works by Dewa Ketut Alit and GGT members Sean Mannion and Rebecca Zook. Admission is \$8 for adults, \$4 for students and seniors, and free to MIT community members and children under 12.

For more information, see <http://www.galaktika.org>.



PHOTO / LIU JUNQI

Wu Man will perform with Gamelan Galak Tika on May 14 in Kresge Auditorium.

## ▶ ARTS NEWS

### Students selected to show photos

An MIT jury has selected three MIT students—Naomi Horowitz, a graduate student in architecture; Marianna Shnayderman, a senior in materials science and engineering; and Lisa C. Smith, a senior in architecture—to be part of the 2004 Photographic Resources Center (PRC) Student Exhibition. The exhibition, on view through May 30, features works by students from the PRC's Institutional Plus Member schools in the Boston area. The gallery is at 832 Commonwealth Ave. in Boston and is open Tuesday through Friday from 10 a.m. to 6 p.m., Thursdays from 10 a.m. to 8 p.m. and weekends from noon to 5 p.m.

### BMOP performs works by Ziporyn, Ruehr

"Next," a concert by the Boston Modern Orchestra Project (BMOP) on Friday, May 21 features music by "the next generation of prominent American composers" and includes the world premiere of "War Chant" by Evan Ziporyn, the Kenan Sahin Distinguished Professor of Music, and "Sky Above Clouds," written in 1989 by lecturer Elena Ruehr, BMOP's composer-in-residence.

"Next" begins at 8 p.m. and a discussion with the composers hosted by Ruehr will start at 7 p.m. in New England Conservatory's Jordan Hall. The concert will feature Grammy-winning clarinetist Richard Stoltzman, who will perform as soloist in Stephen Hartke's "Landscape with Blues" (2001), and

pianist Ursula Oppens, who will perform August Read Thomas' "Aurora" (2000). Call (617) 363-0396 or go to <http://www.bmop.org> for tickets. Free tickets for MIT students are available at the Office of the Arts in Room E15-205.

Ziporyn has also composed the music for the upcoming American Repertory Theater's production of Sophocles' "Oedipus" (May 15 to June 12). I Nyoman Catra, former artist-in-residence at MIT and co-founder of MIT's Gamelan Galak Tika, will provide lead vocals in which the Greek chorus sings the original ancient Greek text set to Ziporyn's music. The play uses a translation by Stephen Berg and Diskin Clay and is directed by Robert Woodruff. For performance and ticket information, see <http://www.amrep.org>.

## 'Chicks Make Flicks' features screening, discussion of film on Cambodian flutist

Filmmaker Jocelyn Glatzer will screen and discuss "The Flute Player" in a Chicks Make Flicks event on Wednesday, May 12 at 7 p.m. in Room 6-120.

"The Flute Player" features Cambodian immigrant Arn Chorn-Pond, who probably would have carried on his family's musical legacy and become an opera star if the Khmer Rouge hadn't

taken over Cambodia in 1975. Instead, at age nine, Arn was thrust for four years into the killing fields, a genocide that claimed his family and the lives of 2 million other Cambodians.

In the film, after living in the United States for 20 years, Arn is facing the shadows of his past as he fights to save Cambodia's once-outlawed traditional music from extinction.

"The Flute Player" won the Audience Award at the 2003 South by Southwest Film Festival as well as sponsorship and funding from the Sundance Institute and ITVS; it also was broadcast by PBS' acclaimed "POV" series. Before directing "The Flute Player," Glatzer worked for Maysles Films as well as WNET's "Great Performances" and "American Playhouse."

Chicks Make Flicks is a monthly series organized by Women in Film and Video/New England and co-sponsored by MIT's Women's Studies Program and Women's Independent Living Group. The series was established to highlight women's contributions to film and to encourage more female participation in the filmmaking industry.

For more information, call 253-8844.



IMAGE COURTESY / JOCELYN GLATZER

Jocelyn Glatzer's "The Flute Player" features Cambodian performer Arn Chorn-Pond.

## Physicist explores the mysteries of great violins

Susannah Mandel  
Office of the Arts

What makes a Stradivarius sound like a Stradivarius? Between about 1600 and 1750, the violin makers of Cremona, Italy, produced instruments whose "voices" were the most beautiful ever heard. Today, those 350-year-old violins remain regally unique. But physicist and violin maker Jack Fry believes their voices (and those of modern violins) can be analyzed with the mathematics of acoustics and then replicated or modified using the humblest of tools: sand paper and coat hangers.

Fry is professor emeritus of physics at the University of Madison at Wisconsin, where he established the Experimental High Energy Physics program in 1952. For the past 30 years, he has also explored the physics of stringed instrument construction. He spoke about his research on the violin's structural acoustics on April 19 in Killian Hall.

Rose Mary Harbison, a professional violinist and a longtime associate of Fry's, told the audience that violins produced in the so-called "golden age" have "personalities" of their own. "The violin can sound seductive, pleading, secretive or even nasty," said Harbison, whose husband is composer and Institute Professor John Harbison. But there is no well-developed vocabulary to describe these sounds, which makes them difficult to analyze or reproduce.

Fry studies how a violin's proportions and construction contribute to its distinctive voice. By analyzing old instruments, he said, he has learned to modify modern violins to approximate the qualities of great instruments of the past.

Fry explained that a violin's voice is dependent on several aspects of its construction. These include the thickness of the fibers that run parallel to the "tweeter," an area between the outside of the violin's right F hole and the instrument's edge. That area affects the very high frequencies—important for both a violin's carrying power and the "silkeness" of its voice.

In contrast to his mathematics' subtlety, the tools Fry uses to modify his modern violins are low-tech: small scrapers made from bent coat hangers and tipped with sandpaper, which he uses to reach inside a violin and remove infinitesimal amounts of wood from the fibers. The quantity is so small that it wouldn't even be visible as dust, he said.

After the presentation, Fry and Harbison gave a demonstration of his method: Harbison played on a violin, then handed it over to Fry for scraping as the two discussed how to "smooth" its voice. After several repetitions, Harbison's eyes brightened at the sound. "Yes!" she said. She asked the audience, "Can you hear the difference?" They murmured assent. Sternly, she told Fry, "You can't have it back!" Fry smiled and put his scraper away.

## MIT EVENT HIGHLIGHTS MAY 12 - 16

Science/  
Technology

Performance

Architecture/  
Planning

Humanities



Music



Exhibit



Reading

Special  
InterestBusiness/  
Money

Film



Sports

Featured  
Event

## Visual Arts Program exhibition

Lukas K. Lysakowski explores contemporary relationships between man, machine and nature, and culture in a project titled "taraxos / akos" (still image above). Lysakowski's piece is included in "Creative Intelligence," an exhibition with works by Visual Arts Program seniors. The show opens with a reception on May 14 from 6 to 9p.m. in Building N51 and will be on view May 15-16 from 11 a.m. to 6 p.m.

WEDNESDAY  
May 12**Women's  
Studies Book  
Party**

Celebration with buffet and short readings by five MIT authors. 4:30-6pm. Room 14E-304. 253-8844.

**Is VoIP the  
Next Big  
Thing?**

MIT Enterprise Forum panel. \$25 members/students free. 6-9pm. Room 10-250.

**\$50K  
Competition**  
Final awards ceremony. 7pm. Kresge Auditorium.**"The Flute  
Player"**  
By Jocelyn Glatzer. Chicks Make Flicks. 7pm. Room 6-120. 253-8844.**Object of  
the Month:  
"Technique"  
No. 1 (1885)**  
MIT's first yearbook. Institute Archives and Special Collections. Through May 31. Hallway across from 14N-118. 253-5136.THURSDAY  
May 13**Constructing  
the Rule of  
Law: Public  
Security,  
Justice and Democracy**  
Arturo Alvarado, research fellow. Sponsored by CIS. 4:30-6pm. Room E38-615. 258-7614.**"Triplets of  
Belleville"**  
LSC. \$3. 7 and 10pm; Sunday at 7pm. Room 26-100.**MIT Symphony  
Orchestra**  
Dante Anzolini, director. Student compositions concert. 9pm. Kresge Auditorium. 452-2394.**"Table  
Manners"**  
MIT Community Players production of play by Alan Ayckbourn, directed by Ronni Marshak. \$10, \$8 MIT community, senior citizens, other students, \$6 MIT/Wellesley students. 8pm. Also 2pm on May 15. Kresge Little Theater. 253-2530.FRIDAY  
May 14**Biofrontiers  
Lectures**  
Microdevices for High Throughput Measurements in Systems Biology. Scott Manolis, MIT. Noon. McGovern Auditorium, Whitehead. 258-7270.**"Creative  
Intelligence"**  
Exhibition of works by students in Visual Arts Program. Reception 6-9pm. Exhibition May 15-16, 11am-6pm, N51. 253-5229.**U. Shrinivas  
on Mandolin**  
World-renowned Carnatic artist U. Shrinivas performs on the electric mandolin, with violin and mridangam accompaniment. \$14-\$25. 8pm. Wong Auditorium. 258-7971.**Logarhythms  
Spring  
Concert**  
MIT a cappella group. 9pm. Room 10-250.SATURDAY  
May 15**Making it to  
the Top**  
Sloan alumni's annual Women in Business and Technology Symposium. 9:15-5:15pm. Hotel@MIT. \$35-\$80.**"National  
Insecurity"**  
New political works by MIT-affiliated composer Curtis K. Hughes and David T. Little, performed by the Callithumpian Consort. 3pm. Killian Hall. 617-899-8238.**"Our Husband  
Has Gone  
Mad Again"**  
Black Theater Guild and African Students Association production of comedy by Nigerian playwright Ola Rotimi. Directed by Thomas DeFrantz. 8pm; May 16 at 2pm. Sala de Puerto Rico. 253-4720.**"Cold  
Mountain"**  
LSC. \$3. 10pm. Room 26-100. 258-8881.SUNDAY  
May 16**"Gestural  
Engineering:  
The Sculpture  
of Arthur  
Ganson"**  
Ongoing exhibition. Free for MIT; free for everyone on third Sunday of the month. 12-5pm. 253-4444**Cycling Film  
Festival**  
The MIT Cycling Club and Zipcar host this film festival to kick off Massachusetts Bike Week 2004. Proceeds benefit the MIT Cycling Club, MassBike and the Basis Women's Cycling Team. 1:30-10pm. Room 10-250.**International  
Folk Dancing  
(Participatory)**  
Live music by "Shining Moon." Teaching from 8-9pm. Suggested donation \$1. 8-11pm. Sala de Puerto Rico. 253-FOLK.**CSSA Dance  
Party**  
Disco and ballroom dancing sponsored by Chinese Student and Scholar Association. 8pm-midnight. 253-3947.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>.

## EDITOR'S CHOICE

MIT \$50K  
COMPETITION

Finalist teams present their ideas in this business competition, followed by announcement of winning team and awards ceremony. (781) 455-9050.

*May 12*Kresge  
Auditorium  
7 p.m.GAMELAN GALAK  
TIKA CONCERT

Premiere of Evan Ziporyn's work for guest artist Wu Man. \$8 adults, \$4 students and seniors, free to MIT community and children. 253-9800.

*May 14*Kresge  
Auditorium  
8 p.m.PLUSH DADDY FLY  
SPRING SHOW

Comedy sketches and video clips by MIT's student comedy troupe.

*May 15*Wong  
Auditorium  
8 p.m.

## MIT EVENT HIGHLIGHTS MAY 17 - 23

MONDAY  
May 17FINAL EXAM  
WEEK BEGINSTUESDAY  
May 18**"Josef Albers:  
Interaction of  
Color"**

Color plates from Josef Albers' book published in 1963 as an experimental guide. The plates use color illusion to demonstrate the relativity and instability of color. The entire set of plates and full accompanying texts also may be explored on the gallery's computer. Dean's Gallery at Sloan School. Room E52-466. Weekdays 9am-5pm. 253-4400.

**Semester  
Farewell  
Contra Dance**  
MIT Folkdance Club. Music by Tea Party with Ann Cowan as caller. No partner or experience necessary. All dances are taught. \$5, MIT and Wellesley students free. 8-10:30pm. Morss Hall. (617) 354-0864.WEDNESDAY  
May 19**Artist Behind  
the Desk  
Concert**

Mezzo soprano Shiba Nemat-Nasser, an administrative assistant at Sloan, performs. 12-1pm. Killian Hall. 253-1694

**Gallery Talk**  
List Visual Arts Center curator Bill Arning discusses "Artur Zmijewski: Selected Works 1998-2003" and "Marjetica Potrc: Urgent Architecture" (May 6-July 11). Noon. List Visual Arts Center. 253-4680**Object  
Lessons: A  
Submarine  
LNG Tanker**  
Liquid Natural Gas (LNG) tankers are among the most complex ships in the merchant shipping world. In 1977, General Dynamics sponsored studies to build LNG submarine tankers to cross Arctic seas. Kurt Hasselbalch uses two concept models to discuss this concept. Compton Gallery. Noon-1pm. 253-4444.THURSDAY  
May 20**"Glimpses  
of the East:  
Shanghai to  
Shimla"**

Artwork by Neeti Gupta and Moneta Ho, graduate students in humanities, arts and social sciences. Through May 20 at Rotch Architecture Library. 8:30am-11pm.

**"God's  
Children"**  
A wrenching documentary about the residents of Payatas, one of the largest garbage dumps in the world, just outside Manila, Philippines. Directed by Hiroshi Shinomiya. In conjunction with "Marjetica Potrc: Urgent Architecture" at the List Visual Arts Center. 6:30pm. Bartos Theater. 253-4680.FRIDAY  
May 21**Gallery Talk**  
List Visual Arts Center Curator Bill Arning and Joe MacDonald, assistant professor of Architecture, Harvard Design School/principal in Urban A+O design studio, discuss "Marjetica Potrc: Urgent Architecture." 6pm. List Visual Arts Center. 253-4680.SATURDAY  
May 22**Varsity Men's  
and Women's  
Outdoor Track  
and Field Last  
Chance Qualifier**  
Department of Athletics, Physical Education and Recreation. 10am. Steinbrenner Stadium. 258-5265.**Gallery Talk**  
List Visual Arts Center Outreach Coordinator Hiroko Kikuchi discusses "Artur Zmijewski: Selected Works 1998-2003." 2pm. List Visual Arts Center. 253-4680.**International  
Folk Dancing  
(participatory)**  
Teaching and beginners' dances from 8-9pm. A mixture of all skill levels from 9-11pm. MIT and Wellesley students free; \$1 suggested donation for all others. MIT Folk Dance Club. Sala de Puerto Rico. 253-FOLK.

PHOTO / MICHAEL PRICE

Hybrid House: Caracas, West Bank, West Palm Beach (2003) by Marjetica Potrc.