



Volume 47 – Number 20
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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

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INTERNATIONAL DELAYS

A sluggish federal tracking system spells slowdowns in getting international students and scholars to MIT, faculty members are told.

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Erik Demaine arrives on MIT's faculty via an unorthodox route of traveling with his father—and not going to school until college.

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James McLurkin wins the \$30,000 Lemelson-MIT Student Prize for inventing a swarm of tiny robots.

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Vinie Burrows will present her one-woman show about Rose McClendon, one of her theatrical predecessors.

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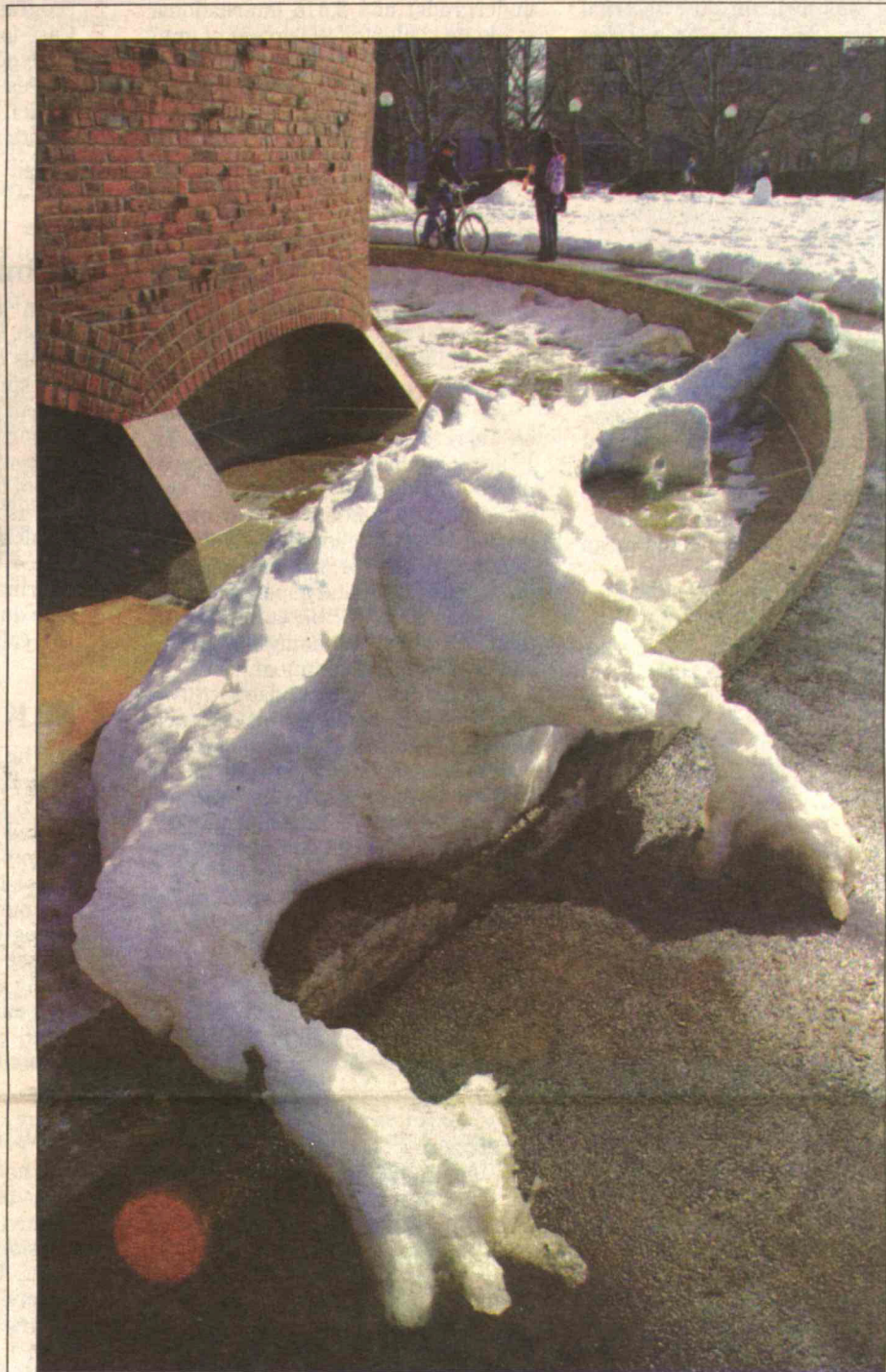


PHOTO / DONNA COVENY

Melting monster in the moat

This 20-foot monster lizard, obviously a relic from the ice age, appeared in the moat outside the MIT Chapel last Friday

morning. Mother Nature quickly disposed of the creature with warmer weather, and it suffered a meltdown.

Freedom of expression is crucial, panel says

About 30 faculty, student and staff members attended the first of three open meetings scheduled by the Committee on Community to discuss the importance of freedom of expression on campus in the face of heightened world tension and the threat of war.

"People from nations, regions and even religions that are targets of anger and hate are likely to be very much a part of our own community," said Chancellor Phillip Clay, chair of the 22-member committee that includes faculty, students, administrators and staff. "We must be prepared to support all of our members throughout these times."

NEXT MEETINGS

Thursday, Feb. 27
7 p.m., Rm 10-250
Thursday, March 6
Noon, Wong Aud.

Clay introduced three members who spoke at the meeting Monday afternoon in Room 10-250: MIT Police Chief John DiFava; senior Jyoti Agarwal; and William Van C. Schalkwyk, director of environmental programs and risk management.

DiFava outlined the role that police play in ensuring individual safety, mobility and expression. Van Schalkwyk discussed ways in which emergency responses and security had been upgraded. Agarwal noted the range of resources available and the administration's eagerness to support student initiatives.

"The audience response was very positive," said Kirk D. Kolenbrander, special assistant to the president and the chancellor as well as a member of the committee, which has been meeting since November.

See **COMMUNITY**

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MIT enlists allies in brief supporting U. Michigan

MIT was joined by a powerful coalition of prestigious universities, business titans and leading U.S. scientific advisory groups in filing a Supreme Court brief supporting University of Michigan policies that include race as a factor in admissions.

The co-signers of MIT's amicus curiae ("friend of the court") brief in *Grutter v. Bollinger* and *Gratz vs. Bollinger* were Stanford University, DuPont, IBM, the National Academy of Engineering, the National Academy of Sciences and the National Action Council for Minorities in Engineering, a consortium of companies dedicated to promoting the diversity of the engi-

See **BRIEF**

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Superman fan to help the Man navigate campus

Darren J. Clarke
News Office

Aaron Donaghey, an MIT Disabilities Services Office employee and a member of the Screen Actor's Guild, will play host to one of his heroes on Sunday.

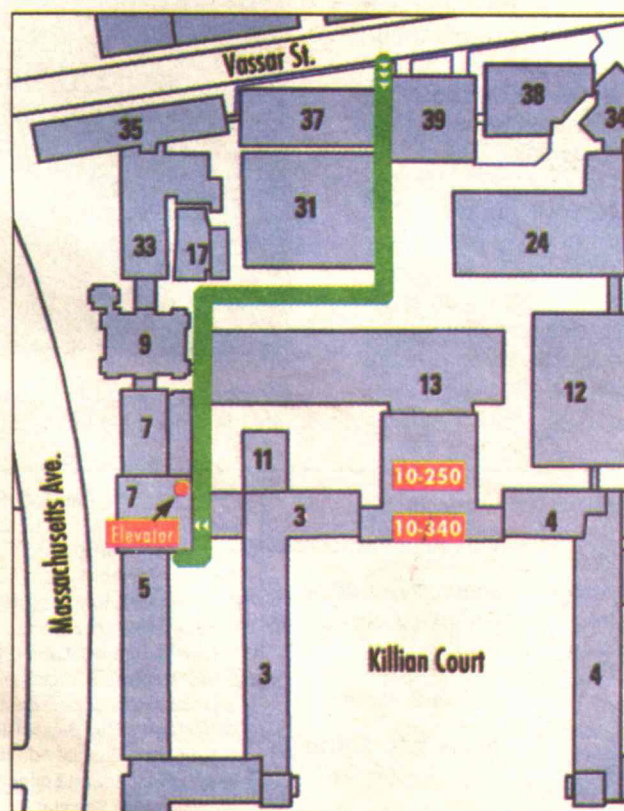
Christopher Reeve, best known for his portrayal of Superman, will be on campus to speak at the MIT/Harvard Conference on Neuroscience, and Donaghey will be his navigator, mapping a wheelchair-accessible route for the visit. Reeve is paralyzed from the neck down due to a 1995 equestrian accident.

"MIT is sometimes hard to get around," said Donaghey, who also uses a wheelchair for mobility because of a condition similar to Reeve's. "It's an old school and with all the construction going on, it makes it that much harder."

Donaghey, 31, started acting in television commercials for CVS and AT&T about six years ago, and soon he will make an appearance in a movie titled "The Human Stain," starring Anthony Hopkins. As he guides Reeve around campus, his

See **REEVE**

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GRAPHIC / LISA DAMTOFT

The route

Christopher Reeve and his companions will enter the campus from Vassar Street between Buildings 37 and 39. They will park their automobile next to Building 5 and enter Building 7 at ground level.

The group will take the elevator to the third floor to go to the Emma Rogers Room (10-340) for a brief respite. Then they will return to the Building 7 elevator to descend one floor to Room 10-250 where Reeve will speak.

The route will be reversed leaving the campus.

Aaron Donaghey of the Disabilities Services Office mapped the wheelchair-accessible route for Reeve.

Sluggish SEVIS database complicates process for documenting internationals

Denise Brehm
News Office

The federal government's new tracking system for international students and scholars has slowed the speed at which MIT can bring people to campus from other countries, but many faculty members still remain unaware that control of documentation has shifted largely out of the hands of MIT's offices of international students and scholars.

The directors of those two offices said at the Feb. 19 faculty meeting that the federal government's new electronic database, the Student and Exchange Visitor Information Systems (SEVIS), which went into effect Jan. 30—coupled with stricter security checks on all visa applicants—has profoundly altered the process for bringing admitted students and visiting scholars to campus.

"The days of us being able to print a document in a day and then run it up to Harvard the same day for an international scholar's transfer are over," said Penny Rosser, director of the International Scholars Office. "We are at the mercy of this imperfect electronic system. We send data in a form into cyberspace and then we must wait for it to come back before we can print a document."

The information in the SEVIS database is shared by the Department of State (including consulates and embassies), the Immigration and Naturalization Service, the sponsoring institution (in this case MIT) and the Social Security Administration.

Danielle Guichard-Ashbrook, director of the International Students Office and associate dean of graduate students, said other government agencies, perhaps including the Internal Revenue Service, may be given access to the information in the future.

SEVIS now requires universities to track students and scholars, as well as dependents who will be traveling with them. Changes that affect registration—such as approved leaves or dropping to less than full-time status—must be reported.

Moreover, international students and visitors now must notify the government of any change in address within 10 days, a radical departure from before the Sept. 11 terrorist attacks, when the government often didn't pay much attention to these things. Often changes were reported only when students sought a renewed visa. Changes in status must now be reported electronically—in advance.

A lapse in compliance could mean trouble for a student.

"Faculty members have to help students understand that they [the students] are responsible for remaining compliant with these rules," said Ike Colbert, dean for graduate students.

The difficulties faced by universities using SEVIS are compounded by the fact that the system isn't working correctly, Rosser and Guichard-Ashbrook told the faculty.

"We input correct information, but wrong information frequently comes back. And it crashes many, many times a day," said Guichard-Ashbrook, who encouraged faculty to

get the word out that times have changed. "Spread the word," she said.

This year MIT has 403 international undergraduates (9 percent of all undergrads) and 2,416 international graduate students (40 percent of grad students), up from 2,000 in 1992. In 2001-02, MIT had 1,648 international scholars from 82 countries.

New Degree Programs

Professor Kip Hodges, chair of the Committee on the Undergraduate Program (CUP), discussed a proposal to codify the process for creating new undergraduate degree programs and presented a motion for faculty approval of the proposed guidelines. The motion will be voted on at the next faculty meeting.

Agreed to by CUP, the Committee on Curriculum (CoC) and the Faculty Policy Committee (FPC), the proposed guidelines designate the required components of new major proposals and the appropriate evaluation processes for various types of proposed majors, and stipulate that all proposals first will be submitted to the CoC, which will notify the faculty and invite general comment.

Hodges also gave updates to two experimental bachelor of science degree programs: in archeology and materials, and in comparative media studies. Both programs are interdepartmental or interdisciplinary majors and have been approved as CUP-sanctioned experiments.

Faculty members are encouraged to download the proposed guidelines at <http://web.mit.edu/faculty/rules/index.htm>.

NEWS YOU CAN USE

Dance performance

Kinaesthetics Lab, a new student choreography group at MIT, will present Breakthrough, its first dance performance, on Feb. 27 and 28 at 8 p.m. Breakthrough will highlight diversity and innovation within the choreographic process. Student choreographers collaborated with musician Martin Case for the performances (admission is \$10 or \$5 for students and seniors). All the pieces are premieres except the final one, a work by the choreographer David Parsons. It was commissioned by the Americans Dance Legacy Institute as part of a collection of works intended to promote a greater understanding and appreciation of modern dance.

Seminars on child/family issues

In keeping with its expanding mission and scope, the Center for Work, Family and Personal Life is offering a wide range of noontime seminars this spring on topics from career planning to elder care to job flexibility.

Formerly called the Family Resource Center, the center offers programs to support the full diversity of lifestyles that enrich the MIT community, as well as services specifically for families.

All seminars are free and start at noon in Room 16-151. Preregistration is required. For further information or to preregister, see <http://web.mit.edu/hr/worklife>, visit the center in Room 16-151, call 253-1592 or e-mail worklife@mit.edu.

MLK oratorical contest

The first round of the Dr. Martin Luther King Jr. Oratorical Contest is scheduled for Monday, March 3 at 6 p.m. in Room 6-120. All undergraduates are invited to compete. The theme is "Faces at the Bottom of the Well: Nightmare of Reality vs. Dr. King's Dream."

Four finalists will be chosen to compete for cash prizes in the finals on March 17 by two Martin Luther King Visiting Professors and one student, acting as judges. The competition, part of MIT's 29th annual celebration of the life and legacy of Dr. King, is sponsored by the Presidential Planning Committee for the celebration.

Student writing prizes

The Ilona Karmel Writing Prizes Competition, sponsored by the Program in Writing and Humanistic Studies, is accepting manuscript submissions from undergraduate and graduate students. Prizes carry cash awards and are given to writers of essays, plays, poetry, fiction and technical papers. The deadline for entries is 5 p.m. on Friday, April 4. For more information, visit the Program in Writing and Humanistic Studies office in Room 14E-303 or see <http://web.mit.edu/humanistic/www/prizes.shtml>, where prize descriptions and contest rules are available.

Laureates speak on environment

MIT Nobel laureates Eric Chivian and Mario Molina will speak on "Global Environmental Issues: Effects on the Atmosphere and the Biosphere" on Thursday, March 6 at 7 p.m. in Room 10-250.

Molina is an Institute Professor involved in developing our understanding of the stratospheric ozone layer and its susceptibility to human-made disturbances. He shared the 1995 Nobel Prize in chemistry for his work in atmospheric chemistry. Chivian, a psychiatrist formerly at MIT Medical, is director of the Center for Health and the Global Environment founded at Harvard Medical School to investigate and promote awareness of the human health consequences of global environmental change. He is a co-founder of International Physicians for the Prevention of Nuclear War, which won the Nobel Peace Prize in 1985.

The lecture is part of the Ford/MIT Nobel Laureate Lecture Series and is open to the MIT community. There will be a reception in Lobby 13 following the lecture.

COMMUNITY

Continued from Page 1

The committee has adopted the following principles:

MIT is an educational institution first and foremost.

"MIT is an environment that encourages informed analysis and dialogue, the expression of multiple points of view, and the provision of educational forums and other opportunities for the exchange of information and diverse views on the world situation.

"Freedom of expression is essential to the mission of a university. So is freedom from unreasonable and dis-

ruptive offense. We should avoid putting these essential elements of our university to a balancing test, and consider both the interests of individuals and the community as well as the right to freedom of expression."

MIT is an international institution.

"The education MIT provides and the research MIT produces are dependent on bringing together the best minds from around the world, regardless of nationality, religion or political views. We will continue to operate as an international institution that, with significant collaborations around the world, is committed to producing global citizens."

All members of the MIT community are full members.

"While fulfilling our responsibility to abide by the law, we will work to protect the rights and opportunities of all students, faculty and staff to pursue their academic, professional and research interests. We will continue to work diligently to keep our campus a welcoming, safe and supportive place to live, work and study. We will support those members of our community who are called to national service."

Questions and comments should be addressed to community-questions@mit.edu. For more information, see <http://web.mit.edu/community>.

Chancellor Clay urges community participation

Chancellor Phillip L. Clay, chair of the Committee on Community, urges all members of the community to participate in one of the two meetings scheduled for tomorrow and Thursday, March 6.

"The success of this effort depends on broadly engaging faculty, staff and students in honoring the principles of our community," Clay said.

At each session, the senior faculty, students and staff on the 22-person committee will present its principles, review MIT's relevant policies and practices for public discourse, and discuss how each member of the community can help create an environment that encourages openness and dialogue.

The audience will have an opportunity to present ideas and entertain suggestions for effective community-building.

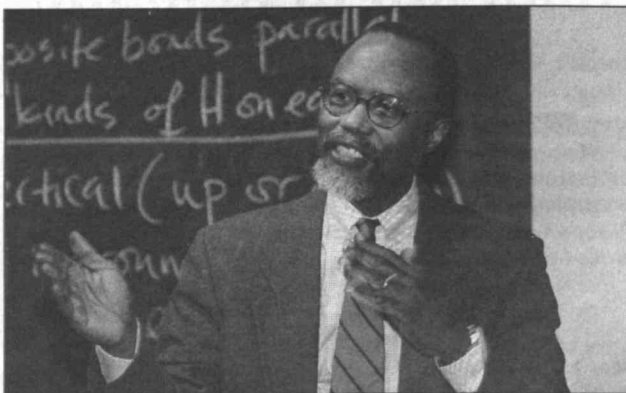


PHOTO / DONNA COVENEY

Chancellor Phillip Clay speaks at the first of three community meetings held in 10-250.

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BRIEFLY

U.N. envoy links development, sustainability, leadership

Negotiations to attain global sustainability are too important to be left to professional negotiators—they must involve all affected parties, including women, youth, business, indigenous people and government at all levels of jurisdiction, a former U.N. Environmental Envoy to the 2002 World Summit on Sustainable Development said in a Feb. 20 talk at MIT.



Jan Pronk

Institute for Environment and Development.

Motivated partners—for example, an important local industry and the government overseeing it—can experiment with much more innovative environmental strategies than the conservative, lowest-common-denominator type of solutions typical of international treaties, said Pronk.

Workshop opens students' eyes to water quality

Students from Cambridge's Morse Middle School visited MIT for "The River is Our Backyard: Water Quality in the Charles River," a Feb. 14 workshop at MIT. Part of a project initiated by MIT with the Cambridge Schools, the program is a major component of a year of fellowships and classroom and field work on environmental issues.

Keith Bush of the Urban Ecology Institute helped students build their own watershed and test it with water flows supplied by spray bottles of colored water. In another session, students poured small film canisters full of sample pollutants into one big jar to observe the combined effect. They built their own filter systems and observed the impact of running the polluted water through them. Lecturer Daniele Lantagne introduced students to the creatures that inhabit the river.

The project was undertaken by MIT in connection with the settlement of an enforcement brought by the U.S. Environmental Protection Agency and the U.S. Department of Justice for alleged violations of the Federal Clean Water Act, the Clean Air Act, and the Resource Conservation and Recovery Act; there is no allegation of any actual harm to the environment.

MIT's smart classrooms allow long distance learning

Using smart classrooms developed at MIT, graduate students in the School of Engineering are taking graduate courses simultaneously with peers at the National University of Singapore and the University of Cambridge.

Massachusetts clocks are five hours behind Cambridge's and 11 hours behind Singapore's. Both classes start at 8:30 a.m. here, so they start at 1:30 p.m. in the United Kingdom and 7:30 p.m. in Singapore.

MIT students in 3.48J (Materials and Processes for Microelectromechanical Systems) and 3.320 (Atomistic Computer Modeling of Materials) are participating in the distance-learning project. The classes are taught in classrooms with large screens that provide video feeds of the lecture and materials. Students and lecturers on all three continents are seen and heard at the other sites as they ask questions and make comments.

The courses play a key role in the Program for Advanced Materials for Micro- and Nano-Systems (AMMNS) of the Singapore-MIT Alliance. The classrooms were developed through the support of the Singapore-MIT Alliance and the Cambridge-MIT Institute.

Record storm shuts down indoor tennis courts

MIT's indoor tennis courts were shut down as a result of damage suffered during the 27.5-inch snowstorm on Feb. 17. "We regret the inconvenience that the deflation of the bubble causes to the MIT community," said Candace Royer, head of the Department of Athletics, Physical Education and Recreation. "We will do everything within our power to get this facility up and operational as quickly as possible."

Call 253-1451 or check <http://web.mit.edu/athletics/www> for updates on the status of the courts.

Díaz brings a powerful message to his creative writing workshop

Sarah H. Wright
News Office

Junot Díaz gave this first assignment in his new undergraduate writing course: write a one-page description of a person, actual or imagined, whom you despise or love.

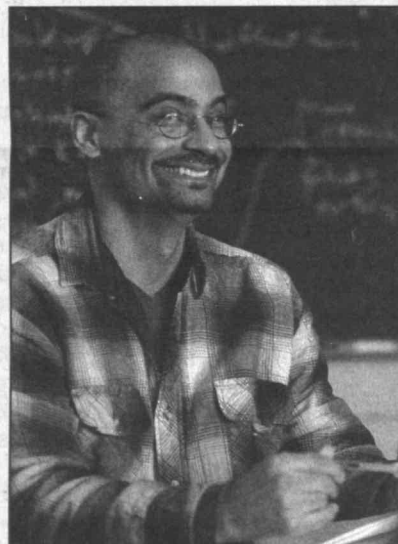
For the Dominican-born Díaz, whole worlds, whole stories, live in that little word "or," and its conjunctive cousins "both," "and," and "also." Stories are "assembled," he told his students, with tools for building conflict, confluence and surprise.

Díaz, an associate professor in the Program in Writing and Humanistic Studies beginning this term, is the author of "Drown" (1996), a widely acclaimed collection of short stories.

"The idiom of the workshop is listening and critiquing how stories work, if they work. Your critiquing muscles will build up over time," he assured the students crowding around a table in Room 4-253.

Later, sitting in his new office, Díaz, 34, whose fiction has appeared in *The New Yorker*, *The Paris Review* and *African Verse*, described how both his life and work have been fueled by surprising and profound conjunctions, beginning with immigrating to New Jersey from Santo Domingo with his family when he was six.

"Immigration doomed me to a complicated relationship to lan-



"Prepare to suffer."

MacVicar Day highlights classroom technology

Rooms 26-100 and 10-250 are traditional lecture halls. Generations of MIT students have filled the rows of seats to attend lectures in these rooms.

Modern classrooms look very different, and the teaching and learning that take place in them have changed just as dramatically. MacVicar Day activities on Friday, March 7 will highlight the relationship between the rethinking of effective educational methods and the changes to the physical space in which teaching and learning take place.

The activities will begin at 3 p.m. in 10-250 with a presentation by William J. Mitchell, dean of the School of Architecture and Planning, entitled "Places for Learning: New Functions and New Form." He will speak about the integral relationship between educational and architectural goals that is reflected in the recent building and renovation projects at MIT.

From 4 to 5:30 p.m., the community is invited to visit six renovated classrooms where faculty and students will talk about the transformed teaching and learning that takes place in these spaces. The classrooms that will be open are:

33-116—Aeronautics and Astronautics Learning Laboratory

The Department of Aeronautics and Astronautics' Guggenheim Laboratory has been renovated and expanded, creating the flexible Learning Laboratory for Complex Systems, which combines classroom and hands-on learning to teach engineering process skills in a methodology called "CDIO" (conceive, design, implement, operate).

26-152—TEAL (Technology Enabled Active Learning)

Introductory physics is presented in a new format that



PHOTOS / DONNA COVENEY

"As they watch, I'll become stronger and stronger."

Junot Díaz

guage, to English," said Díaz, who writes in English and speaks both English and Spanish. "My childhood was lots of extreme contradictions. As a young boy, I was acutely sensitive; I was clever in an anti-intellectual immigrant community; I was productive and ambitious, yet a member of a despised and discriminated-against underclass."

The 10 stories collected in "Drown" are loosely based on Díaz's experiences growing up in both the Dominican Republic and urban United States. "It's written from an invisible ground zero, the way immigration affects everyday life," he said.

The "ghost imprint" of history affects Díaz's life and work, too. Since childhood he has sensed a "deep historical silence hanging over the entire hemisphere from what started in the Dominican—slavery, capitalism, the annihilation of indigenous people," he said.

Díaz is unsentimental about writing and the writing process. He writes four hours each day and has never thought of his art as a gift. "I do as I have been called to do. It's painful. It demands so much. To anyone interested in writing, I say, 'Prepare to suffer,'" he said.

While writing itself is an individual labor, learning about writing and criticism works best in a group, Díaz believes. "There are things that cannot be learned except in a collective,

especially in the humanities. Complex insights can only be achieved collectively," he said.

Díaz particularly credits women teachers for "pushing me intellectually," and he warns male students to be conscious of their power in the classroom. "We have a habit of taking the air out of the room," he said. More than half the students in Díaz's class are men.

The students will write stories and read short works by "writers of color and the kookier white kids, and a lot of relationship stuff," said Díaz, who praised fiction by Toni Morrison, Sandra Cisneros, Louise Erdrich and Joe Haldeman, an adjunct professor in MIT's writing program. Growing up, he loved "junk—comic books, horror, sci-fi."

And speaking of surprises, students will see more than their intellectual and critical muscles grow during the semester. Díaz lifts weights for fun. "As they watch, I'll become stronger and stronger," he said.

Díaz, who attended public schools in Parlin, near Perth Amboy, New Jersey, received his B.A. from Rutgers University and an M.F.A. from Cornell University. He is now writing a full-length novel.

Díaz has previous connections to MIT. He won the Council for the Arts at MIT's 1998 Eugene McDermott Award and was an artist in residence here in March 1999.

integrates lecture, recitation and laboratory experiments. Animations and simulations help students visualize complex concepts, especially in electromagnetism.

10-337—TEP (Teacher Education Program)

The TEP space supports a dual mission: to develop a group of undergraduates who will become the science and math teachers of tomorrow, and to work with in-service teachers to bring the "MIT experience" to their classrooms. The space is designed to integrate on- and off-computer work, and to facilitate collaboration.

7-432—Undergraduate Architecture Studio

The renovated studios in the School of Architecture introduce undergraduates to the skills needed for building in contemporary cities. For the most part, computers have replaced drafting tables; all the studios are equipped with network drops and CAD workstations as well as with ISDN lines for videoconferencing.

4-231—The Shakespeare Electronic Archive

The Shakespeare Electronic Archive will be featured in one of the recently renovated all-purpose classrooms that incorporates network and wireless connectivity. The Shakespeare project has been constructing electronic environments for teaching and research based on digital copies of primary documents in all media.

3-370—Park Room for Innovative Education

The B.J. Park and Chungli Park Room for Innovative Education is being used for active learning initiatives in the Department of Mechanical Engineering. It lets groups of students conduct desktop experiments and use web-based modules to illuminate lecture content.

Brochures with maps and descriptions of the classrooms will be available. To obtain a brochure in advance, contact Helen Samuels at hwsamuel@mit.edu.

Bond decries rise of black poverty

Deborah Halber
News Office

The success of the American civil rights movement should be measured not by the increase in black millionaires since the 1960s, but by the decrease in black employment, civil rights pioneer Julian Bond declared at MIT's 29th annual celebration of the life and legacy of Dr. Martin Luther King Jr.

Persistent and growing poverty among black Americans points to a "failure to keep the movement moving on," Bond, 63, told the standing-room-only crowd in the Stratton Student Center on Feb. 14.

Bond warned the group of students, faculty and guests that King's tireless grassroots work on behalf of poor and disenfranchised black Americans seemed lost on recent generations who see King only "as a grainy TV picture—a gifted preacher who had a dream."

He reminded the audience that King was assassinated while supporting a garbage workers' strike in Memphis. "For too many, we don't honor the movement, we honor the myth," he said. "Yesterday's movement was a people's movement—it relied on people."

In a speech that was as scathing against the current Bush administration and justice system as it was measured, civil and gentlemanly, Bond said that some of the same forces that tried to derail the civil rights movement in the 1960s are still in place today, and even more insidious because they are harder to detect.

Bond spent 20 years in the Georgia legislature and more recently served as chairman of the NAACP and as a professor at American University and the University of Virginia. He said that just as terrorism is difficult to punish and detect, so is today's brand of racism. While racism that resulted in public lynchings was more blatant, the racism inherent in the current political climate is just as real.

"Removal of the more blatant forms of American apartheid makes it seem like the discussion is over. We find ourselves fighting old battles that we thought we had won," he said. "We're seeing freedom shrink and hate expand."

"There is a right-wing conspiracy," he said, and it is operating out of the top levels of the U.S. government and through organizations that "wallow in imagined victimhood" and "buy seats at the tables of influence."

"We're such a young country," said

Bond, himself the grandson of a slave. "It's only been 38 years since many of the civil rights laws were passed. Some are telling us those 38 years have been enough."

"We need a formula for the future that includes the fact that society has been doing something special against the Negro. Affirmative action is under attack not because it has failed but because it has succeeded," he said.

The war on poverty, he said, has been replaced by a war on the poor, as both Bush administrations have supported tax cuts for the wealthy and cut dozens of programs aimed at helping the disenfranchised. "And where are the Democrats?" he said. "Absent without leave from this battle for America's soul. Often one political party is shameless and one is spineless."

In his 40 years of activism, Bond said he is more concerned than ever that decades of progress are being threatened by the current political climate.

Racial justice, economic equality and world peace are among the themes that occupied Martin Luther King Jr., Bond said, and these are the themes that should occupy us. "As the drums of war beat louder, we should remember what we're fighting for," he said.



PHOTO / DONNA COVENEY

"We're seeing freedom shrink and hate expand," Julian Bond said at MIT's Martin Luther King Jr. celebratory breakfast.

QUOTABLE



Help each other out of the well

“The moment that a minority person rises to the top of the well, the people at the top let go of the rope and call us underqualified, too conservative or too liberal. What they really mean is we are not white enough. And sometimes, to those in our own communities, we are not Hispanic enough, or black enough. Why do we keep holding ourselves down at the bottom of the well instead of helping each other to climb out? Look around you. The faces at the bottom of the well are no different from you or me or anyone else in this room. Ask yourselves how you beat the odds and made it to and through MIT. And when you leave this place, will you return to the communities that you left behind? Like Dr. King, will we face the challenge and return to the South, or will we forget that we, too, were once faces at the bottom of the well?”

KATERI GARCIA
SENIOR IN MECHANICAL ENGINEERING



Don't let dreams dwindle

“Dr. King had the audacity to believe that people everywhere should have three meals a day for their body, education and culture for their minds, and dignity, equality and freedom for their spirits. Unfortunately, he was assassinated before he could see his dream realized. As such, his tombstone reads 'Free at last, free at last, thank God Almighty, I am free at last.' Thus I implore you, let not Dr. King's dreams of significance dwindle to a mere symbol to add to all the uncashed checks handed down to those that suffer. Let not another face at the bottom of the well have to drown in their own despair before they can finally say that they're free at last. Let us prove that you can assassinate the messenger but you cannot assassinate the dream.”

AYANNA SAMUELS
GRADUATE STUDENT IN AERO/ASTRO

Vest details diversity benefits during his own education

Sarah H. Wright
News Office

Using MIT's 29th annual breakfast honoring Dr. Martin Luther King, Jr. as a forum, President Charles M. Vest announced that MIT would file with the U.S. Supreme Court a friend-of-the-court brief in support of the University of Michigan's policy to include race among factors for admissions.

Vowing to keep MIT in the forefront of the move to preserve race as a factor in admissions, Vest said, "MIT for decades has been a leader in building the diversity of our own community and of the engineering and science workforce and leadership of America. And it is not going to lose that edge on my watch."

Vest, 61, devoted about a third of his 20-minute talk to his personal experiences. "My own journey," he said, "is one of direct and meaningful personal benefit from diversity."

He grew up in West Virginia—a "border state not quite of the south but not quite of the north either"—and attended racially segregated schools until junior high.

"Our schools were desegregated in one fell swoop a year or so ahead of Brown v. Board of Education [1954]. I came quickly to value and learn from the new classmates who joined us. I remember when our high school football coach drilled us on how to protect our black teammates should they be attacked in some of the more rural towns in which we were to play.

"My first science teacher, who was a big inspiration, was black. My high school physics teacher was a woman. My closest friend in graduate school was from India. My Ph.D. advisor was

from Turkey. My closest colleagues as a young professor were from Taiwan, Hungary and Turkey. My own father grew up in a German-speaking household.

"I know that I am richer, that my worldview is more balanced, and that my ability to do my job and live my life has been greatly enhanced by these and by so many more personal experiences that we can file under the heading of diversity," Vest said.

An ongoing inspiration for Vest is the MIT community itself, he said. "When I look around at an MIT student body whose undergraduates are 42 percent women, 6 percent African-American, 11 percent Hispanic American, 2 percent Native American and present a huge range of diversity in so many other dimensions, it seems to me that a miracle has happened," he said.

"But that's just the point. It is not a miracle. It is not a natural occurrence. It is the result of determined, conscientious effort, over more than three decades, often against seemingly insurmountable odds. It is the result of institutional leadership and occasional courage. It is a result of the determination of innumerable families and communities. The goal was as simple as it was profound: to give every young person the opportunity to succeed ... despite the length of the journey, our nation is a better place than it was three decades ago."

Vest's talk ended on a note more determined than optimistic.

"Race still matters in America," he said. "We haven't reached the day when we will truly have a race-blind society. We hope we will, but we haven't. And we must not put our heads in the sand, declare victory and let 30 years of progress slide."

BRIEF

Continued from Page 1

neering work force.

The two cases—one involving admissions to the University of Michigan Law School and the other to its College of Literature, Science and the Arts—are scheduled for oral arguments before the court on April 1. The cases stem from lawsuits filed against the university by unsuccessful applicants who argued that race should not be a factor in admissions (the defendant, Lee Bollinger, was president

of the University of Michigan when the suits were originally filed).

"As great universities, leading corporations and national academies, we have a profound responsibility to provide for the future economic strength, health and security of this nation," said President Charles M. Vest when the brief was filed. "The court must not block our path to building the diverse scientific and engineering workforce and leadership we need to do the job."

Vest cited four key points in the brief:

- "The interest of colleges and universities, including those with a strong focus on science and engineering, in achieving diversity of our student bodies and academic communities is compelling in many critical respects.

- "We must retain our freedom to consider race as one of many factors when admitting students in order to achieve this diversity and to select the most promising students.

- "This is true for private as well as public institutions.

- "A diverse workforce and future leadership in science and engineering will be essential to our nation's future economic strength."

"Together, this group represents American education and industry," said senior counsel Jamie L. Keith, who worked with constitutional experts at the Washington law firm Jones Day in writing the brief and also worked to consolidate the coalition of co-sponsors. "I hope we made the point that diversity is essential for the country to maintain its leadership position in the world today."

Prodigy prof skipped school until he started college at 12

The following is an edited version of an article published in the Jan. 18 issue of *New Scientist* (vol. 177, issue 2378, page 40—reprinted with permission). The interview was conducted by Steve Nadis, a former Knight Science Journalism Fellow at MIT. The original interview is online at <http://www.newscientist.com/opinion/opinterview.jsp?id=ns23781>.

When he was 12, Erik Demaine talked himself into Dalhousie University in his home town of Halifax, Nova Scotia, despite having no grades or academic record to speak of. Eight years and a Ph.D. later, he became MIT's youngest professor in the fall of 2001. He specializes in computational origami—the geometry of paper folding.

Q. You left school at the age of seven and spent the next five years on the road with your father. Why?

A. Mainly because it seemed like a fun thing to do. My dad, Martin, was a craftsman, which made it easy for him to travel and sell his stuff at craft fairs throughout the U.S. It was a very free-form existence. Our movements weren't guided by anything more specific than "that seems like an interesting place to go."

Q. What happened to your formal education during those years of wandering?

A. My dad taught me from home-school manuals we got from an agency. When I was nine, it became more efficient for me to teach myself from the same materials. That approach worked well for everything but spelling, which is hard to test yourself on. But we figured out a system for that, too.

Q. Were you ever curious about what went on inside the classroom?

A. I checked out normal schools from time to time to make sure I wasn't missing anything. My longest stint was a month in a Miami school because I was intrigued by a cute girl. But I left once I realised she had no interest in me. The main thing I learned was how much time is wasted in school. When you take away lunch, recess and other breaks, the nine-to-three day reduces to about one hour of real instruction. Home schooling is much more efficient.

Q. When did you become interested in mathematics?

A. It started from playing video games when I was quite young. I asked

my dad how people wrote those games, and he said you first have to learn how to write a computer program. He got hold of some books on programming so he could teach me, and soon I was reading the books on my own. After a year or so of that, he said, "If you want to be good at computers, you have to be good at mathematics." So I said, "OK, let's learn some mathematics." I started with a high school algebra text, and things took off from there.

Q. Do you feel any sort of age gap at MIT, being far younger than both your faculty colleagues and many of your students?

A. That's becoming less of an issue now that I can go to bars legally, but age has never really been important in my life. Some people who accomplished a lot when they were young have stressed their age as a way of making their achievements stand out even more. I try to downplay the age thing because eventually everyone gets older.

Q. What's your father up to these days?

A. He's a visiting scientist at MIT with an office in this lab. When MIT offered me a position, they offered him a position too, which was great. Sometimes we work together; other times we work separately. He has tried to keep up in mathematics, learning this stuff as I've been learning it, but as I've got deeper into the field our roles have changed somewhat.

Q. What was your first real accomplishment in mathematics?

A. Six years ago, when I began my Ph.D. work in computational geometry at the University of Waterloo in Ontario, my dad remembered "the paper cut problem" from an article written in the 1960s on paper folding and mathematics. The idea is to take a piece of paper, fold it any way and as many times as you want, and then make one straight cut and see what shapes you get. The question is, are all shapes possible? I worked on this problem for two years at Dalhousie with my dad and adviser Anna Lubiw. After experimenting for a while, we realised you could make all kinds of shapes, such as butterflies, swans, hearts or stars.

Q. What are you doing when you're not working on folding problems?

A. I have a separate project that involves a new approach to organiz-



PHOTO / DONNA COVENEY

Erik Demaine, an assistant professor of EECS, shows off some of his origami and other creations.

ing data. My hope is to make web searches quicker and more efficient. Last week, a mathematician from Spain visited me and we looked at the classic problem in facility location: where, for instance, would you site 100 fast-food outlets to make them closest to the most people? I also work in combinatorial game theory, studying the complexity of computer games such as Tetris, which in fact is what got me into mathematics in the first place. My goal is to keep moving into new areas of mathematics and not be confined to a single branch.

Q. Does it seem weird to you to have a tenured job and so much stability in your life, given your nomadic past?

A. I guess I'm getting used to it. Stability seems like a good thing to me, and I can't see any downside. If you don't want it, you can always throw it away.

See page 7 for a story about an MIT origami contest.

Robotic ants inventor James McLurkin wins \$30K Lemelson student prize

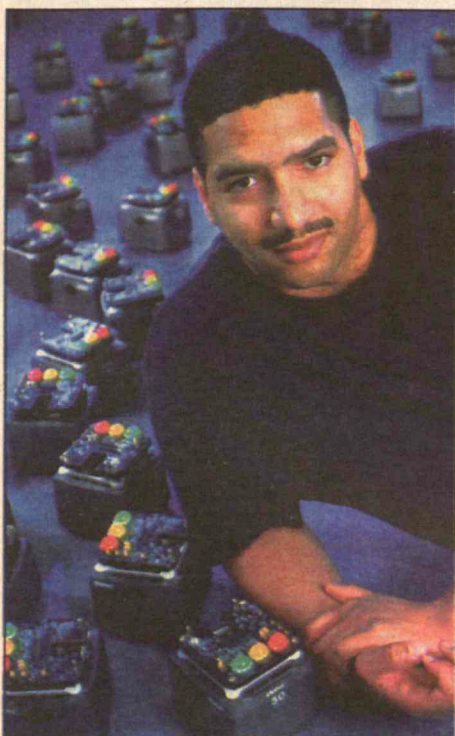


PHOTO / MARK OSTOW

"Understanding nature is the key."

James McLurkin

Graduate student James McLurkin, inventor of the world's smallest self-contained autonomous robots measuring a little over one inch on a side, is the winner of the ninth \$30,000 Lemelson-MIT Student Prize for inventiveness.

The 30-year-old native of Baldwin, N.Y., is working on his Ph.D. in computer science and building a fleet of small autonomous robots that work cooperatively to accomplish tasks.

As part of his doctoral research, McLurkin is developing algorithms and techniques for programming these swarms of robots programmed to mimic the behavior of bees: cluster, disperse, follow and orbit. By simulating the complex interactions of bees, McLurkin's robots accomplish individual tasks that support the collective goal of the group.

"James is a clever and inspired inventor," said Professor Rodney A. Brooks, director of the Artificial Intelligence Laboratory. In a letter of recommendation for the prize, Brooks said, "In the future, the world will be full of teams of mobile robots and they will all trace their ancestry to those developed by James McLurkin while still a student at MIT."

Fascinated with the process of invention since he was seven, McLurkin spent much of his childhood reconstructing and enhancing toys and electronic devices. Before he graduated from high school, he

already had programmed his own video games, dismantled and rebuilt parts of his bicycle, assembled a customized computer, and designed and built two robots. Influenced by his parents' love of nature, he also began to develop a keen interest in exploring and learning from the principles of nature.

A firm believer that microrobotics should begin with the study of natural phenomena, McLurkin decided to focus his MIT undergraduate thesis project on simulating the behavior of an ant colony using 12 cubic-inch robots (MIT Tech Talk, April 26, 1995). While working on the project, he stored a large container of ants on his desk to study the way they interacted, communicated and performed tasks. He programmed his robotic ants to respond to their environment, enabling them to hunt for food, pass messages to one another and even play tag. "Understanding nature is the key to unlocking the secrets of intelligence," McLurkin said.

Recognizing the enormous potential for tasks his robots could accomplish if they could self-organize, McLurkin later expanded his research to focus on developing distributed computing techniques to enable swarms of robots to act as a group as well as individually. Swarm robots travel in a fleet. Once a discovery is made by one robot, it will signal the group. The swarm can then unite around the discovery and accomplish

the task it was programmed to achieve.

As lead scientist at iRobot in Somerville, he managed a research team that built more than 100 small robots equipped to communicate with each other, compute their relative positions and utilize touch-sensing for navigation. The swarm robots are four and a half inches per side, making them 125 times larger and immensely more powerful than his robotic ants. Now part of his doctoral thesis research, each robot has bump sensors, light sensors, a self-charger, a radio modem and an audio system. Eventually, each will be equipped with a food sensor, trail sensors and a camera.

McLurkin earned his bachelor's degree in electrical engineering and expects to complete his Ph.D. in 2006. Before returning to MIT for graduate school, he earned his master's degree in electrical engineering from the University of California at Berkeley.

McLurkin is one of the inventors now being showcased in a traveling exhibition at Boston's Museum of Science (MIT Tech Talk, Oct. 23, 2002). "Invention at Play" is sponsored by the Lemelson Center for the Study of Invention and Innovation and was first shown at the Smithsonian's National Museum of American History. For more information, visit <http://www.si.edu/lemelson/centerpieces/iap>. For more information on the Lemelson Foundation, see <http://web.mit.edu/invent>.

Silence is golden for two teams of RNA researchers

Scientists exploit interference to shut down mammal genes

MIT researchers have developed a way to exploit RNA interference for the first time to silence genes in a wide variety of mammalian cells, including embryonic cells. The study appeared in the Feb. 17 edition of *Nature Genetics*.

This new approach allows genes to be switched off by inserting short pieces of ribonucleic acid (RNA) into developing cells. It is currently being used to help researchers uncover the function of the more than 30,000 genes found in humans, as well as in animal models of important diseases.

"Imagine finding a gene that is used by a bioterrorism agent," said Luk Van Parijs, assistant professor of biology at MIT's Center for Cancer Research (CCR) and senior author of the study, "and then modifying the cells of the body to no longer express that gene. It's like being vaccinated: the agent can no longer harm the body."

RNA interference is a potentially powerful tool, but important cell types have been resistant to the introduction of short interfering RNAs (siRNAs) and short hairpin RNAs (shRNAs) required to trigger this process.

Van Parijs and colleagues created a system based on a disarmed lentivirus—a retrovirus that can introduce genetic material into almost every cell or tissue, including stem cells and neurons—and have used this virus to successfully deliver shRNAs into mammalian cells and even induce RNA interference (RNAi) in transgenic animals.

Using lentiviruses to silence genes will allow researchers to systematically test how they function in virtually all cells of the body and create animal models that will allow them to quickly and efficiently determine which genes are important to the function of different tissues and organs and which might be effective therapeutic targets in diseases.

Using this new technology, the MIT researchers have created transgenic mice in which important immune genes or cancer genes, such as p53, have been silenced. These mice are now being studied to understand more about how these genes contribute to autoimmune disease and cancer.

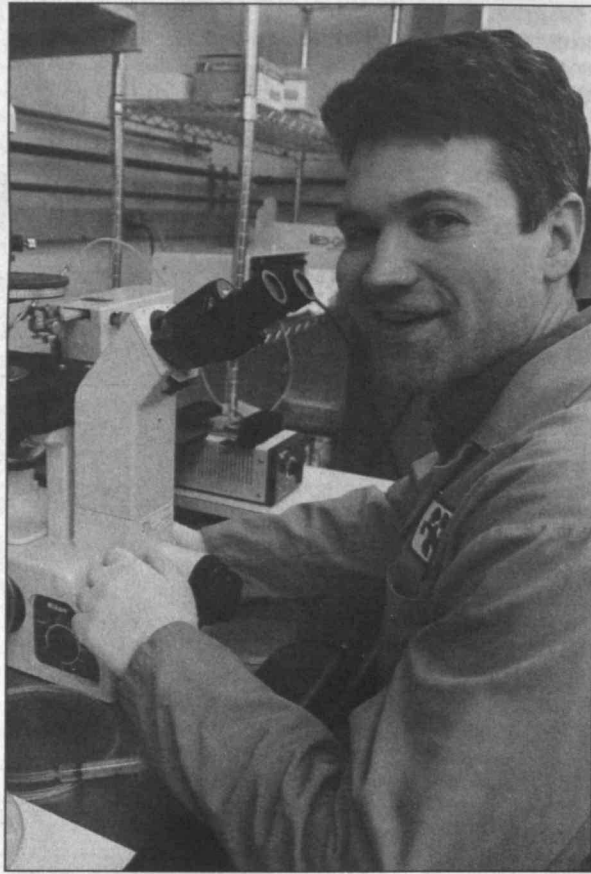


PHOTO / DONNA COVENEY

"Imagine finding a gene that is used by a bioterrorism agent and then modifying the cells of the body to no longer express that gene."

Luk Van Parijs

New short-form messenger can turn off targeted gene

A short form of RNA designed by MIT researchers can turn off a targeted gene much the way naturally occurring microRNAs do, MIT researchers report in the Feb. 15 issue of *Genes & Development*.

RNA—ribonucleic acid—was long thought to be only DNA's messenger, an intermediary that delivered the blueprint for constructing proteins. Researchers have now found that tiny segments of double-stranded RNA, dubbed short interfering RNAs (siRNAs), can be designed to shut down any given gene.

RNA medicines could be developed to treat a host of disorders from high cholesterol to cancer, as well as viral diseases such as AIDS.

MicroRNAs are small, naturally occurring RNA molecules that are similar to siRNAs but that function differently to silence genes.

Small RNAs, 21-25 nucleotides long, work in animals in at least two distinct ways: siRNA pair exactly to mRNA and destroy it, while microRNAs partially pair with mRNAs and repress their translation without destroying the mRNA.

Biology graduate students John G. Doench and Christian P. Petersen and Phillip A. Sharp, Institute Professor and director of the McGovern Institute at MIT, hope to use their newfound information about siRNAs to understand how naturally occurring microRNAs work to stop the translation of certain genes in mammals.

"This study shows that the two silencing pathways are connected," Petersen said. "Researchers have always assumed that siRNAs only act on messenger RNAs to degrade them by RNA interference, but they can also turn off gene expression by halting translation."

Last June, Sharp and colleagues showed that siRNAs could stop HIV infection in cells grown in the lab. The researchers created siRNAs that inhibited the growth of HIV through gene silencing.

"A lot of really big questions surround the biology of these RNAs, and we think we'll be able to study many of them with this system," Petersen said.

Biology class aims to engineer blinking life forms in the lab

Deborah Halber
News Office

When four MIT biology and engineering faculty members designed a daring new IAP course for this year, they jokingly nicknamed it "phage wars."

The 16 students in "Synthetic Biology Lab: Engineered Genetic Blinkers" didn't end up competing to see who could make the best bacteria-attacking virus. Instead, given a small "parts kit" containing pieces of DNA, they aimed to design a biological entity that does not exist in the natural world: a one-celled system that emits a periodic signal of light, or blink.

Why make a little living lighthouse? MIT's first-of-its-kind course is expected to pave the way for a revolution in the evolving field of engineered genetic networks.

"Synthetic Biology Lab," which ran from Jan. 6-31, was created by Drew Endy, a fellow in biology and the Biological Engineering Division; Thomas F. Knight Jr., a senior research scientist in electrical engineering and computer science; Randy Rettberg, a research affiliate of the Artificial Intelligence Laboratory; and Gerald J. Sussman, the Matsushita Professor of Electrical Engineering.

Endy said that companies with the capability to synthesize long fragments of DNA have been cropping up, yet "we are almost entirely unprepared to make good use of this fabrication infrastructure because we lack the knowledge, tools and design framework necessary to systematically engineer large-scale genetic systems."

In the mid-1970s, biologists developed the ability to build genetic circuits by combining or synthesizing pieces of DNA. In the late 1990s, physicists and engineers started designing and building genetic systems using five or six components. Now, the ability to manipulate DNA makes it possible to put together dozens of components, but the work remains painstaking and difficult.

At the same time, companies such as Blue Heron Biotechnology, formed by John Mulligan (S.B. 1980), have developed methods that allow for the efficient construction of long fragments of user-specified DNA.

"One of the bottlenecks [in drug discovery] was getting access to the genes that we needed and preparing them to answer the question: Is this interesting gene a potential therapeutic target?" Mulligan said. "Gene synthesis was developed as a potential solution to this problem."

It's pricey—Blue Heron's DNA synthesis alone for the Synthetic Bio Lab course costs \$80,000—but potentially faster and easier than slaving in a lab. "This class was a first attempt to decouple biological system design and debugging from the physical work of fabrication. These students didn't have to pipette or run gels," Endy said. "Design the right parts and an understandable system, put the resulting DNA into a bacteria and check to see if you have something that works."

When recombinant DNA technology was first developed in 1973, researchers didn't know all the consequences of combining existing pieces of DNA. Now students have the capability to synthesize whatever they can specify. "Before, I had to go and find and culture the organism containing the piece of DNA. Now I can make the DNA directly," Sussman said. Coupled with the fact that the DNA sequences of various viruses and even the genes encoding anthrax are freely available on the web, while synthesis technology is becoming cheaper and widely available, the subject is increasingly worrisome.

After discussing these concerns, the students in Synthetic Biology Lab agreed that the scientific understanding and future benefits to be gained from synthetic biology justified its responsible exploration. Still, "it wasn't an accident that we only gave everybody a 5 kilobase synthesis budget," Endy quipped.

The course, which took more than eight months to develop, was inspired in part by a pioneering series of classes on integrated circuit design held at Caltech and MIT in the late 1970s. Part of a search for improved, simplified methods for VLSI system design, the classes resulted in a new methodology and new products that had a big impact on the chip design industry and helped drive the personal computing and computer-communication infrastructure.

The early computer industry started with logic devices that were sold as part of logic families; the properties of the family and each individual part were documented in a data book. Like applying Henry Ford's assembly line to genomics, the MIT scientists hope to come up with something similar: a BioBricks data book.

"Synthetic biology needs such a standardization of description and a common base of parts, properties and interfaces," Rettberg said. To begin this process, the MIT scientists worked over the past year

to create a data book. During the course, the students specified and designed around 50 new BioBrick parts.

By taking advantage of a standard assembly strategy developed by Knight, many combinations of parts can be assembled to create a large number of distinct systems, including different blinkers.

If "Synthetic Biology Lab" is as successful as those early VLSI system design classes, it will lead to facile control of biological information, materials and energy, Endy said.

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. TechTalk ads are posted on the Internet. 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

28mm wide-angle lens for Minolta camera. W Rokkor-X 1:2.8 manual focus. Used only once. \$75. 617-625-0870.

Mercier men's 10-spd bike with krypton lock, best offer. Living rm set, best offer. acentor@mit.edu

VEHICLES

1989 Olds Cutlass Supreme. 76k miles, 2-dr auto, cranberry ext, red leather int, all pwr, A/C, gd/exc cond. Grt 2nd car. \$1,600. Joel, 781-981-2855 or alpert@ll.mit.edu.

2001 Ford Escape. Fully loaded, 4x4. 3-yr lease, \$347/mo. \$2000 cash incentive. Moving out of the country. 508-545-1630

1992 Toyota Previa LE. 1 owner, exc cond, maintenance record, 112k miles, must drive, won't last, \$5,495. 978-750-0586.

HOUSING

Cambridge: Lrg loft rm w/prvt bath/entry avail for short-term stays for members of the MIT community. Rates avail upon request. 617-441-0860, emassey@mit.edu or <http://www.cambridgeloft.com>.

Deadline to apply for summer and fall 2002-03 on-campus graduate housing is 2/28 at 5pm. More info: <http://web.mit.edu/rslsp/grad>, Graduate Housing Office (E32-238), gradhousing@mit.edu or 253-5148.

Cambridge: 387 Columbia St, 1st flr, 4 rms, wall-to-wall, \$900. 1056 Cambridge St, 2nd flr, 1BR, wall-to-wall, \$700. Tony, 617-666-8770.

Brookline: Coolidge Corner 3BR townhse, 2.5b, 2 decks, cul-de-sac, attached garage, A/C, gas ht. Move in cond, \$625,000. 253-1707.

Cambridge: Lrg studio apt, fully furn, on campus, prkg avail, grt view. Avail April through Sept, \$1,500/mo. Ray, 617-547-4504 or r.diffley@att.net.

ROOMMATES

Cambridge: 2 young women seek third roommate in newly renov Inman Sq apt. New appliances, low utils, laundry in bldg, close to bus, nr T. \$667/mo + utils. lbradtmitter@yahoo.com.

Cambridge/Belmont: Seeking responsible non-smoker (F preferred). Storage, w/d, dw, lrg yard, deck, garden. Cats already, no more pets. Nr bus lines, short term OK. \$1,000/mo +utils, no deposit or fee. ers66@juno.com

VACATION

London: English couple w/boys (13 and 9) will exchange their spacious London hse and car w/another family during Aug 2003, preferably on the coast nr Boston. <http://uk.geocities.com/mburstyn> or bis@mit.edu.

Naples: Share new lakefront hse, own bedrm/bath, nr Audubon Sanctuary, birding, walking, canoeing, tai chi, beaches, Internet. No smoking/drugs. \$4,000/March-April. gloria_burkhardt@alum.mit.edu or 239-353-8280.

MISCELLANEOUS

Experienced editor/proofreader/writer will assist you w/resume, cover letter, research paper and thesis writing. Professional, timely, affordable. e_diting@hotmail.com

Burrows gives one-woman show honoring actress

Mary Haller
News Office

Broadway actress, writer and director Vinie Burrows will pay homage to one of her underappreciated theatrical predecessors, Rose McClendon, in a workshop production at MIT next week.

Burrows began her acting career on Broadway when she was a teenager, sharing the stage with Helen Hayes in a play directed by Joshua Logan. In rapid succession came six other Broadway plays and many off-Broadway productions; she then branched out to create, produce and direct her own solo productions. She'll perform her latest one, "Rose McClendon: Black on the Great White Way," on Thursday, March 6 at 8 p.m. in Kresge Little Theater as part of a brief residency at MIT.

Described by theater critic Clive Barnes of The New York Post as "one of the reigning divas of the black theatre," Burrows

began developing one-woman shows as a reaction to the scarcity of quality roles offered to actors of color.

Her newest show honors Rose McClendon (1884-1936), a premier African-American actress of the Harlem Renaissance in the 1920s and 1930s who influenced the careers of many aspiring black actors of the period. Although Paul Robeson called McClendon "the foremost actress of the colored race" and renowned critic Alexander Woollcott compared her to the famed Italian actress Eleonora Duse, there are no biographies, books, plays or scholarly dissertations about her.

"As a young actor, the lives and talents of the great actresses of the past fascinated me," said Burrows, who also noticed that all of these actresses were white. When she saw a photograph of McClendon in a Harlem public library, Burrows said she "intuitively felt that she [McClendon] belonged in the pantheon of great performers."

Burrows' play blends fact with fiction, using scenes from roles that McClendon actually played as well as roles she could have played if Broadway had, as Burrows observes, "fully used her considerable gifts."

The MIT performance will be directed by Associate Provost for the Arts Alan Brody, who also directed Burrows in her internationally-acclaimed one-woman show, "Sister! Sister!"

"Vinie is the most accomplished, powerful, passionate artist I have ever worked with," says Brody. "Her presence is mesmerizing, her fierce intelligence inspiring." Burrows was awarded the 2002 McDermott Award in the Arts from the Council for the Arts at MIT last September. While at MIT she will engage with students in acting classes and meet with students and faculty in several informal settings.

In addition to her active theater career, Burrows is a vigorous peace activist and serves as the permanent representative to the

United Nations for the Women's International Democratic Federation.

She recently added one more credit to her résumé: a graduate degree in performance studies from the Tisch School of the Arts at New York University. "I wanted to put a theoretical framework on what I had been doing practically," she said. "I also wanted to see if my little gray cells would still work."

Burrows said her experience in graduate school was "exhilarating and exhausting."

"I don't look at anything the same way anymore," she said, "whether it's being with my newest grandchild or thinking of the Feb. 15 anti-war rally," in which she participated.

"They say love is not for the young," adds Burrows. "It's the same with education."

Burrows will perform portions of "Rose McClendon" as part of MIT's annual "African-American Living History Museum" tomorrow (Thursday, Feb. 27) at 5:30

p.m. in the Sala de Puerto Rico. Organized by Associate Professor Thomas DeFrantz, the performance will feature student portrayals of activists, scientists and inventors prominent in African-American history.



Vinie Burrows

Students don't fold under pressure in contest, but just for the fun of it

Lynn Heinemann
Office of the Arts

MIT students don't all dream of a paperless society, as a recent origami competition proved.

Some of the competitors coaxed their fingers to remember origami creations they'd learned years before. Some studied books of intricate figures to recreate step-by-step illustrations. And some devised their own, using as many as 98 pieces of paper in a single entry without resorting to the use of glue or tape.

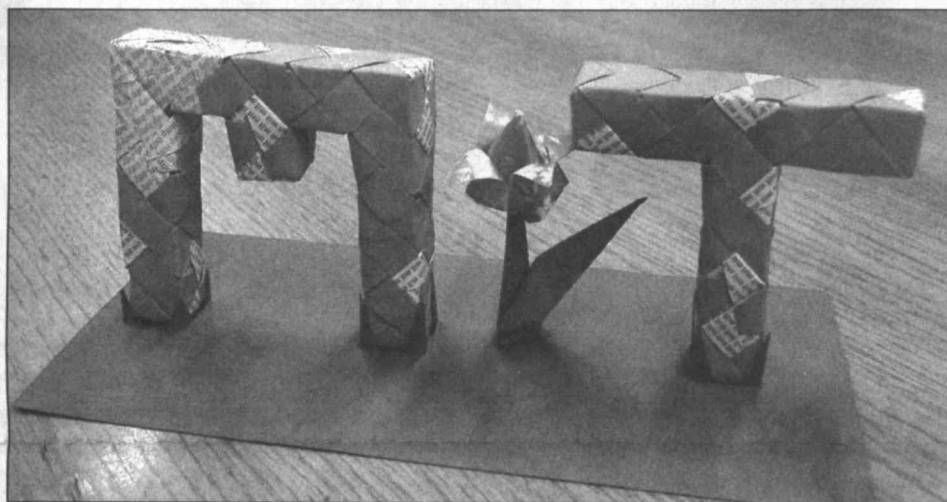
Seven students brought 15 origami sculptures for consideration in a juried exhibition of the art form, which uses only folding techniques.

Although folding can be considered as taboo as spindling and mutilating, an exhibit of the works on view at the Office of the Arts in Room E15-205 proves that this activity can be elevated to the highest form of art.

The jury—five MIT affiliates or alumni with more than 100 years of cumulative origami credits—presented 12 awards in categories such as most creative composition, best technical folding and best use of material.

Entries ranged from a raccoon by graduate student Michael Bosse (Best Technical Folding/Representational) to a DNA model by sophomore Albert Su (Best Technical Folding/Abstract). Graduate student Wesley Andrés Watters Farfán produced a trilobite (Honorable Mention) while sophomore Yeu-whai K. Lin created the word "MIT" with the "I" designated by a flower (Most Creative Composition).

"I was surprised by the diversity of different styles of origami," said judge Martin Demaine, visiting scientist in the Lab for Computer Science. "One aspect that interested me is that there is a strong geometric representation in the exhibition," said Demaine, who studies folding problems and algorithmic art.



PHOTO/ ERIK DEMAINE

"I Have Truly Found Paradise" by sophomore Yeu-whai K. Lin, which uses 98 separate pieces of paper, won the award for most creative composition in the origami competition.

Sponsored by the Office of the Arts/Special Programs, the MIT Japan Program and the office of Erik Demaine, the competition was staged to promote interest in origami in the MIT community and to showcase student work. Erik Demaine, Martin's son, is an assistant pro-

fessor in electrical engineering and computer science (see article on page 5). A reception for an exhibit of the selected works will be held on Friday, Feb. 28 from 4-6 p.m. in the Office of the Arts. They will remain on view on weekdays from 9 a.m. to 5 p.m. through May 15.

REEVE

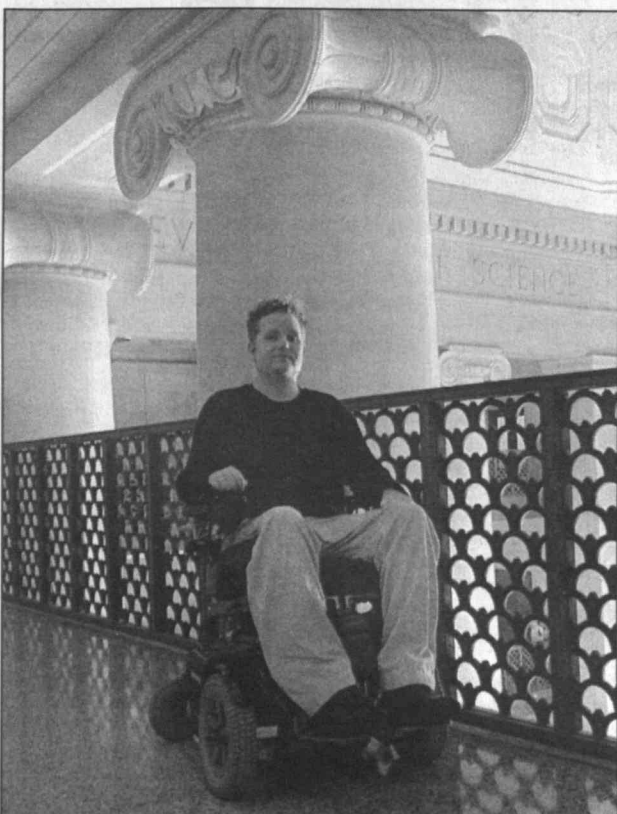


PHOTO / DONNA COVENEY

Aaron Donaghey will accompany Christopher Reeve when he visits MIT to speak to neuroscientists at a conference this weekend. "Maybe I'll ask him if he knows of any acting work," Donaghey says.

Continued from Page 1

ears will be open for career advice.

"Maybe I'll ask him if he knows of any acting work," he said with a smile.

The route Donaghey has planned for Reeve's visit demonstrates the attention to detail he learned since his car accident 14 years ago.

"MIT's main address is 77 Massachusetts Ave.—it's on every letterhead and it's where people direct visitors," he said. "But think of someone with a disability getting there and looking up at that huge flight of stairs."

A wheelchair-accessible entrance is under construction—an important symbolic step, in Donaghey's view—but for the time being, other arrangements are necessary.

Reeve will enter through the basement of Building 7 and use the elevator to get to the Emma Rogers Room on the third floor of Building 10. When it's time for his speech, the nearby Lobby 10 elevators would seem the obvious choice to carry him down a level to Room 10-250, but they are much too small to accommodate a wheelchair like Reeve's, so it's back to the Building 7 elevators, down a level and then back to Building 10.

Despite the convoluted route, Donaghey is generally pleased with MIT's accessibility efforts. Automatic door buttons have been installed around campus, new ramps are planned for Walker Memorial and the Sloan School, and the Zesiger Sports and Fitness Center includes accessible exercise equipment and an accessible pool.



Christopher Reeve

Donaghey admires and appreciates Reeve's activities on- and off-screen. Since childhood, "Superman I" has held a special place in his heart, but his favorite is the 1997 HBO film "In the Gloaming," which Reeve directed after his accident. The film features Glenn Close, Bridget Fonda and Whoopi Goldberg.

For Donaghey, Reeve's activism is his highest achievement.

"He's a great spokesperson for the spinal-cord-injured community," Donaghey said. "He's active, intelligent and willing to lobby."

Not only willing, but able. Since the late 1990s, the Christopher Reeve Paralysis Foundation has raised and distributed more than \$30 million in research grants to study everything from cell regeneration and gene therapy to rehabilitation techniques.

Donaghey also credits Reeve for his contagious optimism. At age 50, Reeve believes that at the current rate of scientific progress, he will walk again. In the past five years, more scientists and others with spinal cord damage are inclined to agree.

"I have no doubt that at some point in my life I'll be out of the chair; it's just a matter of when," said Donaghey.

The MIT/Harvard Conference on Neuroscience will be held Saturday and Sunday in Room 10-250. Admission is free for undergraduates, graduate students and postdoctoral fellows. For information, see <http://www.hippocraticsociety.org/main.php>.

MIT EVENT HIGHLIGHTS FEBRUARY 26 - MARCH 2



Kim HwaSun will talk about her life as a Korean "comfort woman" during WWII, on Feb. 26.

WEDNESDAY February 26

Lemelson-MIT Student Prize Press Conference
10am. Museum of Science. Shuttle provided. More info: 253-3352

Adv. Music Performance Student Recitals
Graham T. Wright, baritone; Karen Harvey, piano. 5pm. Killian Hall. More info: 253-2906.

"Three Daughters"
Film by Satyajit Ray starring Aparna Sen. Screened in conjunction with Sen's upcoming MIT residency. 8pm. Rm 4-237. More info: 253-8844.

Testimony of a Korean Comfort Woman
As a girl, Kim HwaSun was forced into sexual slavery by the Japanese Imperial Forces during WWII. She will discuss her experiences and her physical and psychological struggles at 7:15pm, Killian Hall. More info: 253-4771.

THURSDAY February 27

MIT Chapel Concert: Pentimento
Carla Chrisfield, soprano; Andrus Madsen, harpsichord. Noon. MIT Chapel. More info: 253-2906

"Blue Vinyl"
A humorous documentary looks at vinyl siding. Winner at the Sundance Film Festival. 8pm. Rm W31-301. More info: ariella@mit.edu.

Kinaesthetics Lab Debut Performance
Dance performance by student choreographers. Feb. 27-28, 8pm, Kresge Little Theater. \$10, \$5 students.

FRIDAY February 28

"Naruto," "Generator Gawl," "Helsing"
Sponsored by MIT Anime Club. 7pm-midnight. Rm 6-120. More info: anime-inquiry@mit.edu.

"Standing in the Shadows of Motown"
Sponsored by LSC. 7 and 10pm and Sunday at 7pm. Rm 26-100. More info: 258-8881.

Men's Swimming NEWMAC Championships
Zesiger Pool. More info: 253-7946 or athletics@mit.edu.

SATURDAY March 1

Women's Lacrosse vs. Tufts Univ.
10am. Jack Barry Turf. More info: 253-7946 or athletics@mit.edu.

MIT Invention Studio: Electric Clay
Experiment with clay as a sculptable sensor input. Pre-registration required. \$25 per 2-person team. 1-3:30pm. MIT Museum. More info: 253-5927.

HTC Film Festival
Featuring films made by the MIT community. Sponsored by Media Lab; History, Theory and Criticism of Architecture and Art; Dept. of Architecture. 4:30-8:30pm. Bartos Theater. More info: 258-8438 or deveau@mit.edu.

"Solaris"
Sponsored by LSC. 7 and 10pm. Sunday at 10pm. Rm 26-100. More info: 258-8881.

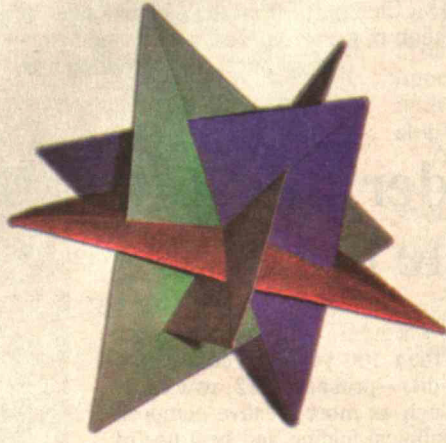
MIT-Harvard Conference on Neuroscience
March 1-2, 9am-6pm, Room 10-250. More info: hippocratic-request@mit.edu.

SUNDAY March 2

Mardi Gras Celebration!
Music, face painting, steel drums, food, magic and more. Sponsored by Caribbean Club, European Club, Tech Catholic Community. 7-9:30pm. Walker Memorial. More info: mardigras@mit.edu.

"Rapid Eye Movement"
A short film by Runa Islam. Noon-6pm. List Ctr. More info: 253-4680.

"Robots & Beyond: Exploring Artificial Intelligence at MIT" and "Holography: The Light Fantastic"
Ongoing exhibits at MIT Museum. Admission: \$5 and \$2, free w/MIT ID. Noon-5pm. More info: 253-4444.



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

"AFRICAN-AMERICAN LIVING HISTORY"

Vignettes about African-American historical figures by MIT students, performed by guest artist Vinie Burrows.

Feb. 27

La Sala de Puerto Rico
5:30 p.m.

STUDENT ORIGAMI EXHIBITION

Opening reception for juried exhibition of origami sculpture. On view through May 15.

Feb. 28

Room E15-205
4 - 6 p.m.

FORD/MIT NOBEL LAUREATE LECTURE

Global Environmental Issues: Effects on the Atmosphere and Biosphere. Professor Mario Molina and Dr. Eric Chivian.

March 6

Room 10-250
7 - 9 p.m.

MIT EVENT HIGHLIGHTS MARCH 3 - 9

MONDAY March 3

"Cuban Photographers: New Generation"
Through March 3. Architecture Dome Café (Bldg 7, 4th flr). More info: tsakonas@mit.edu

"Steven Holl: Light, Material & Detail"
Through April 16. Wolk Gallery (7-338) and Compton Gallery (10-105). Wolk hrs: Mon-Fri, 9am-5pm. Compton hrs: Mon-Fri, 9:30am-5pm. More info: 253-2825.



A close-up of Simmons Hall, designed by architect Steven Holl.

TUESDAY March 4

Beyond Bollywood: The Cultural Politics of the South Asian Diasporic Cinema
Jigna Desai. 11am-12:30pm, Rm 1-150. More info: 253-8844.

Middle East Stability: New Organizing Concepts
Mamoun Fandy, Georgetown Univ. Sponsored by Ctr. for Intl. Studies. 4:30pm. Rm E51-095. More info: 253-8961 or mcollett@mit.edu.

The Politics and Technology of Motherhood
Cynthia Cohen and Andrea Germankin. Sponsored by Women's Studies Program. 4:30-6:30pm. Rm E51-149. More info: 253-8844 or emmh@mit.edu.

This Will Kill That: Architecture and the Media
Lecture by Terence Riley, MOMA, N.Y. 6:30pm. Rm 10-250. More info: 253-7791.

WEDNESDAY March 5

An Engineer's Quest for Musical Bliss
Alumnus Carlos Prieto, cellist and conductor, gives a talk and performance. 8pm. Killian Hall. More info: 253-2906.

"Mr. Death: The Rise and Fall of Fred A. Leuchter Jr."
Film by Errol Morris. Sponsored by History, Theory and Criticism of Architecture and Art. 7:30-10:30pm. Rm 3-133. More info: 258-8438.

Swing Dancing
Sponsored by Lindy Hop Society. 8:30-11:30pm. Student Ctr., 2nd flr. More info: cam1@mit.edu.

"Deep Frontiers: Ocean Engineering at MIT"
An exhibition of ocean science technologies developed at MIT. 9am-8pm. Hart Nautical Gallery, Bldg 5, first floor. More info: 253-4444.

THURSDAY March 6

MIT Chapel Concert: Pentimento
Phillips Consort of Viols. Noon, MIT Chapel. 253-2906.

Watson and DNA: A Panel Discussion
Victor McElheny, Phil Sharp, Nancy Hopkins and others. Sponsored by authors @mit. 5:30-7:30pm. Wong Auditorium. More info: 253-5249.

poetry@MIT: Joseph Torra and Gerrit Lansing
Sponsored by the Program in Writing and Humanistic Studies. 7pm. Rm 6-120. More info: 253-7894.

"Rose McClendon: Harlem's Gift to Broadway"
One-woman show about Harlem Renaissance actress, written and performed by Vinie Burrows. 8pm. Kresge Little Theater. More info: 253-2341.

FRIDAY March 7

"Haibane Renmei," "Princess Tutu," and more
Sponsored by MIT Anime Club. 7pm-midnight. Rm 4-370. More info: anime-inquiry@mit.edu.

"The Closet"
Sponsored by LSC. 7 and 10pm and Sunday at 7pm. Rm 26-100. More info: 258-8881.

MIT Guest Artist Series: The Vermeer Quartet
Performs Mozart, Britten and Debussy. 8pm. Kresge Aud. More info: 253-2906.

"William Wegman: Selected Video Works 1970-1978"
Media Test Wall, hallway in Whitaker Bldg 56. More info: 253-4400.

SATURDAY March 8

Graduate Student Career Symposium
Sponsored by OCSPA. 9:30am-5pm. Stratton Student Ctr., 3rd flr. More info: 253-4733.

Women's Ice Hockey Alumni Game
3pm. Johnson Ice Rink. More info: 253-7946 or athletics@mit.edu.

"Das Experiment"
Sponsored by LSC. 5 and 8pm and Sunday at 10pm. Rm 26-100. More info: 258-8881.

MIT Festival Jazz Ensemble: Elephants and Aardvarks
Collaboration with the Aardvark Jazz Orchestra. Music of Mark Harvey (two premieres) and Duke Ellington. \$3 at the door. 8pm. Kresge Aud. More info: 253-2826.

SUNDAY March 9

"Paul Pfeiffer"
Video, photography and sculpture. Through April 6. Noon-6pm. List Visual Arts Ctr. More info: 253-4680.

"Paul Pfeiffer" Gallery Talk
Hiroko Kikuchi. 2pm. List Visual Arts Ctr. More info: 253-4680.



"Four Horsemen of the Apocalypse" by Paul Pfeiffer.