



Volume 48 – Number 29  
Wednesday – June 2, 2004

# TechTalk

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



PHOTO / DONNA COVENEY

Rhododendrons in bloom are dressing up the campus for Friday's Commencement exercises.

## Diplomas and campus set for the big day

About 2,205 undergraduates and graduate students are scheduled to receive 1,114 bachelor's degrees, 1,161 master's, 211 doctorate and 10 Engineer degrees at MIT's 138th Commencement on Friday, June 4 on Killian Court.

Elias A. Zerhouni, director of the National Institutes of Health, will deliver the principal address. President Charles M. Vest will charge the graduates. Other speakers include R. Erich Caulfield, president of the Graduate Student Council, and Maria Hidalgo, president of the Class of 2004, who will present the class

gift. The Rev. Robert M. Randolph, senior associate dean for students at MIT and an affiliate minister at Harvard University's Memorial Church, will deliver the invocation.

Since becoming its 15th director in May 2002, Zerhouni has initiated a new research vision for the NIH, focusing the attention of the biomedical research community on new pathways of discovery, research teams for the future and reengineering the clinical

See **COMMENCEMENT**

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## Yeast tackles fibers linked to Alzheimer's disease

David Cameron  
Whitehead Institute

Amyloid fibers—those clumps of plaque-like proteins that clog up the brains of Alzheimer's patients—have perplexed scientists with their robust structures. Researchers don't yet have a way to assail these resilient molecules. Now a team from MIT and the Whitehead Institute for Biomedical Research reports that yeast may succeed where scientists have not.

In a study published online this week in the journal *Science*, the researchers describe a natural biological process by which yeast cells dismantle amyloid fibers.

"These proteins are remarkably stable," said Susan Lindquist, director of the Whitehead Institute,

an MIT professor of biology and lead researcher on the project. "This is the first time that anyone has found anything that can catalytically take apart an amyloid fiber." Although the fibers are not necessarily the cause of Alzheimer's, they are associated with it and with many other neurological conditions.

The finding follows years of study on a yeast protein called Sup35, which helps cells translate genetic information into strings of amino acids, the building blocks of protein molecules. Sometimes Sup35 suddenly forms amyloid fibers similar to those found in Alzheimer's patients. In yeast, however, this doesn't kill the cell. Rather, it is part of the cell's normal biology, changing the types of proteins that the cell makes—changes that can sometimes be beneficial.

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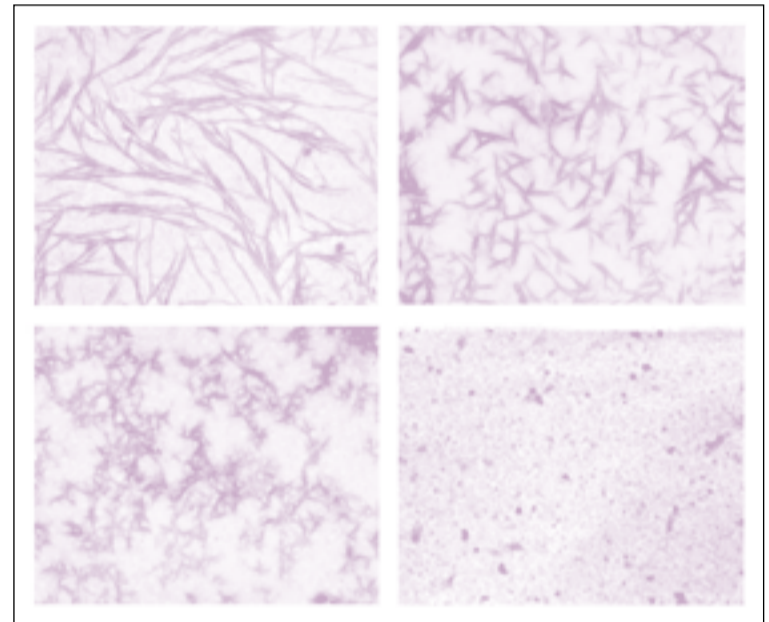


IMAGE COURTESY / SCIENCE MAGAZINE

In the upper left image, amyloid fibers at first resist any attempt to disrupt their structure. However, a protein called Hsp104 breaks them apart until (bottom right) they have been completely dissolved.

## Faculty votes to take national leadership role on diversity

Arthur Jones and Denise Brehm  
News Office

A bold step toward strengthening the Institute's diversity profile was taken when the faculty committed "to taking a leadership position among our peer institutions in the recruiting and success of underrepresented minority faculty and graduate students."

The resolution adopted by the faculty at its May 19 meeting

also "urges the provost, academic deans, dean of graduate education and department heads to take all necessary and sufficient steps to increase the percent of underrepresented minority faculty by roughly a factor of two within a decade..."

The resolution urges the MIT leadership to use identical methods to increase the percentage of underrepresented minority graduate students by roughly a factor of three within a decade.

Through the unanimously adopted resolution, the faculty also asks the provost to "provide guidance and direction as requested by the departments, including examples of best practices around the country, in order to achieve these goals."

Annual reports measuring the progress of the recruitment process—including the recruitment of women—are anticipated by the faculty, the Faculty Policy Committee (FPC) and the Council on Fac-

ulty Diversity, by school, department and laboratory, according to terms of the resolution.

In a detailed explanation of the FPC report before the vote, Professor Rafael Bras, chair of the faculty, provided faculty and undergraduate statistics over the years at MIT.

For example, of the current 6,228 graduate students, 113 are African-American, 153 Hispanic and 16 Native American. Those ratios have remained almost

constant over the last five years, according to the report.

The report also noted the following application numbers and selectivity (percentage admitted) for graduate students since 1999.

African-American—80 applied and 38 percent admitted in 1999, 198 applied and 40 percent admitted in 2000, 179 applied and 31 percent admitted in 2001, 200

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### NEWS

#### CORPORATE CULTURE PLAYS ROLE

A new project looks at the impact on supply chains of sudden disruptions such as terrorist attacks or natural disasters.

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A graduate student invites 300 to dine with her.

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Wolfgang Ketterle is selected as the next Killian Faculty Achievement Award winner.

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A student is making a cross-country bike trek to raise money for FDNY Widow's and Children's Fund.

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Robert Langer receives the Kettering Prize for his work on drug delivery systems for treating cancer.

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#### AWARDS PAGES

MIT Tech Talk lists the names of the many students, faculty and staff who received awards this year.

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# Team probes impact of terrorism on supply chain

Ken Cottrill

Center for Transportation and Logistics

Why are some companies much better than others at dealing with sudden supply chain disruptions? A research project at MIT's Center for Transportation and Logistics is studying the impact of terrorism on supply chains and identifying what companies can do to be resilient when disaster strikes.

Supply chains can be thrown into disarray for many reasons. A severe storm can delay urgently needed raw materials. A major dock strike can halt the movement of goods. Then there are low-probability, high-impact incidents such as an earthquake or terrorist attack.

Companies can learn to cope with crises like these and minimize the disruption to their businesses. "Often the issue is cultural—making sure that damage control is built into the very fabric of the organization," said Yossi Sheffi, professor of civil and environmental engineering and engineering systems and leader of the project.

For example, a few years ago the production of computer chips was halted by a fire at a large supplier. One major customer, cell phone manufacturer Nokia, reacted quickly and found alternative sources of the chips. Competitor Ericsson was much slower to react and eventually exited the cell phone business.

Nokia was able to recover quickly because part of its corporate culture is to communicate bad news quickly throughout the company. "When the tendency is to hide or delay negative information, the company concerned is generally slower to react when hit by the unexpected," Sheffi said.

Resilient companies also are prepared organizationally for supply chain interruptions. Part of the Nokia response was to redesign its product so components from other sources could be used. That required quickly calling cross-functional teams of managers into action to make the necessary changes.

"Companies can use vulnerability maps to help them assess their level of exposure to sudden dislocations," Sheffi said. On such a grid, American Airlines has a relatively high vulnerability because the loss of a single aircraft to a terrorist attack could have a catastrophic effect on its business. In comparison, McDonald's is less exposed since the closure of a single store or even group of stores would not close the company's network of 30,000-plus outlets.

But the vulnerability map is changing. "The risks grow daily as global supply lines stretch, competition stiffens, customers become more demanding and political instability takes its toll around the world," Sheffi said. Companies can become resilient by creating flexible supply chains and ensuring that security is part of their corporate cultures.

The three-year project is funded by the Cambridge-MIT Institute.

## FSILG panel issues draft

A draft report from the Task Force on Fraternities, Sororities and Independent Living Groups, which has been examining the challenges and opportunities facing the FSILG community, has been submitted to President Charles M. Vest. The task force was formed to frame recommendations for strengthening and sustaining the FSILG system.

The draft report is under review by the principal stakeholders. A final report will be circulated to the MIT community in the fall.

"I am very grateful to the task force for its dedication, perseverance and thoughtful recommendations, which provide MIT with a pathway forward," President Vest said of the draft report.

Recommendations in the report included:

- Improve communications and working relations among students, administration and alumni
- Improve the financial health of the FSILGs and establish quality-of-life and infrastructure standards
- Develop more effective recruiting practices
- Develop effective roles and responsibilities for all stakeholders
- Extend and more effectively manage the transition period
- Include FSILGs in long-term planning for campus housing.

### NEWS YOU CAN USE

#### ROTC, chaplains offer reflection time

On Wednesday, June 2 at noon, the ROTC Oversight Committee and the Board of Chaplains will co-sponsor a time of prayer and personal reflection in the MIT Chapel on behalf of those serving in the armed forces, especially MIT graduates and officers commissioned through MIT's ROTC units who are in Iraq and Afghanistan. Materials intended to assist in personal prayer and meditation will be provided.

#### Fab Lab event offers laser art

The MIT Center for Bits and Atoms' Fab Lab and the South End Technology Center (SETC) will host a sidewalk sale on Friday, June 5 from 11 a.m. to 3 p.m. at the entrances to SETC at 359 Columbus Ave. and Tent City at 130 Dartmouth St. in Boston.

Arts and crafts created with computers, lasers and computer-controlled cutting and milling machines will be on sale. Visitors can sign up for future SETC/Fab Lab classes and have items personalized with scanned and inscribed laser images.

The MIT Fab Lab is one of six Fab Labs supported by the National Science Foundation. For more information, see <http://cba.mit.edu/projects/fablab>.

## Aero/astro honor society resurrected

Two seniors in the Department of Aeronautics and Astronautics have reactivated the Institute's chapter of Sigma Gamma Tau, the national academic honors society for students of aeronautics and astronautics. Anna Mracek and Timothee de Mierry worked with Professor Paul Lagace to revive the MIT chapter of the 51-year-old honor society, which lapsed in the late 1990s.

Students selected for membership must place near the top of their class and must be likely to make significant advances in their profession.

"As with any honors society, Sigma Gamma Tau membership does inspire respect from people in the field. As the chapter continues, the opportunities for leadership and interaction with the faculty will definitely be an asset to members," said Mracek, president of the chapter. "Additionally, we are working to build a bridge between the undergraduate and graduate communities to help seniors with the graduate application process."

The SGT has already participated in two

community service projects in partnership with other campus groups—as science advisors and support staff at the Science Expo, and as teachers and mentors for the Mars Society's Boy Scout Space Exploration Day—according to Mracek, who will remain at MIT as a graduate student next year.

#### Membership roster

MIT members are seniors Douglas Allaire, Julie Arnold, David Broniatowski (graduate liaison officer), Timothee de Mierry, Martin Jonikas, Anna Mracek (president) and Douglas Quattrochi; and juniors Omar Bashir, Brett Bethke (treasurer), Thomas Coffee, Shuonan Dong, Finale Doshi, Nicholas Hoff, Elizabeth Jordan (vice president), JoHanna Przybylowski, Emily Schwartz, and Regina Sullivan (secretary).

Sigma Gamma Tau was founded at Purdue University in 1953; today it has 50 collegiate chapters and nearly 15,000 members.

—Denise Brehm

## DIVERSITY

### Continued from Page 1

applied and 24 percent admitted in 2002, and 201 applied and 29 percent admitted in 2003.

Hispanic—220 applied and 39 percent admitted in 1999; 227 applied and 36 percent admitted in 2000; 221 applied and 36 percent admitted in 2001, 276 applied and 32 percent admitted in 2002, and 338 applied and 30 percent admitted in 2003.

Native American—14 applied and 21 percent admitted in 1999, 14 applied and 50 percent admitted in 2000, 16 applied and 63 percent admitted in 2001, 27 applied and 26 percent admitted in 2002, and 56 applied and 34 percent admitted in 2003.

The proportion of underrepresented minorities on the MIT faculty is just under 5 percent.

#### Other business

A proposal for the establishment of an S.B. degree in archaeology and materials (course 3-C) was presented by professors Mark Schuster and Sam Allen. The program was conducted as an experimental program for five years

as required by the Committee on Undergraduate Program (CUP). CUP and the FPC have now voted in favor of establishing it as a permanent undergraduate degree program in the Department of Materials Science and Engineering.

Schuster described it as a "small, high-quality program that combines the humanities and sciences."

"It integrates archaeology, anthropology, geology and materials science," said Allen. "No other degree program in the U.S. is comparable." The faculty will vote on the proposal at its September meeting.

Chancellor Phillip Clay gave the annual report of the ROTC Task Force regarding efforts to implement the 1996 faculty vote regarding the exclusion of lesbian, bisexual, gay and transgendered persons from participation in the ROTC at MIT. While no shift in national policy has occurred and no appropriate court case been found to allow MIT participation in challenging the federal government in that regard, several campus initiatives have seen success.

MIT has become a more welcoming environment for LBGT people, Clay said, as evidenced by greater attendance at campus-wide events to support the LBGT com-

munity and by the renewed "welcome campaign" marked by the "You Are Welcome" signs recently distributed on campus.

Alternative leadership programs that take advantage of ROTC's leadership development capacity, as agreed to by the faculty eight years ago, now are flourishing on campus.

Eight retiring faculty members were recognized for their service to the Institute: William L. Porter of architecture, Ronald M. Latanision of materials science and engineering, Donald E. Troxel of electrical engineering and computer science, Franklin M. Fisher of economics, Bruce Mazlish of history, Judith J. Thomson of linguistics and philosophy, Cynthia G. Wolff of the Program in Writing and Humanistic Studies, and Daniel Kleppner of physics.

Recommended as ex officio members of the faculty for next year were Jeffrey Meldman, associate dean in the Office of the Dean for Undergraduate Education; Robert Randolph, senior associate dean for students; Mary Rowe, special assistant to the president and ombudsperson; and Alan White, senior associate dean at the Sloan School.

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

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

Subscribers may call 617-252-1550 or send e-mail to [mailsvc@mit.edu](mailto:mailsvc@mit.edu).

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

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

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



# Dining with strangers shows promise

Denise Brehm  
News Office

Random dinner invitation from stranger could lead to rewarding social experience. Fortune cookie or MIT fact?

This winter and spring, it became a fact when 300 randomly selected graduate students were invited to dinner by Alisa Morss, a graduate student in health sciences and technology who received a Graduate Student Life grant to hold three Random Grad Student Dinners at the MIT Museum.

"I really firmly believe that graduate school doesn't have to be such a painful experience. It's a really good time in your life. You're in your twenties and you're learning and discovering and getting to do what you want to do much more than you do in, say, an engineering job," said Morss, who is a member of the Committee on Student Life.

The idea for the dinners sprang from that committee and was patterned after Professor Samuel "Jay" Keyser's Random Faculty Dinners. The plan is to get graduate students out of their labs and living

rooms and into a social situation with grad students from other departments, and at the same time provide them access to administrators who can improve the grad school experience.

"It's important to give people the opportunity to enjoy their time in graduate school," said Morss. "You can't force them, but you can provide the opportunity."

Judging from survey responses, most of the diners appreciated the opportunity—"It was a great event." "Fun." "I'm glad I went." "It was nice to meet new people." "An inviting atmosphere." "Should happen more often."

Morss invited a handful of administrators to each dinner, including Dean for Graduate Students Isaac Colbert, whose office sponsors the Graduate Student Life grants program through allocation of the graduate student life fee. The Graduate Students Office (GSO) has awarded nearly 50 grants during the past two years.

Morss, who is also a member of the committee that selects the projects, said the committee looks for original ideas for small to medium-sized events that bring together students who normally wouldn't interact. The panel is particularly interest-

ed in projects that serve underrepresented groups such as international students or students with families. The committee hopes to provide seed funding to launch projects that can obtain future funding elsewhere for continuation.

Morss' \$4,000 grant provided most of the funding for her dinners. Roughly 25 students attended each (a 25 percent acceptance rate on her invitations) along with five or six administrators. With the success of these first three random dinners, she hopes to find more permanent funding to establish the gatherings as an MIT tradition.

Each of the evenings had its own theme with a speaker to encourage discussion around that theme after the meal. For instance, Stephen Immerman, senior associate dean for student life and executive director of Enterprise Services, led a discussion at the February dinner about the types of businesses and services that graduate students might like to see spring up along Massachusetts Avenue between MIT and Central Square.

The Graduate Student Life grants are just one aspect of a new emphasis on improving graduate student community at

MIT, which sprang from the 1998 report of the Task Force on Student Life and Learning. As part of its ongoing initiative, the GSO is gathering input from graduate students through surveys and advisory committees to learn how to improve the graduate student experience at MIT.

A sampling of other Graduate Student Life grants:

- \$850 for mathematics students to dine out with faculty members.
- \$2,000 to support "Hidden Jewels of Our Community," a juried art show for work by graduate students and spouses.
- \$2,500 to the Sand Mandala project at Simmons Hall.
- \$1,000 for a babysitting exchange among graduate student families, both on and off campus.
- \$3,000 to provide child care to students and their families so they can attend meetings of organizations that have a direct impact on them.
- \$5,000 for attendance at performing arts events around Boston and pre- or post-performance discussions.

A new round of proposals will be accepted next fall. For more information, go to <http://web.mit.edu/gso/community/com>

## News Office redesigns site

Sporting a simple, practical and user-friendly structure, a new web site has been unveiled by the MIT News Office, allowing for smoother research, browsing and access to critical News Office services.

The new streamlined web site "serves all our constituencies—the MIT community, the news media and curious people everywhere—quite well and with a high level of ease," said News Office Director Arthur Jones.

Chief among the features of the new site is the "by topic" button that leads to five dozen topics, from aeronautical and astronautical engineering to voting technology. Each topic page includes recent and archived news stories as well as related MIT web sites.

The site lists three main categories (News, Services, About Us) in the menu section, reflecting a shift away from a multi-publication structure to a sharper news focus and emphasis on the full array of News Office services. Advice on submitting or writing news stories for the News Office, subscriptions to e-mail news and RSS news feeds, and forms for ordering images are some of the services offered.

The site at <http://web.mit.edu/newsoffice> went live in the early hours of May 18 and, with more than 11,000 documents available, was nearly a year in the making. News Office web editor and developer Lisa Damtoft said the site will continue to be updated and revised. MIT community members may contact her with comments at [newsoffice@mit.edu](mailto:newsoffice@mit.edu).

Following the year's final issue of MIT Tech Talk on June 9, the web site will be the Institute's primary news source until late August, when the newspaper begins publishing again. A 2004-05 Tech Talk publication schedule will be posted soon at <http://web.mit.edu/newsoffice/techtalk-pubsked.html>.

In addition to offering research and campus news over the summer, the web site will follow MIT sophomore Adam Kaczmarek on his cross-country bike ride to raise money for the Uniformed Firefighter's Association Widow's and Children's Fund (see story on page 4).



IMAGE COURTESY / AMPS

## Hawks take wing



PHOTO / MARY ELLIFF

All politics aside, the MIT campus is seemingly full of hawks these days. The red-tailed hawk fledgling at left departed its nest for the first time on May 26, taking a solo flight to the bike racks in front of the Stratton Student Center and eventually back to its nest, encouraged by parental calls. Poeples at MIT and elsewhere have been following the progress of the bird and its sibling in their campus nest since April via Hawkcam, a continuous feed of video images on MIT cable TV and the Academic Media Production Services web site at <http://web.mit.edu/amps/spotlight/hawkcam.html>. At right, another hawk takes a rest on the 17th-floor windowsill of Professor Peter Stone's office, as spotted by occupants of Building 54 in April.

## ALZHEIMER'S

Continued from Page 1

Previous research in the Lindquist lab described how a protein called Hsp104 seemed to affect Sup35's ability to form amyloid fibers. When a yeast cell contained either high amounts of Hsp104 or none at all, amyloid fibers never formed. But when Hsp104 levels were small, the fibers flourished.

While these types of relationships between chemicals aren't unheard of, the finding "was counterintuitive. Both high levels of Hsp104 and the absence of Hsp104 caused the same effect. That certainly made us want to figure out what was going on," said Lindquist.

In the new study, Lindquist and postdoctoral researcher James Shorter isolated Sup35 and Hsp104. They saw that small amounts of Hsp104 catalyzed the formation of amyloid fibers, but large levels of the protein actually caused the fibers to dissolve.

"Given their resilient structure, the fact that a protein can take apart these amyloids is remarkable," Lindquist said. "It has huge implications for our understanding of the protein folding process in amyloid-related conditions."

This research may also contribute to scientists' understanding of evolution. Prions, those infectious proteins implicated in conditions such as mad cow disease,

are a subclass of amyloids. In yeast cells, Sup35 technically is a prion, although it is not toxic to the cell. Many researchers suspect that because prions have been so well conserved in yeast for hundreds of thousands of years, they must serve some sort of evolutionary purpose, and that's where Hsp104 comes in.

Hsp104 belongs to a class of proteins that sometimes is influenced by environmental factors. It is conceivable, Shorter explained, that a yeast cell in one type of environment can experience an abundance of Hsp104, which would then keep Sup35 from forming amyloid fibers in that cell. But put that cell in a different environment and the result may be a more moderate

level of Hsp104 that would, in turn, create amyloid fibers in Sup35, changing how that protein functions and ultimately altering the cell's biology.

And because these changes could then be passed on to subsequent generations of cells, this would be an example of environment guiding the evolutionary process, the scientists noted.

"This is speculation that hasn't been demonstrated yet," Shorter said. "For obvious reasons it's hard to prove any evolutionary argument. But this paper is one indication that this might be the case."

The work was supported by a Charles A. Kind Trust postdoctoral fellowship and the National Institutes of Health.

# Ketterle wins Killian Award

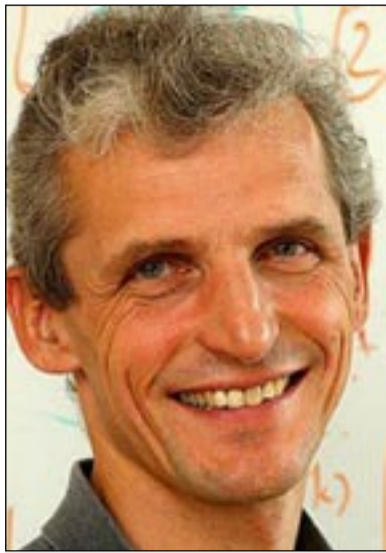
Denise Brehm  
News Office

Professor Wolfgang Ketterle, one of the first observers of a new state of matter called the Bose-Einstein condensate and creator of the first atom laser, is MIT's James R. Killian Jr. Faculty Achievement Award winner for 2004-05.

The physicist shared the Nobel Prize in physics in 2001 with two MIT alumni for their discovery of Bose-Einstein condensation (BEC) in 1995. Ketterle went on to be the first scientist to realize an atom laser in 1997. Known also as an exceptional teacher and lecturer, he now has been named by his faculty colleagues to hold the Killian title and deliver a lecture on his work in spring 2005. The award was established in 1971 as a tribute to MIT's 10th president; it recognizes extraordinary professional accomplishment by an MIT faculty member.

"He is clearly one of the world's greatest scientists," Professor Robert Langer, chair of the Killian Award Committee, said of Ketterle in making the announcement at the May 19 faculty meeting.

"In the last decade no other faculty member at MIT has risen so fast, done such significant scientific work, or will give as spellbinding a faculty lecture," Langer said, reading from the nomination letter. "His public lectures set a standard of expository



Wolfgang Ketterle

excellence equaled only by [Edward M.] Purcell and [Richard] Feynman." Added Langer: "Be sure the lecture is scheduled for Kresge—it is the only place large enough to hold the audience."

"I am surprised and honored," said Ketterle, visibly moved by the tribute. "I came here today for my hero and distinguished colleague, Dan Kleppner, who is retiring."

"I have always been proud to be at MIT, to be part of a wonderful community of excellent people," Ketterle said after the meeting. "To receive this highest honor the MIT faculty can bestow on one of its own

members is a very special recognition, because it comes from people I greatly admire and appreciate." Winning the Killian Award means "to be appreciated not just as a scientist, but as a colleague and member of the MIT community," he said.

Ketterle is the John D. MacArthur Professor of Physics and a member of MIT's Research Laboratory for Electronics and the MIT-Harvard Center for Ultracold Atoms. He earned the Ph.D. in physics from the University of Munich in 1986, came to MIT as a research associate in 1990, joined the physics faculty in 1993 and was promoted to professor in 1997.

His current research is in atomic physics and laser spectroscopy, particularly laser cooling and trapping of atoms to explore new aspects of ultracold atomic matter. His research group focuses on the study and applications of quantum-degenerate gases and laser-like atomic beams. He has made pioneering contributions to sound, superfluidity and properties of multicomponent condensates.

Ketterle is a fellow of the American Physical Society, the American Academy of Arts and Sciences and the Institute of Physics, as well as the equivalent European scientific societies. In addition to the Nobel Prize, which he won with Eric Cornell and Carl Wieman, he is winner of numerous other awards, including the Order of Merit of the Federal Republic of Germany (2002).

# Coast-to-coast bike ride benefits FDNY

Denise Brehm  
News Office

Adam will hit the macadam soon.

Adam Kaczmarek, a 19-year-old mechanical engineering sophomore, will cycle from Los Angeles to New York in a 41-day, 3,336-mile trip beginning Monday, June 7 to raise money for the Uniformed Firefighters Association Widow's and Children's Fund.

Kaczmarek's ride is an adjunct to the Fire Department of New York's cross-country ride, which will run from September to October, when Kaczmarek will be back in school. The ride will benefit the families of firefighters who die in the line of duty. Kaczmarek's cousin, Christopher Santora, was a FDNY firefighter who lost his life in the terrorist attack on Sept. 11, 2001.

"I've always wanted to do this, ride cross-country, but I couldn't go with Kyle last year. So I decided to go this summer and raise money for the firefighters," said Kaczmarek, referring to his Theta Chi fraternity brother Kyle Rattray, who made a similar east-west ride last year to raise money for the American Cancer Society.

Peter Gregg, a Cornell University student whose brother Andrew is an MIT Theta Chi member, and Kaczmarek will follow the same route as the firefighters. The two cyclists will try to line up firehouses in which to sleep on some nights. On other nights they'll camp out using equipment they'll carry along.

The MIT News Office will publish an ongoing log of the ride (June 7 to July 17) on its web site at <http://web.mit.edu/newsoffice>. People who want to follow along are encouraged to do so. To make a donation in support of the ride, Kaczmarek asks that you send a check to the FDNY Cross-Country Bike Tour Foundation. See <http://fdnycrosscountry.org> for more information.

## AWARDS AND HONORS

**Merton C. Flemings**, the Toyota Professor Emeritus in the Department of Materials Science and Engineering and director of the Lemelson-MIT Program, has been awarded an honorary doctorate by the Swiss Institute of Technology in Lausanne for "his role as pioneer and for his exceptional scientific contributions in the field of solidification and foundry."



David E. Pritchard

**David E. Pritchard**, the Cecil and Ida Green Professor of Physics, has received the Optical Society of America's Max Born Award. The award, given annually to recognize outstanding contributions to physical optics, theoretical or experimental, honors Pritchard for his work in the "creative application of light to new forms of spectroscopy, to manipulation and trapping of atoms, and for pioneering the new fields of atom optics and atom interferometry."

**Margaret Hiesinger**, a graduate student in the Program in Science, Technology and Society, has been named a Luce Scholar. The Henry Luce Foundation provides stipends and internships for 15 young Americans to live and work in Asia each year. Established in 1974, the Luce program's purpose is to increase awareness of Asia among future leaders in American society.

**Sean Safford**, a doctoral candidate at the Sloan School of Management and a research associate with the Industrial Performance Center, won the 2005 Pondy Award for the best paper based on a dissertation, conferred by the organization and management theory division of the Academy of Management. Safford's paper is titled "Why the Garden Club Couldn't Save Youngstown: Networks and Economic Divergence in the Rustbelt."

Assistant Professor of History **Christopher Capozzola** is one of 15 new Carnegie Scholars. The scholars, selected by the Carnegie Corp., receive research funding of up to \$100,000 each for a maximum of two years. Capozzola's Carnegie project is titled "Uncle Sam Wants You: Political Obligations in World War I America."

The Institute of Electrical and Electronics Engineers has named **Alan S. Willisky**, the Edwin Sibley Webster Professor of Electrical Engineering, as recipient of the IEEE Donald G. Fink Paper Award for his paper, "Multiresolution [MR] Markov Models for Signal and Image Processing." The award is given to the most outstanding survey, review or tutorial paper published in any

IEEE transaction, journal or magazine. "Willisky's thorough guide to MR methods, concept and applications is expected to serve as a valuable reference work for years to come," his citation read.

**Zeynep Çelik**, a graduate student in architecture, has won the Dedalus Foundation's 2004 Dissertation Fellowship Award, given annually to a student at an American university working on a Ph.D. dissertation related to modern art and modernism. The award comes with a \$20,000 stipend. Çelik's dissertation is titled "The Kinaesthetic Impulse: Space, Performance and the Body in German Architecture, 1880-1914."

**Joel Cutcher-Gershenfeld**, a senior research scientist in the Sloan School, has received a Fulbright Senior Specialists grant in business administration at the University of Sydney's Faculty of Economics and Business. The Fulbright Senior Specialists Program offers two- to six-week grants to leading U.S. academics and professionals to work at academic institutions in 140 countries.

"The traditional Fulbright Scholar Program offers grants ranging from two months to an academic year, and some academics and professionals find it difficult to be away overseas for that length of time," said Patti McGill Peterson, executive director of the Council for International Exchange of Scholars, the organization that manages the Fulbright Scholar Program.



Carol Makinson

The Women's Commission for Refugee Women and Children has honored **Carol Makinson**, executive director of the Center for International Studies, with a "Voices of Courage" award for her "instrumental role in putting reproductive health for refugees on the international agenda." Makinson, formerly program officer for Population at the Mellon Foundation, chairs an NIH review panel on grants for international collaboration on research and training in the population field.

**Richard Larson**, professor of civil engineering and of engineering systems, has won the Harold Larnder Prize, which is financed through the Harold Larnder Memorial Trust of the Canadian Operational Research Society. The prize is awarded annually to an individual who has achieved international distinction in operational research. Larson is also director of LINC (Learning International Networks Consortium), an international community of practitioners and scholars interested in bringing quality

tertiary education to developing countries.

MIT is co-recipient of the Cambridge City Council's GoGreen Business Award in the large business category for energy. Other recipients were the Harvard Green Campus Initiative and Genzyme. MIT received the award for its Community Solar Power Initiative (see MIT Tech Talk, Oct. 30, 2002) and other efforts to promote energy efficiency and renewable energy. The solar power initiative (<http://solarpower.mit.edu>), managed by Laxmi Rao of Facilities, offers assistance and financial incentives for installing photovoltaic arrays on campus buildings as well as homes and businesses of MIT affiliates in certain communities. MIT also won the GoGreen award in 2001.



Nancy Leveson

Professor **Nancy Leveson** of the Department of Aeronautics and Astronautics and the Engineering Systems Division has been awarded the Outstanding Research Award by the Association for Computing Machinery's Special Interest Group on Software Engineering (SIGSOFT). Alex Wolf, chair of SIGSOFT, wrote that Leveson's "contributions to the development of software safety have had a deep and lasting impact on software engineering."

Two Broad Institute postdoctoral fellows, **Brad Bernstein** and **Vamsi Mootha**, have received Burroughs Wellcome Fund Career Awards in the Biomedical Sciences. Each will receive \$500,000 over five years toward postdoctoral training and early years of faculty service.

Bernstein, who is also a postdoctoral fellow at Harvard University, is developing genomic and proteomic methods to identify chemical variations in histones. Mootha, an instructor in medicine at Harvard Medical School, uses genomics, proteomics and computation to decipher the cell's instructions for making mitochondria.

Six members of the MIT community have been elected to the American Philosophical Society (APS). They are senior research scientist **Timothy Berners-Lee** of the Computer Science and Artificial Intelligence Lab, Institute Professor **Noam Chomsky** of linguistics, Professor **H. Robert Horvitz** of biology, a Nobel laureate, and Professor **JoAnne Stubbe** of chemistry and biology. Newly elected alumni are chemistry professors **John I. Brauman** (S.B. 1959), of Stanford University and **Peter H. von Hippel** (S.B. 1952, S.M., Ph.D.) of the University of Oregon.





PHOTO / DONNA COVENEY

Faculty gathered at Gray House last week to celebrate faculty members who received promotions in 2003-04. Left to right: Gang Chen of mechanical engineering, who was promoted to full professor; Saman Amarasinghe of electrical engineering and computer science (EECS), promoted to associate professor with tenure; President Charles M. Vest; and David Perreault of EECS, and Arindam Dutta of architecture, both promoted to associate professor without tenure.

## Faculty members awarded tenure

The Corporation's Executive Committee approved 16 faculty members for promotion to tenure on May 7. Individual photos and profiles, including any additional members of the faculty who receive tenure before the end of the academic year, will appear in a fall issue of MIT Tech Talk.

Those who received tenure are Wil-

liam H. Green Jr. of chemical engineering; Saman Amarasinghe, William Freeman and Tommi Jaakkola of electrical engineering and computer science; Angela Belcher of materials science and engineering; Daniel Fox and Norvin Richards III of linguistics and philosophy; Thomas DeFrantz of music and theater arts; Edward Steinfeld

of political science; Helen Lee of writing and humanistic studies; Kristin Forbes and Roberto Rigobon of the Sloan School of management; Angelika Amon of biology; H. Sebastian Seung of brain and cognitive sciences (promoted to full professor with tenure); and John M.W. Bush and Daniel A. Spielman of mathematics.

# Langer award cites cancer work

Robert Langer, the Germeshausen Professor of Chemical and Biomedical Engineering, has been awarded the Charles F. Kettering Prize, one of three awards given annually by the General Motors Cancer Research Foundation. The \$250,000 prize recognizes the most outstanding recent contribution to the diagnosis or treatment of cancer.

Langer was cited for his major contributions to the development of sustained-release drug delivery systems for the treatment of cancer.

"I went into cancer research because I had always drawn a lot of satisfaction from helping people," Langer said. "I wanted to use my science and engineering background in a way that would help people live longer and healthier lives."



Robert Langer

Langer's achievements have had a profound impact on the field of cancer research. His accomplishments are also unique in that he entered the field with a Ph.D. in chemical engineering when

he teamed with cancer researcher Judah Folkman at Children's Hospital in Boston in 1974. At that time, the scientific community believed that only small molecules could pass through a plastic delivery system in a controlled manner.

In the 1970s, Langer went on to develop polymer materials that allowed the large molecules of a protein to pass through membranes in a controlled manner to inhibit angiogenesis, the process by which tumors recruit blood vessels. Blocking angiogenesis is critical in fighting cancer because the new blood vessels allow tumor cells to escape into the circulation and lodge in other organs.

In addition, this discovery led to his work on biodegradable polymers that pharmaceutical companies later used for treating men with advanced prostate cancer. Langer's subsequent research on biodegradable polymers with Henry Brem of the Johns Hopkins University School of Medicine led to new treatments for patients with brain cancer.

"In a general sense, I think the significance of our discovery is that it opened up the field of controlled drug delivery systems, allowing for treatments with molecules of varying sizes that could be delivered over a broad range of time—from days to months," Langer said. "Specific to cancer research, I think it helped in three areas: the angiogenesis field, the development of new treatments, and the introduction of local chemotherapies."

"Receiving the Kettering Prize is an enormous honor for me," Langer added. "I'm very proud that this award is a symbol of recognition for the impact biomedical engineering has had on the fight against cancer. And I hope it inspires others to pursue a career in cancer research."

GM will present the prize to Langer during an awards ceremony at the U.S. Department of State on Wednesday, June 9. The ceremony is part of the GMCRF Annual Scientific Conference. Langer will give a lecture describing his research.

## Dibner Institute names Fellows for '04-'05

The Dibner Institute for the History of Science and Technology will welcome nine senior fellows, one senior research scholar, four postdoctoral fellows, four re-appointed postdoctoral fellows, one science writer fellow, and seven graduate student fellows.

The senior fellows are: Thomas Archibald, professor of Mathematics at Acadia University; Sonja Brentjes, an independent scholar; David Cahan, professor of history at the University of Nebraska; Giora Hon of the University of Haifa; Cesare Maffioli of the Ecole Européenne in Luxembourg; Conevery Valencius of Washington University in St. Louis; James Voelkel, an independent scholar; and Sara Wermiel, a visiting scholar in MIT's Program in Science, Technology and Society (STS).

The senior research scholar is W. Ford Doolittle of Dalhousie University.

First-year postdoctoral fellows are: Kristine Harper, who received her Ph.D. from Oregon State University; doctoral

candidates Andrew Johnston, studying architectural history at the University of California at Berkeley; Takashi Nishiyama of Ohio State University; and Chen-Pang Yeang of STS.

Second-year postdoctoral fellows are Peter Bokulich of the University of Notre Dame; Claire Calcagno, who received her Ph.D. in archaeology from Oxford University and has been a visiting scholar in STS; Dane Daniel of Indiana University; Gerard J. Fitzgerald of Carnegie Mellon University; and David Pantalone, who received his Ph.D. from the University of Toronto.

The new science writer fellow is free-lance writer Seth Shulman.

Graduate student fellows are Alexander Brown, Peter Shulman (S.B. 2001), Jenny Leigh Smith and Anya Zilberstein of STS; Luis Campos and Abena Dove Osseo-Asare of Harvard's Department of the History of Science; and Dr. Katrien Vander Straeten, a student in Boston University's Center for Philosophy and History of Science.

## Booklet, timeline portray Vest presidency years

President Charles M. Vest will preside over Institute Commencement exercises for the 14th and final time this Friday. To mark this occasion and to celebrate the dynamic and innovative years of Vest's leadership, the News Office asked him to reflect in writing on the defining moments of the years since 1990.

The result is a booklet containing six essays written by Vest, along with an accordion-style timeline highlighting events in research, education and community life at MIT during his tenure. It will be available for free to the MIT community on Commencement day.

"The News Office staff has been privileged to observe and to report on President Vest's leadership and accomplishments over the past 14 years," said Arthur Jones, director of the News Office. "As individuals and as a group, we have also carried MIT's key messages to outside media and the larger world. We're pleased to publish President Vest's reflections on MIT's recent growth and ongoing challenges. This is an opportunity for all of us to appreciate and better understand an important chapter in Institute history."

The News Office booklet project began in April, when the News Office asked Vest to comment on some of the key chal-



Charles M. Vest

lenges and innovations that were most meaningful to him and to MIT. He was enthusiastic about the project, but emphasized that it should focus on MIT and not on his personal experiences. His introduction to the essays sets the booklet's thoughtful tone.

"Serving as president of a major research university is not a sandbox ambition for any child—I remain frankly astonished at the road that led me here. I am also overwhelmed with the sense of how much I owe to the insight, imagination, inspiration and judgment of the many, many gifted people I have been lucky enough to work with at MIT," he writes.

Vest's essays reflect on the genesis of MIT's office in Washington, D.C.; the personal and professional challenges he and his colleagues underwent following the Report on the Status of Women Faculty; a behind-the-scenes view of OpenCourseWare; the pursuit of the brain and cognitive sciences as one of MIT's major intellectual priorities; and two essays on building the most invigorating campus and campus life for MIT's students, faculty and staff.

The timeline offers a snapshot of each year. To see a web-based version of the timeline, go to <http://web.mit.edu/timeline>.



# Tech Day 2004 looks at America's passion: cars

Automobiles—how they're made, their problems and their effects on our lives—are the focus of "Shifting Gears," this year's Technology Day program for alumni on Saturday, June 5 in Kresge Auditorium.

"Cars are a prism through which you can view many aspects of American life and culture," said Keith McKay (S.B. 1997), head of the Technology Day Committee and managing director of Village Software in Boston. "Eighty to 100 years ago, the car was an elegant solution to a problem of the time. Now it's still a solution, but there are problems associated with it, and we need to look at whether it's still the right solution."

In a format change from recent Tech Days, the afternoon will feature a second panel discussion in Kresge rather than breakout sessions in other locations. "We didn't want to get too diffuse," McKay said, adding that in previous years, some participants said that they were disappointed at being able to attend only one of the simultaneous afternoon sessions.

The morning session in "Shifting Gears" will examine some of the challenges associated with the automobile, including limited mobility, environmental concerns, limited resources, impact on urban environments and issues facing an aging population. The afternoon session will invite participants to think about solutions to these issues.

The morning panel from 9 a.m. to noon, moderated by President Charles M. Vest, will feature:

- Daniel Roos (S.B. 1961, S.M., Ph.D.) the Japan Steel Industry Professor, associate dean for engineering systems and co-director of the Engineering Systems Division

- John B. Heywood (S.M. 1962, Ph.D.), the Sun Jae Professor of Mechanical Engineering and director of the Center for 21st Century Energy and the Sloan Automotive Laboratory

- Ralph A. Gakenheimer, professor of urban studies and of civil and environmental engineering

- Joseph F. Coughlin, director of the New England University Transportation Centers Program (Region One), researcher in the MIT Center for Transportation and Logistics and director of the MIT AgeLab

The afternoon program from 2:15 to 5 p.m. will be moderated by Norman R. Augustine, retired chairman and CEO of Lockheed Martin Corp. Panelists will be:

- Ernest J. Moniz, professor of physics and director of energy studies in the Laboratory for Energy and the Environment

- William Mitchell, professor of architecture and head of the Program in Media Arts and Sciences

- Anne Asensio, executive director of advanced design with General Motors Design

- Dean Kamen, president of DEKA Research and Development Corp., chairman of Segway LLC and founder of FIRST (For Inspiration and Recognition of Science and Technology).



## ▶ ARTS NEWS

Seth Bisen-Hersh, who graduated in 2001 with degrees in computer science and music, will perform his musical study of gay heterosexuality, "The Gayest Straight Man Alive," weekends June 4-12 at Where Eagles Dare (347 W. 36th St., New York). Show times are 10:30 p.m. on Fridays and 5 p.m. on Saturdays. Bisen-

Hersh, who earned a master's degree in music technology at New York University, also announced that his new musical satire about a drunken bum who's elected into public office, "The Spickner Spin," has been accepted into the 2004 New York International Fringe Festival (Aug. 13-29).

# Tech Night at Pops features MIT talent

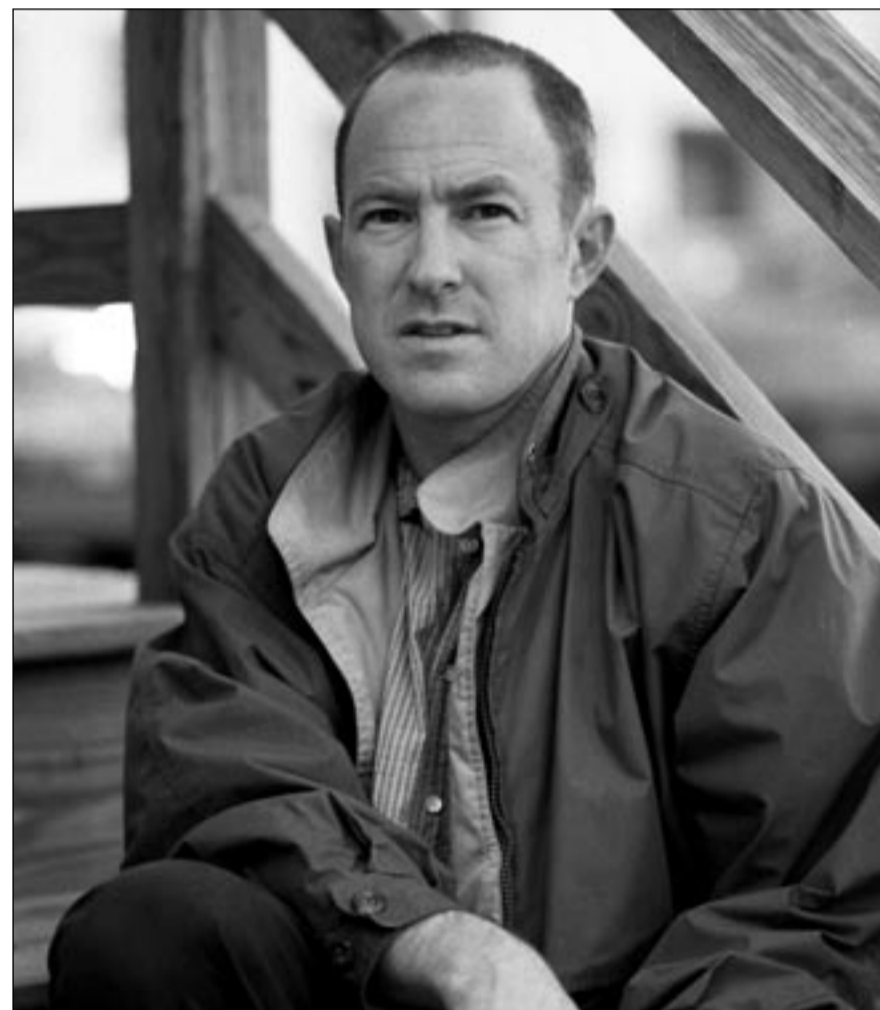
While Keith Lockhart is celebrating his 10th year as conductor of the Boston Pops, Tech Night at Pops celebrates its far greater longevity—107 years as an annual tradition. On Thursday, June 3, Lockhart will lead the Pops in a concert that includes a guest appearance by Evan Ziporyn, MIT's Kenan Sahin Distinguished Professor of Music, who will be the soloist in Artie Shaw's "Concerto for Clarinet."

Known for his expertise on the Balinese gamelan and as an innovative composer for combined ensembles of gamelan and western instruments, Ziporyn will swing to a piece originally composed for the Fred Astaire film, "Second Chorus." Ziporyn, has performed with singer/songwriter Paul Simon, the Bang on a Can All-Stars and Steve Reich, also directs MIT's Gamelan Galak Tika.

The program will also include Robert Russell Bennett's "The Four Freedoms Symphony" performed with a film produced by Susan Dangel and Dick Bartlett with text and narration by Charles Osgood; John Williams' "Hymn to New England"; a multiple birthday tribute to Count Basie, Glenn Miller and Fats Waller; Irving Berlin's "There's No Business Like Show Business"; "A Billy Joel Triptych"; selections of works by Duke Ellington; and "Hot Honey Rag" from Kander and Ebb's "Chicago."

As tradition demands, the concert will conclude with a singalong version of MIT's alma mater, "In Praise of MIT."

The concert is sold out as tickets were purchased by this year's graduates and alumni returning to campus for reunions and Tech Week.



Professor Evan Ziporyn will perform Artie Shaw's "Concerto for Clarinet" on June 3 at the 107th Tech Night at the Pops.

## CLASSIFIED ADS

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

### FOR SALE

NordicTrack, \$75. Imperial freezer, \$50. Small upright mahogany piano, needs tuning and work, nice piece of furniture, \$50. Trundle unit and mattress, fits under twin bed \$50. Misc furniture-moving. 253-3529 or [cmorse@mit.edu](mailto:cmorse@mit.edu).

2002 Coachman Cascade Travel Trailer. Slide out, screen house, like new, never towed. Worth over \$14,000, must sell, moving out of state. \$12,900/bst. Tony, 253-3922.

Sharp AFR609X 5500 BTU A/C. Works grt, used rarely, remote control, \$80. [jync@mit.edu](mailto:jync@mit.edu).

Craftsman 21" self propelled rear bag mower. 7hp engine, 1 yr old, \$350 new. \$150/bst. Don, 978-957-2774 (after 5pm) or [dsousa@haystack.mit.edu](mailto:dsousa@haystack.mit.edu).

Brand new Head iS10 oversize tennis racquet. 1/2 grip size, 115 sq. inches, pre-strung w/ Head Intellistring 17 gauge, 68 lbs, incl racquet cover, vibration dampener, \$50. [dhsoder@mit.edu](mailto:dhsoder@mit.edu) or 253-5575.

Clayton Marcus furniture, blue/ white plaid love seat, wing chair, ottoman. Blue sleep sofa, queen, like new. \$800. Tom, 253-6715 or 617-799-5887.

### VEHICLES

1999 Mercury Sable GS. 53K miles, green ext, gray int, cassette/radio, airbags (driver/passenger), pwr windows/locks, rear window defroster, A/C. \$6,000. Karin Bäckstrand, [karinb@mit.edu](mailto:karinb@mit.edu), 617-492-5095 or 258-6084.

1992 Mazda MX-3 GS hatchback. 6-cyl, white, 90K miles, 5-spd, A/C, cruise, pwr windows/locks/mirrors. Gd cond, \$2,400/bst. 781-648-0502 or [anniek@mit.edu](mailto:anniek@mit.edu).

### HOUSING

Medford: Condo/loft, hist school bldg, Forest St, 1,111 sq.ft., 2 levels, 23' ceilings, spiral stairs, open flr plan, lr, dining area, sm office, 2b, BR, balc/study area, indr pkg space, indr pool, tennis court, laundry, central electric air/heat, dw, hwd flrs, 5 miles to MIT, 2 blocks to Rt. 93. \$299,000. 781-266-6545 or [bbolivar@mit.edu](mailto:bbolivar@mit.edu).

Somerville: Union Sq, 1BR, 2nd flr, lr, hwd flrs, nr restaurants/groceries/#85 to MIT. Avail 7/1, \$1,150/mo. Lou, 978-658-8555.

Somerville: Charming Greek revival farmhse on dbl lot, 15min to MIT or Harvard, huge porch, exc cond, landscaped flower gardens, 2BR + study, undeveloped walk-up attic. \$415,000. Clare, 253-7708.

Arlington: Broadway, 2nd flr of 3 family hse, 2BR, dr, lr, hwd flrs, back porch, hk-up for w/d, prkg for 1 car. Avail 6/1, \$1,350/mo. Katina, 781-643-5971.

Westford: 6-yr-old hse, 3BR, 2b, 1,450/sq/ft, bsmnt, garage, deck on 1/3 acre, incl all appliances, yard tools, patio set, more. Avail

8/1 for 2 yrs, \$1,950/mo. 978-392-1278.

Belmont: 4BR, 2.5b furn hse, flat fenced yard, walk to exc schools, parks, buses, avail 8/2004-7/2005. Bill, 253-4580.

Somerville: Spring Hill, 3BR apt, 1st flr of 3 flr bldg, prkg on-str. Avail 9/1, \$1,875 + utils. [lmart@mit.edu](mailto:lmart@mit.edu).

Belmont: Lrg, furn rm in lovely house. Off-strt prkg, central A/C, some kitchen privs, lrg garden, short or long term. Rent neg. Frence/English lessons also avail. 617-484-6833.

### ROOMMATES

Medford: Roommate to share lrg condo in the Wellington Circle area, nr T/shopping/malls. Completely furn, own BR, prvt full bath, A/C, swimming pool. \$800/mo. John, 617-548-2797 or Phyllis, 253-3038.

Cambridge: Furn rm in 3BR, 1.5b apt, 2 blocks from MIT campus. Avail 6/1-8/30 (flexible), \$639/mo. [flam@mit.edu](mailto:flam@mit.edu) or 617-225-7686.

### VACATION

Kissimmee, FL: Deeded time-share, early May, 5-star resort, ground flr, sleeps 6, screened porch, all amenities, pool, hot-tub, health club, nr theme parks, 1/2 price, \$9,000. 617-436-5663 or [wtonejoel@juno.com](mailto:wtonejoel@juno.com).

Orleans: Hub of Cape Cod, B&B suite in authentically restored 1852 Greek revival farmhse, nr Pleasant Bay Beach/boat landing, prvt bath and entrance. \$500 or \$700/wk. Sandy, 508-240-6990.

White Mountains, NH: Waterville Estates, panoramic views from mntntop, 3BR, 2baths, twtnhs, pond, htd pools, hot tubs, tennis, saunas, fitness ctr, biking, hiking, nr golf. No pets/smoking. Avail June-Aug, \$700/wk, \$1,300/2wks, \$2,400/4wks. Chuck, [snowood\\_view@comcast.net](mailto:snowood_view@comcast.net).

Brewster, Cape Cod: Grt vacation cottage on hill above freshwater pond, 50' prvt beach, sleeps 6, separate studio-hse, nr conservation land, prvt, pretty, calm. Avail July, \$1,000/wk. Andy, 617-876-6257 or Steve, 617-876-6121.

Martha's Vineyard: 4BR Chappaquiddick hse on 1 acre, newly renov, 1 mile to beach, 3 miles from Edgartown, 2 wks left in Sept, \$850/wk and \$900/wk. David, 781-981-5087 (work) or 603-654-5513 (home).

Westport: 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).

### STUDENT JOBS

**Positions for students with work-study eligibility.**

Assist the Science Clubs for Girls, an after school science program, to improve and create science curriculum. Create, test and lead hands-on science experiments. 20/hrs/wk, 8 wks in summer, \$10/hr undergrads, \$15/hr grads. Contact Alejandra Pallais, 617-549-2442

Tutoring Plus, serving children in MIT's neighborhood, seeks assistance with planning a 40th anniversary celebration next fall incl planning, fund-raising, managing information. Hrs flexible, \$12/hr. Contact Sally Susnowitz, 258-7344.

# Graduating students look back on experiences

As thousands of students prepare to receive their MIT degrees on Friday, Tech Talk spoke with four of them about what they learned at the Institute, how MIT changed them, and what they plan to do next.



## James Dai

Vancouver, B.C.

Receiving the S.M. in media arts and sciences (thesis research on "intelligent" image retrieval for online communities)

The most important things I'll take away from here are the relationships I formed. I learned that

the academic path is not for me right now and that I have a long way to grow as a person...

The best part about MIT? The opportunity to work with amazing people with very different backgrounds, and the chance to do theater in such an exciting environment. [Dai received the Laya and Jerome B. Wiesner Award for achievement as a performer, designer and videographer.]

[I learned] that grad school is just a means to an end. The hard part is figuring out what I'm passionate about.

**Post-grad plans:** I'll work full time on Microsoft's search engine as a program manager in Seattle and do theater in the city. Eventually I'll get an M.F.A. in directing and try to do theater full time.



## Becky Pferdehirt

Middleton, Wis.

Receiving the S.B. in biology

The education has been wonderful, but without a doubt it's the people here who have really made my MIT experience special. When I first came here, I was afraid people would be introverted—only interested in their studies. I've been so surprised. The people I've met here I've no doubt I'll be in contact with for the rest of my life...

The best part about MIT was being part of Alpha Phi [sorority]. It was wonderful to have an academic life, social life and community service. Spending last summer in Paris through the MIT-

France Program was the most amazing experience I've had here...

I've been very impressed with the foreign language program. In about two years I went from knowing no French to being pretty fluent...

MIT students love to hate MIT. My advice is to not be afraid to own up to the fact that you like it here. The key to being happy here? Have interests and do things outside of just schoolwork, and don't be afraid to do things that aren't typically MIT.

**Post-grad plans:** I'm taking a year off before entering a Ph.D. program in biology at [the University of California at] Berkeley. This summer I'll be bartending back in my hometown of Madison, Wis., then in the fall I hope to attend beauty

school. I've always been very interested in fashion, hair and the art of makeup, and think learning about them would be a good life skill.

In spring 2005, I want to do a combination of traveling and community service. I've applied to the Mercy Ship Program, in which doctors stop at ports along the African coast to give free health care to people who wouldn't otherwise have access to it. I don't have any medical experience, but they need volunteers to help the doctors with small tasks. If I don't get into that program, I'll apply for something through Habitat for Humanity.

In the long term, I'm planning to continue in academia. Some day I'd like to have my own lab doing cancer-related research.



## Elena A. Smith

Oak Brook, Ill.

Receiving the S.B. in management

The nicest surprise about MIT for me was the relative nonexistence of competition. Soon after classes began, I discovered that pretty much

everyone I encountered was eager to work together to solve problem sets and, in general, to collaborate to achieve great things. There are an incredible number of amazing people here and with this environment, it doesn't surprise me that MIT can accomplish so much.

At times, I feel a bit more cynical or pessimistic, but most of the time, I still have a pretty

good outlook on life. I think MIT has also shown me to keep the big picture in mind. If you focus too much on the small stuff, it's easy to get lost or left behind.

**Post-grad plans:** I'm taking the summer to travel abroad and then will be starting a career in electrical engineering in the fall. I plan on grad school, but have made no definite plans yet.



## Jesse Smithnosky

Eighty-Four, Penn.

Receiving the S.B. in computer science and engineering

First of all, I loved MIT. I loved the chance to meet absolutely incredible people, to take on amazing challenges (25 hours a week on subject 6.170, 10 hours a week as an officer in my fraternity, and 10 to 15 more in the pool for the swim team), and to have fun all at the same time.

Coming in, I suspected that, as a whole, MIT people would be pretty good at life in general—

things like conflict resolution, setting priorities, and meeting deadlines. How else did they get into this place? As it turned out, I was completely wrong about that.

I also thought that there would be a fairly strong sense of community at MIT. I don't think that's true either. People know their suitemates or maybe even the people from their dorm or living group, but beyond that nobody knows anybody. I'm guilty of it, too; my 10 best friends are all in my fraternity.

I think I've grown up a lot. Unfortunately, I believe I've developed a lot of stereotypes about people. The simple fact of the matter is that they're

reinforced everywhere you look at MIT and you have to stay on the ball to not judge people by first impressions.

I'm in a fraternity, so I can use that one as an example. I feel like a lot of people at MIT just assume that the fraternity guys are arrogant jerks. Sadly, some of them are, but as a whole many of us are quite decent people. I'm guilty of some of these assumptions as well, but I recognize them and try not to let them affect my actions.

**Post-grad plans:** I'm hoping to stay here next year for an M.Eng. After that I'll probably end up as a coder somewhere. I haven't thought much beyond that.

## COMMENCEMENT

### Continued from Page 1

research enterprise (see story below).

"Dr. Zerhouni is an innovative scientist and administrator who has made significant contributions to the world," said Vest. "His is just a great American story. Arriving on these shores as a young student and now a distinguished scientist leading our largest research establishment, he exemplifies the benefits of an open and accessible research community."

Zerhouni came to the United States from Algeria in 1975. After earning a medical degree from the University of Algiers, he was accepted as a radiology resident at Johns Hopkins University School of Medicine, where he advanced to become chairman of the Department of Radiology and Radiological Science, radiologist in chief, president of the Clinical Practice Association, executive vice dean and professor of biomedical engineering.

He singly and jointly holds eight patents for various computerized tomography and magnetic resonance imaging inventions.

### Commencement exercises

Vest will present the following degrees: bachelor of science; bachelor of science/master of science; bachelor of science/master of engineering; and advanced degrees in the School of Science, the Woods Hole Oceanographic Institution and the Whitaker College of Health Sciences and Technology. Provost Robert A. Brown will award advanced degrees in the schools of Architecture and Planning; Engineering; and Humanities, Arts and Social Sciences, and in the Sloan School of Management.

Following the exercises, a reception will be held for graduates and their guests

on the West Campus Plaza.

A special hooding ceremony for Ph.D. recipients will take place on Thursday, June 3 at 1 p.m. in the Johnson Athletics Center. Chancellor Phillip L. Clay will preside.

### Remote viewing

Access to Killian Court is permitted by either Commencement badge or ticket. Security around Killian Court will be strictly controlled.

Members of the community are invited to watch the ceremonies on closed-circuit television in selected rooms in buildings 1, 2 and 4; rooms 6-120, 10-250, 16-160, 26-100, 34-101, 56-114, E25-111, E51-145, and E51-149; Kresge Auditorium; Kresge Little

Theatre; Rockwell Cage and Johnson Athletics Center. Tickets are not required for admission to these locations.

The ceremony will also be webcast live. The URL will be posted at <http://web.mit.edu/commencement/2004/webcast>.

### Parking restrictions

West Garage, the West Garage Annex Lot and the East Lot will be reserved for Commencement guest parking and will be closed to MIT parkers for the entire day. No visitor passes will be accepted. However, those who require handicapped and medical reserved parking spaces will be accommodated. Contact the Parking and Transportation Office if you normally park at West

Garage, West Garage Annex Lot or the East Lot and have an urgent business need to park on campus on Commencement day.

### Plant sale

The MIT Community Service Fund will host its annual fund-raising sale of the plants displayed on the Commencement podium and surrounding stage at 4 p.m. Proceeds from sales of the plants, which are made available by the Office of Conference Services and Special Events, support service to the local community by MIT staff and student volunteers.

Complete Commencement information, including the complete schedule, is available at <http://web.mit.edu/commencement/2004>.

## NIH funds much research at MIT, Whitehead

The National Institutes of Health, headed by MIT Commencement speaker Elias A. Zerhouni, are the federal focal point for health research and have supported a wide range of research at MIT and the Whitehead Institute for Biomedical Research.

The NIH, which is based in Bethesda, Md., is an agency of the U.S. Department of Health and Human Services. Its mission is to conduct and support research into the causes, diagnosis, prevention and cure of human diseases, including those related to environmental contaminants.

Recent NIH-funded projects at MIT and Whitehead include:

- A study that showed yeast cells' ability to dismantle amyloid fibers, the clumps of plaque-like proteins that clog the brains of Alzheimer's patients (see story on page 1). The fibers, known for their resilient

molecular structure, have never before been dismantled. Although amyloid fibers are not necessarily the cause of Alzheimer's, they are associated with it and many other neurological conditions.

- Established a new research center with an MIT researcher's involvement—The Woods Hole Center for Oceans and Human Health—to study the distribution of biological organisms that have potential consequences for human health in the temperate coastal ocean and its bays, harbors and estuaries.

- Research showing that the lightning-quick shifts our eyes make when taking in a scene—long thought to be random—occur in a specific order. This kind of information about the brain's inner workings may shed light on how the visual cortex processes cues from the eyes.

- A body of work that suggests a new treatment for adult-onset diabetes. A research team at the Broad Institute of MIT and Harvard has found a gene that revs up the energy-producing ability of muscle cells, which could lessen the harmful effects of the disease.

- A study on the effects of blocking a single mutated gene to treat many of the psychiatric and neurological disabilities associated with a primary cause of mental retardation, fragile X syndrome.

- A report by MIT researchers that identifies a potential new way to combat smallpox.

For more information on these and other research projects, go to the MIT News Office web site at <http://web.mit.edu/newsoffice> and click on "research" or "by topic."



# ▶ 2004 MIT Award Winners

## Special section

### ▶ Awards convocation

The following awards were presented at the Institute Awards Convocation on May 4. Some awards announced at the convocation appear elsewhere in this issue; arts-related awards are on page 9, living group awards are on page 14, and the Patrick J. McGovern '59 Entrepreneurship Award is listed with the Sloan School of Management awards on page 12.

#### Service

**William L. Stewart Jr. Awards**—for contributions by an individual student or student organization to extracurricular activities and events during the preceding year

David A. Berry G, biological engineering, Mt. Kisco, N.Y.

William S. DelHagen G, EECS, Manhattan Beach, Calif.

Peter T. Rye G, chemistry, Merrimack, N.H.

Hans Tung G, management, Ranchos Palos Verdes, Calif.

Rose A. Grabowski '05, management, Andover, Mass.

Fahad H. Kajani '05, management, Richmond, Texas

John R. Velasco '05, political science, La Mesa, Calif.

**Laya Wiesner Community Award**—for a member or friend of the MIT community for conspicuously effective service that reflects Mrs. Wiesner's concerns for enhancing life at the Institute and the world

Maryanne Kirkbride, MIT Medical's clinical director for campus life

**Priscilla King Gray Award for Public Service**—for an undergraduate exceptionally committed to public service at MIT and its surrounding communities

Anne Kloimwieder '04, biology, Dayton, Ohio

**James N. Murphy Award**—for an employee whose spirit and loyalty exemplify inspired and dedicated service, especially with regard to students

Gabrielle Abelard, program manager for graduate residences in Student Life Programs

Robert T. Ramsay Jr., house manager of MacGregor House

**Gordon Y Billard Award**—for special service of outstanding merit performed for the Institute

Vicky Sirianni, chief facilities officer in Facilities

Karen Nilsson, director of Housing

**Karl Taylor Compton Prize**—for achievements in citizenship and devotion to the welfare of MIT

R. Erich Caulfield G, EECS, Baton Rouge, La.

Emily Cofer '04, mechanical engineering, Millis, Mass.

**John S.W. Kellett '47 Award**—for a commitment to creating a more welcoming environment at MIT, including but not limited to improving the experience of lesbian, bisexual, gay, transgendered (LGBT) and questioning individuals

Benjamin R. Wagner '05, EECS, Nashua, Mont.

#### Education

**Edward L. Horton Fellowship Award**—for fostering fellowship in the graduate student body

Alexandre Debs G, economics, Drummondville, Quebec

**Frank E. Perkins Award**—for excellent advising for graduate students

Associate Professor Peter So of mechanical engineering

**Irwin Sizer Award for the Most Significant Improvement in MIT Education**

Associate Professor Caroline A. Ross of materials science and engineering

**Graduate Student Council Teaching Award**—for excellence in teaching a graduate-level course, given each year to one professor or teaching assistant from each school

Professor William Porter, architecture

Professor Lee Gehrke, HST  
Assistant Professor Jared Curhan, Sloan School of Management

Professor Asuman Ozdaglar, EECS

Dionisios Margetis, instructor in mathematics

Professor David Kaiser, STS  
Shan-Yuan Ho G, EECS, San Francisco

**Goodwin Medal**—for a graduate student whose performance of teaching duties is "conspicuously effective over and above ordinary excellence"

Brian C. Dean G, EECS, Cambridge, Mass.

Rajeev Malhotra G, HST, Murrieta, Calif.

**Everett Moore Baker Memorial Award for Excellence in Undergraduate Teaching**

Professor Donald R. Sadoway of materials science and engineering

Sarah A. Tabacco, instructor in chemistry

**Bose Award for Excellence in Teaching**

Professor Ian Hunter of mechanical engineering

**Arthur C. Smith Award**—to a faculty member for meaningful contributions and devotion to undergraduate student life

Professor Stephen M. Meyer of political science

#### Women and minorities

**Albert G. Hill Prize**—for minority juniors or seniors with high academic standards and continued contributions to improving the quality of life for minorities at MIT

Pius A. Uzamere '04, EECS, New Castle, Penn.

Terrence Strader '04, EECS, Cincinnati, Ohio

**Laya W. Wiesner Award**—for an undergraduate woman who has most enhanced MIT community life

Monique A. Johnson '04, architecture, Morrisville, N.C.

**Ronald E. McNair Scholarship Award**—for black undergraduates with strong academic performance and considerable contributions to the minority community

Kasetta V. Coleman '04, materials science and engineering, Philadelphia

Nnennia L. Ejebe '04, chemical engineering, Plymouth, Minn.

Christine P. Fleming '04, EECS, Bronx, N.Y.

Adrian E. Townsend '04, aero/astro, Rochester, N.Y.

Afiya A. Whisby '04, architecture, Macon, Ga.



PHOTO / DONNA COVENEY

Karl Taylor Compton Prize winners R. Erich Caulfield and Emily Cofer.

**Association of MIT Alumnae (AMITA) Senior Academic Award**—for senior women who have demonstrated academic excellence through coursework and related professional activities at MIT

Irit Rappley '04, BCS, Cambridge, Mass.

Sonya C. Tang '04, chemistry, Great Neck, N.Y.

**Betsy Schumacker Award**—for a female undergraduate for excellence in athletic competition

Kathryn M. Duffy '04, chemistry, Port Washington, Wis.

**Howard W. Johnson Award**—for the male senior athlete of the year

Nicholas R. Nestle '04, EECS, Smyrna, Ga.

#### Athletics

**Harold J. Pettegrove Award**—for outstanding service to intramurals

Kent A. Ross '04, mathematics, Tokyo

**Malcolm G. Kispert Award**—for the male and female senior scholar-athletes of the year

Martha W. Buckley '04, physics, Washington, D.C.

Rory E. Foster '04, mechanical engineering, Madison, Wis.



PHOTO / DONNA COVENEY

Goodwin medalists Rajeev Malhotra (left) and Brian C. Dean.

#### Key to abbreviations

In the pages that follow, the names of some academic departments and programs have been shortened to save space. A key to abbreviations:

Aero/astro	Aeronautics and astronautics
BCS	Brain and cognitive sciences
CEE	Civil and environmental engineering
CSAIL	Computer Science and Artificial Intelligence Laboratory
DUSP	Department of Urban Studies and Planning
EAPS	Earth, atmospheric and planetary sciences
EECS	Electrical engineering and computer science
HST	Harvard/MIT Division of Health Sciences and Technology
STS	Program in Science, Technology and Society
UROP	Undergraduate Research Opportunities Program



PHOTO / DONNA COVENEY

Gordon Y Billard Award winners Karen Nilsson (left) and Victoria Sirianni.



## Arts

### Awards Convocation

**Louis Sudler Prize in the Arts**—to a senior who has demonstrated excellence in music, theater, painting, sculpture, design, architecture or film

Andrew P. McPherson '04, music, Woodbury, Minn.

**Laya and Jerome B. Wiesner Award**—to students, organizations and/or living groups for achievement in the creative and performing arts

James Dai G, media arts and sciences, Vancouver, B.C., for his involvement in theater and his work as a designer and videographer

Daniel J. Paluska G, mechanical engineering, Somerville, Mass., for his "interest in creating communities of and venues for artists whose work involves art and engineering"

Andrew J. Perelson '04, EECS, Santa Fe, N.M., for his contributions to theater and dance at MIT

**Harold and Arlene Schnitzer Prize in the Visual Arts**—for artistic talent and creative concepts based on a body of work and written personal statements

1st prize: Coryn Kempster G, architecture, Brantford, Ontario

2nd prize: Lisa M. Bidlingmeyer G, comparative media studies, Frazer, Penn.

3rd prize: Neils J. Cosman '04, mechanical engineering, Belmont, Mass.

### Music and theater arts

#### Epstein Award

Daniel Stein '05, EECS, Palm Beach Gardens, Fla., for distinguished service and musical contribution to the MIT Symphony Orchestra

**Gregory Tucker Memorial Prize**—for ability in composition, performance, or music-historical studies and overall contributions to the music and theater arts section

Percy Liang G, EECS, Portland, Ore.

Ethan Fenn '04, mathematics, Painted Post, N.Y.

Jeremy Baskin '04, chemistry, Westmount, Quebec.

**Philip Loew Memorial Awards**—for creative accomplishment in music

Alexander Mekelburg '04, mechanical engineering, Baltimore

Thomas Coffee '05, aero/astro, Torrance, Calif.

Andrew Wong '04, physics, Rancho Sante Fe, Calif.

Sarah Poulsen '04, BCS, Vienna, Va.

Nao Jennifer Gamo '05, BCS, Killara, Australia

**Ragnar and Margaret Naess Awards**—for exceptional talent and commitment to private performance study

Eileen Huang '05, chemistry, Hillsborough, N.J.

Yu Yasufuku G, mathematics

Reid Barton '05, mathematics, Arlington, Mass.

Margaret Stringfellow '04, aero/astro, Tacoma, Wash.

The Renaissance Vocal Sextet—Robert Bates '04, Greenwich, Conn.; Benjamin Kendall '06, aero/astro, Irving, Texas; Ben Maron '06, EECS, Carmel, N.Y.; Charlene Shih '07, Shanghai, China; Weifang Sun '04, EECS, Newark, Del.; Jonathan Varsanik '04, physics, Corapolis, Penn.

**Ragnar and Margaret Naess Certificates of Appreciation**

Christine Chiu '06, chemical engineering, Hacienda Heights, Calif.

Thomas Covert '05, mathematics, Belmont, Mass.

Xiaoming Sherman Jia '06, EECS, Roslyn Heights, N.Y.

Jun Liu '07, Edison, N.J.

Jacqueline O'Connor '06, aero/astro, South Windsor, Conn.

Florent Segonne G, EECS, Cannes, France

Caitlin Smythe G, aero/astro, Culver City, Calif.

Sunny Wicks '07, Hattiesburg, Miss.

Joey Zhou '06, EECS, Dallas

**Brad and Dorothea Endicott Award**—for distinguished service and musical contribution to MIT's program in world music

Caitlin Schein '04, BCS, Bloomfield Township, Mich.

Edward S. Darna Awards—to graduating students who have demonstrated excellence in theater arts

Dan Liston '04, management, Cambridge, Mass.

Melissa Cain '04, mechanical engineering, Oklahoma City, Okla.

**Joseph D. Everingham Award**—for a single creative outstanding performance or notable creative accomplishments in theater arts by a graduating senior

Max Goldman '04, mathematics, Wellesley, Mass.

Lisa Messeri '04, aero/astro, West Orange, N.J.



PHOTO / DAN BERSAK

Everingham Award winner Max Goldman in Dramashop's production of "Company of Angels."

### Other Awards

**Vera List Prize in Art and Writing**—for exceptional expression on some aspect of contemporary art

1st prize: Cecilia Ramos '05, architecture, Concord, Mass., for an essay titled "Mark Rothko's The Black and the White: In Pursuit of the Kantian Sublime"

2nd prize: Tiffany Kanaga '04, French and management science, Greenville, Del., for "A Study of Seascape: Moving Beyond Pop Art"

#### MIT Symphony Concerto Competition

Percy Liang G (S.B. 2004), EECS, Portland, Ore.

#### List Foundation Fellowship in the Arts

Dang Vu '05, biology, Jamaica Plain, Mass., for a music composition and performance project for a work to be titled "The Poison Clan Suite: A Celebration of Mutant Culture."

# Students honor Vests at awards convocation



PHOTO / DONNA COVENEY

At the Institute Awards Convocation, President Charles M. Vest and Mrs. Rebecca Vest received a surprise tribute from student leaders. At right is Professor Paul Gray, president of the Institute from 1980-90.

President Charles M. Vest and his wife Rebecca received a special tribute at the Institute Awards Convocation on May 4 for their work on behalf of MIT students over the last 14 years.

R. Erich Caulfield, president of the Graduate Student Council, noted the many financial and physical improvements to MIT during President Vest's tenure. But more important, Caulfield said, is "an investment which strikes at the very core of the Institute's character is the one that has been made in people."

"By not only acknowledging, but embracing the observations made in the Study on Women Faculty in Science at MIT, President Vest has pushed the door open just a little farther for an entire generation of young women who might now find it a bit harder to believe that smart girls don't do math and science," he said.

"When affirmative action was challenged, he ensured that MIT continued its proud tradition as a world leading institution by championing the right and need for institutions of higher learning to view diversity as a critical part of the educational experience," said Pius Uzamere II, president of the Undergraduate Association.

"Dr. Vest has served with a steadfast passion and led with honesty and integrity. He has taken MIT towards a new and brighter future, ensuring that the legacy that William Barton Rogers left the world near a century and a half ago will continue to live and grow," Uzamere said.

Caulfield presented a bouquet of flowers to Mrs. Vest and MIT baseball caps to both Vests as "small tokens of our appreciation."

## ▶ Phi Beta Kappa

- Sudha Rani Amarnath, Lansing, Mich. (biology and chemical engineering)
- Alexandr Andoni, Chisinau, Moldova (EECS and mathematics)
- Joshua Paul Aronson, Centereach, N.Y. (biology)
- Jason Michael Baron, Sarasota, Fla. (biology)
- Jeremy Michael Baskin, Westmount, Canada (chemistry)
- Martha Weaver Buckley, Washington, D.C. (physics and mathematics)
- Philip Johannes Butler, Lubbock, Texas (biology)
- Elisa Calimano, San Juan, Puerto Rico (chemistry)
- Georgiana Andreea Cepoiu, Bucharest, Romania (economics)
- Chung Kit Chan, Brooklyn, N.Y. (management and mathematics)
- Jennifer Tenye Chang, Houston (biology)
- Hogan Chen, College Point, N.Y. (economics and mathematics)
- David Rolin Cheng, Avondale, Penn. (EECS)
- Robert Wen-Chieh Cherng, Whittier, Calif. (physics and mathematics)
- Jonathan Dale Choi, Tulsa, Okla. (biology)
- Neelesh Lalji Chudasama, Watchung, N.J. (biology)
- John Stephen Danaher, Springfield, Va. (EECS and mathematics)
- Arushi Manekha deFonseka, Wilmington, Del. (biology and chemical engineering)
- Jessie Qian Ding, Scarborough, Canada (economics and management)
- Roy Kuniaki Esaki, Kapaa, Hawaii (mechanical engineering)
- Onsi Joe Fakhouri, Dasma, Kuwait (physics and mathematics)
- Ann Marie Elizabeth Faust, Derby, N.Y. (biology)
- Maksym Fedorchuk, Kiev, Ukraine (mathematics)
- Ethan Michael Fenn, Painted Post, N.Y. (mathematics and music)
- Michal Ganz, Amherst, Mass. (biology)
- Max Goldman, Wellesley, Mass. (mathematics)
- Aleksey Golovinskiy, Jersey City, N.J. (physics and mathematics)
- Paul Erik Gorbow, Stockholm, Sweden (mathematics)
- Jonathan Reed Harris, Purcellville, Va. (economics and management)
- Jessica Lyn Haurin, Columbus, Ohio (EAPS)
- Daniel Steven Herman, Yorktown Heights, N.Y. (biology)
- Timmie Ting-Wei Hong, San Diego (materials science and physics)
- John James Huss III, Atlanta (mathematics)
- Izzat Nabil Jarudi, Westwood, Mass. (BCS)
- Mindy Ju, Charlottesville, Va. (biology)
- Teresa Sora Kim, West Hartford, Conn. (biology)
- Aleksandra Korolova, Riga, Latvia (mathematics)
- Timothy Robert Kreider, Moorestown, N.J. (mathematics)
- Martin Vasilev Kurtev, Chicago (biology and BCS)
- Yuk Yan Lam, Morganville, N.J. (physics)
- Sarah Laszlo, Billings, Mont. (BCS)
- Anne Eunhae Lee, Rockville, Md. (economics and mathematics)
- Ioan Tudor Leu, Paunesti Vrancea, Romania (EECS)
- Matthew Richard Levy, Okemos, Mich. (economics)
- Percy Shuo Liang, Portland, Ore. (EECS and mathematics)
- Walton William Lin, Williamsburg, Va. (EECS and mathematics)
- Nadya Mawjee, Markham, Canada (biology)
- Andrew Palmer McPherson, Woodbury, Minn. (music)
- Ankur Mukesh Mehta, Stroudsburg, Penn. (physics)
- Michael John Mortonson, Green Bay, Wis. (physics)
- Enrique Andres Munoz Torres, Santiago, Chile (EECS)
- Michelle Kyaw Nyein, Buffalo Grove, Ill. (chemistry)
- Aaron Joseph Parness, Dekalb, Ill. (mechanical engineering and writing)
- Joshua Seth Peters, Natchitoches, La. (EECS and mathematics)
- David Christopher Poland, East Providence, R.I. (physics)
- Raymond Raad, Brooklyn, N.Y. (mathematics)
- Daniel Robert Ramage, Westfield, N.J. (EECS and mathematics)
- Rohit Navalgund Rao, Rochester, N.Y. (EECS and mathematics)
- Irit Rappley, Cambridge, Mass. (BCS and philosophy and linguistics)
- Sonali Rudra, Sugar Land, Texas (biology and chemical engineering)
- Ashleigh Lynn Sanders, Fairfax, Va. (biology)
- Leah M. Scharf, Sharon, Mass. (biology)
- Lauren Michelle Schiff, Calabasas, Calif. (management)
- Michael Douglas Seeman, Los Altos, Calif. (EECS and physics)
- David Gordon Seif, New Rochelle, N.Y. (economics)
- Andrew David Selbst, West Orange, N.J. (EECS and physics)
- Alp Simsek, Antalya, Turkey (EECS and mathematics)
- Amanda Paige Smith, Rockport, Maine (architecture)
- Hyungbin Son, Youngin Kyung-gido, Korea (physics)
- Irene Seungwan Sonu, McLean, Va. (biology)
- Jim Sukha, Kennesaw, Ga. (EECS and mathematics)
- Jenny Ta, San Francisco, Calif. (mechanical engineering)
- Sonya Chin Tang, Great Neck, N.Y. (chemistry)
- Aekkaratt Thitimon, Ladyao, Chatujak Ban, Thailand (EECS)
- Michael Boonlieng Wongchaowart, Chagrin Falls, Ohio (biology)
- Peng Wu, Ames, Iowa (chemistry and biology)
- Joseph Lih-Kang Yeh, Ellicott City, Md. (biology)
- Bob Yin, Staten Island, N.Y. (biology)



PHOTO © / PAULA LERNER

Award winners in biology include (back row) Cynthia Lien and Michael Wongchaowart, and (front row) Bob Yin and Rita Monson.

## ▶ Biology

*All award recipients are seniors in biology unless otherwise noted.*

**Asinari Award**—for outstanding research in life sciences

Cynthia Lien, Armonk, N.Y.  
Michael Wongchaowart, Chagrin Falls, Ohio

**Luria Prize**—for outstanding scholarship and research of publication quality

Rita Monson '04, mathematics, Fredericton, N.B.

**Whitehead Prize**—for a student who has shown outstanding

promise for a career in biological research

Peng Wu, Ames, Iowa

**Merck Award**—for outstanding research and academic performance in biophysical or bioinformatics sciences

Melanie Cornejo '05, Lima, Peru

**Gene M. Brown Award**—for a senior who has both an outstanding academic record and has made important contributions to the biology teaching program

Bob Yin, Staten Island, N.Y.

## ▶ Nuclear engineering

**PAI Outstanding Teaching Award**—presented by the student chapter of the American Nuclear Society

Professor Sidney Yip

**Manson Benedict Fellowship**—to a graduate student for excellence in academic performance and professional promise in nuclear engineering

Paola Cappellaro G, Milano, Italy  
Lorenzo Pagani G, Milano, Italy  
Peter Yarsky G, Munhall, Penn.

**Roy Axford Award**—for academic achievement by a senior in nuclear engineering

Alexandra Awai '04, Clovis, Calif.

**Irving Kaplan Award**—for academic achievement by a junior in nuclear engineering

Michael Stawicki '05, Bow, N.H.

**Outstanding Student Service Award**—for exceptional services to the students, the department and the entire MIT community

Ben Parks G

**Outstanding Teaching Assistant Award**

Jiyun Zhao G, Shandong Province, China  
Brad Schuller G, Sylvania, Ohio

## ▶ Engineering Systems Division

### Martin Fellowship for Sustainability

Ali Mostashari G, engineering systems, Tehran

### Charles "Harrison" Smith Award

Aaron Raphael '05, materials science and engineering / LFM, Somerville, Mass.

### Eric Pas Dissertation Prize Competition in Travel Behavior Research (honorable mention)

Tomer Toledo, research associate (Ph.D. '03), Bat-Yam, Israel.

### Integrative Graduate Education and Research Training Program grant

Spencer Lewis G, ESD, Arlington, Mass.

Aleksandra Mozdzanowska G, aero/astro and ESD, Cambridge, Mass.

### Charles L. Miller Memorial Lecture

Daniel Roos, the Japan Steel Industry Professor of Engineering in CEE and ESD, associate dean for engineering systems and co-director of ESD

### ESD Educational Excellence Award

Frank L. Field III, senior research associate in CTPID's Materials Systems Laboratory, TPP senior research engineer, and ESD senior lecturer

### Technology and Policy Program Faculty Appreciation Award

David H. Marks, professor of CEE and engineering systems and director of the Laboratory for Energy and the Environment



## ▶ Student Life Programs

### Residential Life Programs

**Legacy Award**—for initiating a program or project that will have a lasting influence on the residence community  
East Campus, for the Bad Ideas Competition

**“Grace Under Fire” Award**—for showing strength in the face of adversity  
Deepti Mehta '04, mathematics, Dar es Salaam, Tanzania

### Outstanding Graduate Resident Tutor Award

Janice Lansita G, biological engineering, New York

### Outstanding Graduate Coordinator Award

Cort and Corey Johnson, for their work in Eastgate

### Undergraduate Residence Hall Event of the Year Award

Simmons Hall, for its Sand Mandala

### Graduate Residence Hall Event of the Year Award

Westgate, for its Cultural Exchange Through Cooking class

### Outstanding Undergraduate Residence Hall Government Award

East Campus

### Outstanding Graduate Residence Hall Government Award

Eastgate

### Residential Teamwork Award

Family Housing Committee

### Student Activities Office

**Best Large Event Fund Committee supported event**

Spring Comedy Event

### Best ARCADE-supported event

Tech Catholic Community, for its Mardi Gras event

### Graduate Program of the Year award

MIT TechLink

### Undergraduate Program of the Year

MIT Mystery Hunt

### Community Building Award

Association of Taiwanese Students, for its Night-market event

### Best Example of Teamwork by an Organization

2003 Career Fair directors

### Best Planned Event

Students for Labor Justice, for the “Got Fair Trade?” event

### Undergraduate Leadership Award

Afiya Whisby '04, architecture, Macon, Ga.

### Graduate Leadership Award

LaRuth McAfee G, chemical engineering, Ann Arbor, Mich.

### Outstanding Graduate Treasurer Award

Arvind Govindarajan G, biology, Quincy, Mass., of the Science and Engineering Business Club

### Outstanding Undergraduate Treasurer Award

John Velasco '05, political science, La Mesa, Calif., of the Undergraduate Association

### Best Performing Arts Award

Casino Rueda, for its “International Flava” event

## ▶ Architecture

### Marvin E. Goody Awards

Lydia Kallipoliti G, Thessaloniki, Greece  
Maria Alexandra Sinisterra G, Bogota, Colombia

### William Everett Chamberlain Prize— for achievement in design

Stephanie Hsu '04, Winter Park, Fla.  
Sarah Seung Shin G, West Orange, N.J.

### Outstanding Undergraduate Prize— for academic and design excellence

Joyce Wang '04, Atherton, Calif.  
Lisa Mroszczyk '04, Danvers, Mass.

### Francis Ward Chandler Prize— for achievement in architectural design

Rori Dajao G, Portsmouth, Va.  
Matthew Pierce G, Westerville, Ohio

**Alpha Rho Chi Medal**—for a graduating student for service, leadership and promise of professional merit

Andrew T. Marcus G, Suffern, N.Y.

### AIA Certificate of Merit

Timothy Morshead, Medford, Mass.

**AIA Medal**—for the top-ranking graduating M.Arch. student

Rebecca Luther, Boston

### Robert Bradford Newman Medal for Merit in Architectural Acoustics

Omar Saad G, Mexico City

**Sidney B. Karofsky '37 Prize**—for the outstanding M.Arch. student with one further year of study

Marco Marraccini G, Richmond, Va.

### Rosemary D. Grimshaw Award

Chris Muskopf G, St. Louis, Mo.

### Permasteelisa Sustainable Architectural Design Award

Christine Lin '04, Wilmington, Del.  
Laia Massagué '04, New York, N.Y.

### SMArchS Prize

Stylianios Dritsas G, Athens, Greece  
Omar Saad G, Mexico City  
Rita Saad G, Byblos, Lebanon  
Jeremy Voorhees G, Troy, N.Y.

**Special Recognition Award**—a new award for outstanding service to the department

Robert Morgan G, Charlestown, S.C.

## ▶ Brain and cognitive sciences

*All students are brain and cognitive sciences majors.*

### Angus MacDonald Awards— for excellence in undergraduate teaching

Ben Balas G, Pittsburgh  
Corey Harwell G, Louisville, Ky.  
Itamar Kahn G, Rehovot, Israel  
Serkan Oray G, Denver  
Alex Rivest G, Arlington, Mass.  
Richard Russell G, Oakland, Calif.

### Walle Nauta Award— for excellence in graduate teaching

David Badre G, Jasper, Ga.  
Brandon Farley G, Minneapolis

### BCS Awards— for continuing dedication to teaching

Charlene Ellsworth G, Ballston Spa, N.Y.  
Josh McDermott G, Arlington, Va.  
Yuri Ostrovsky G, Swampscott, Mass.

Amy Pooler G, Wiscasset, Maine  
Ned Sahin G, Boston  
Nathan Witthoft G, Philadelphia

**Walle J.H. Nauta Award**—  
for outstanding research in brain and cognitive sciences

Michelle Machon '04, Albion, R.I.  
Irit Rappley '04, Cambridge, Mass.

**Hans-Lukas Teuber Award**—  
for outstanding academics in brain and cognitive sciences

Mariko Jameson '04, Henderson, Nev.  
Izzat Jarudi '04, Westwood, Mass.  
Martin Kurtev '04, Chicago  
Sarah Laszlo '04, Billings, Mon.  
Caitlin Schein '04, Bloomfield Township, Mich.

### Honorable mention for leadership in the BCS Society

Kimberly Kempadoo '05, Hillcrest, N.Y.

### Honorable mention for excellent work in a particular subject

Anna Holt '05, Lenexa, Kan.

### Honorable mention for outstanding academic record

Melanie Cornejo '05, Lima, Peru  
Farhan Merali '05, Toronto  
Sidharth Puram '05, Edina, Minn.  
Lara Rogers '05, Puyallup, Wash.

### Outstanding Thesis Awards

David Freedman, Ph.D. 2002, New Haven, Conn.  
Elizabeth Kensing, Ph.D. 2003, Kansas City  
Rebecca Saxe, Ph.D. 2003, Toronto  
James Schummers, Ph.D. 2003, Baltimore

## ▶ Mathematics

**Jon A. Bucsele Prize in Mathematics**—for scholastic achievement, professional promise and enthusiasm for mathematics

Maksym Fedorchuk '04, Kiev, Ukraine

### Charles and Holly Housman Awards for Excellence in Teaching

Frederic Latour G, L'Epiphanie, Canada  
Benjamin Stephens G, Del Mar, Calif.

**Charles W. and Jennifer C. Johnson Prize**—to a graduate student in mathematics for an outstanding research paper accepted for publication in a major journal

Alexei Oblomkov G, Moscow, for “Double Affine Hecke Algebras of Rank 1 and Affine Cubic Surfaces,” published in International Mathematics Research Notices

Lauren Williams G, Palos Verdes Estates, Calif., for “Enumeration of Totally Positive Grassmann Cells,” which will appear in Advances in Mathematics

## ▶ Physics

*Awardees are physics majors unless otherwise noted.*

**Joel Matthew Orloff Award**—for outstanding scholarship in physics

Michael J. Mortonson '04, Green Bay, Wis.

**Joel Matthew Orloff Award**—for outstanding research in physics

YukYan Lam '04, Morganville, N.J.  
Sarah A. Nowak, '04 Westport, Conn.

**Joel Matthew Orloff Award**—for outstanding service to the physics community

Daniel R. Garcia '04, Barrington, Ill.  
Laura A. Lopez '04, Barrington, Ill.

**Malcolm Cotton Brown Award**—to a senior of high academic standing in physics who plans to pursue graduate study in experimental physics

Zilong Chen '04 (physics and EECS), Singapore

**Philip Morse Memorial Award**—for a senior of high academic standing in physics who plans to pursue graduate study in physics

Onsi Fakhouri '04 (physics and mathematics), Dasma, Kuwait

## ▶ HST

### HST Student Leadership Award

David Ting G, HST, Pittsburgh

### Irving M. London Teaching Award

Richard N. Mitchell, associate director of HST

### Thomas A. McMahon Mentoring Award

Associate Professor Dennis Freeman of EECS

## ▶ Electrical engineering and computer science

*All students are EECS majors unless otherwise indicated.*

**Carlton E. Tucker Award**—for teaching excellence

Matthew Notowidigdo G, Columbus, Ohio

**Harold E. Hazen Award**—for teaching excellence

Petro Boufounos G, Dionyssos, Greece

Frederick C. Hennie III Award—for teaching excellence

Nathan Srebro G, Haifa, Israel  
Edwin Olson G, Bloomington, Minn.

**George M. Sprowls Scholarship Award**—for best computer science Ph.D. thesis

Dina Katabi, Ph.D. 2003

Manolis Kamvyselis, Ph.D. 2003

Alex Snoeren, Ph.D. 2003 (honorable mention)

**Northern Telecom/BNR Proj-**

**ect Award**—for the best 6.111 laboratory project

Spring term 2003—Adam Champy '04, Boston; Kevin Emery G, Lighthouse Point, Fla.; and Sameera Ponda '04 (aeronautics and astronautics), Coral Springs, Fla., for "3-D Mill"

Fall term 2003—Philip Guo '05, Westlake Village, Penn., and Ji Zhang '05, Wynnewood, Penn., for "Infared Instant Messenger"

**Morris Joseph Levin Award**—for the best MasterWorks oral thesis presentation

Jung-Won Kim G, Seoul, Korea  
Ali Shoeb G, Winchester, Mass.

Watcharapan Suwansantisuk G, Uttaradot, Thailand

Ashish Khisti G, Toronto

Vijay Divi G, Troy, Mich.

Frank O'Sullivan G, Sneem, Ireland

**George C. Newton Undergraduate Laboratory Prize**—for best

undergraduate laboratory project

Glenn Tournier '04, Cary, Ill.; James Warren '04, Raleigh, N.C.; and Eric Syu, G, Naperville, Ill., for "Virtual Golf"

**Richard J. Caloggero Award**—for exceptional service to the department

Elizabeth Cooper, administrative officer

**Ruth and Joel Spira Award for exceptional teaching**

Assistant Professor Erik Demaine

**Junior Bose Award**—for excellence in teaching

Professor David Perreault

**David Adler Memorial Thesis Prize**—for the best electrical engineering master's thesis

1st prize: Jonathan Sheffi G, Boston

2nd prize: Chen-Wen Huang G,

Duluth, Ga.

3rd prize: Jennifer Yu G, Chelmsford, Mass.

**Ernst A. Guillemin Award**—for best electrical engineering master's thesis

1st place: Ethan Crain G, Cambridge, Mass.

2nd place: Adam Granich-Unikowsky G, Montreal

3rd place: Sourav Raj Dey G, Cambridge, Mass.

**David A. Chanen Writing award**  
Waseem Bakr '05, Abu Dhabi

**Robert A. Fano UROP Award**—for the best electrical engineering UROP project

Rob Speer '06, Long Lake, N.Y.

**Charles and Jennifer Johnson Thesis Prize**—for best computer science master's thesis

Paul Youn G, St. Paul, Minn.

Ali Shoeb G, Winchester, Mass.

**William A. Martin Memorial Thesis Prize**—for best computer science master's thesis

Andrew Hogue G, Upper Saddle River, N.J.

**Department Special Recognition Awards**

Professors Frans Kaashoek, Duane Boning and Srinivas Devadas for their contributions to graduate student admissions, recruitment and programs

Nathan Ickes G, Ft. Collins, Colo., and Rodrigo Rodrigues G, Lisbon, Portugal, for their contributions to departmental education

**Jerome H. Saltzer (1961) Fund Prize**—for excellence in recitation teaching by a faculty member

Professor Gerald L. Wilson

## ▶ Public Service Center

*The Public Service Center's Fellowship Program funds projects that provide sustainable community benefit as well as educational value for the MIT students involved. The fellowships are funded through a grant from the Lord Foundation and by Public Service Center donors. Fellows each receive \$4,000 for summer projects and may also apply for materials grants.*

### Independent fellowships

Elizabeth Basha G, EECS, Woodland, Calif., for an automated flood warning system for a Honduras community

Andrea McCarty G, Comparative Media Studies, Cambridge, Mass., for a preservation and access project for an African film archive in Burkina Faso

Monica Lewis '05, aero/astro, Berwyn, Penn., for "Invent India," a plan for student-community development work at an Indian university

Evan Freund G, DUSP, Washington, D.C., for a project to preserve the environment and develop sustainable tourism practices for Unawatuna, Sri Lanka

James M. Smith G, architecture, for a design for a school, orphanage and medical clinic in Haiti

Neil Ruiz G, political science, Oxnard, Calif., and Johanna Klein G, management, Lexington, Mass., for a project to encourage entrepreneurship in the Philippines

**Vector Fellowships**—to create positive change in students' hometown communities

Monique Lowery '06, management, Bronx, N.Y., for developing a computer science and peer teaching program for a Harlem youth program

David Bermejo '07, EECS, Cicero, Ill., for "Transitions," a college preparation program for the teenagers at his largely Hispanic high school

Asia Price '05, management, Providence, R.I., for a literacy program for her city's public libraries

### Focus Fellows

For projects that meet needs of community organizations

Yeu-Whai Kathy Lin '06, political science and mathematics, North Potomac, Md., for helping the Community Charter School of Cambridge to open its doors

Kimberly Harrison '07, mechanical engineering, Brooklyn, N.Y., for an experimental educational model for the Cambridge Community Arts Center

### Student Leader Awards

#### Best New Service Project

Sidney-Pacific Outreach Committee, for its tax preparation workshops for MIT students and Cambridge residents. Their work also earned a commendation from the Cambridge City Council.

#### Community Connection Award

Parmesh Shahani G, humanities, for "Between the Lines: Negotiating South Asian LGBT Identity," a film and literature festival

#### Community Event Award

Relay for Life, organized by Kyle Rattray '05, BCS, with Matthew Gattis '07, Jupiter, Fla., and Christine Graham '07, Coral Springs, Fla.

#### Living Service Award

Phi Delta Theta, for service events including Toy Days

#### Philanthropy Award

The Vagina Monologues

#### Service Leadership Award

—for community service

Jina Kim '06, materials science and engineering, for renewing the MIT chapter of Best Buddies

## ▶ Sloan School

*All awardees are graduate students in management unless otherwise noted.*

### Seley Award

Caroline Seaman, Nashotah, Wis.  
Lauren Stewart, Bedford, Mass.

### Ford Award

Erin Sellman, Boston

### DuPont Award

Jeremy Kirsch, Huntington, N.Y.

### Sherburne Award

Sara Weiss, Boston

### Trust Fellows

Tanguy Catlin

Thomas Stocky G (media arts and sciences), Glen Allen, Va.

Todd Schwartz, Colorado Springs, Colo.

Niraj Parekh, Somerville, Mass.

Russell Kellner, Hollis, N.H.

### Petersen Fellows

Harris Rabin, Great Neck, N.Y.

Saurabh Tandon, Delhi, India

### Patrick J. McGovern '59 Entrepreneurship Award

"Cross Campus Collaborations: Including the Design and Concrete Launch of I Teams"

Hans Tung, Rancho Palos Verdes, Calif.

Othman Laraki, Casablanca, Morocco

Omer Cedar, Somerville, Mass.

## ▶ Biological Engineering Division

**Biomedical Engineering Society / Johnson & Johnson Excellence Award**—for outstanding research in biomedical engineering

Max Cohen '05, physics, Seattle

Sidharth Puram '05, biology and brain and cognitive sciences, Edina, Minn.

Amy Shi '04, chemical engineering, Ann

Arbor, Mich.

Julie Tse '06, chemical engineering, Santa Barbara, Calif.

Woon Teck Yap '05, biology, Singapore

**Keenan Award**—for innovation in undergraduate education

Ian W. Hunter, professor of mechanical engineering and biological engineering

**Koch Graduate Student Fellowship for Cancer Research and Biogen Idec Graduate Student Fellowship for Industry Leadership**

Min Dong G, Biological Engineering Division, Beijing

**Outstanding Graduate Resident Tutor Award**

Janice Lansita G, Biological Engineering Division, New York





PHOTO / BERND WIDDIG

The MIT International Science and Technology Initiatives (MISTI) awarded six Sun Fellowships. Left to right: winners Erica Fuchs, Virginia Corless and Geoffrey Kigongo; Institute Professor Phillip Sharp; and winners Janice Lin, Akua Adu-Boahene and Kyoung-Hee Yu.

## MISTI

With the support of Anthony (S.B. 1973) and Rosina Sun, the MIT International Science and Technology Initiatives (MISTI) established a fellowship program that supports international research efforts by graduate and undergraduate students. MISTI has sent more than 1,500 students to be interns in labs and offices in Europe and Asia.

### Anthony and Rosina Sun Fellowships

Erica Fuchs G, Reading, Penn., Engineering Systems Division (MIT-China Program)

Akua Adu-Boahene '06, Accra, Ghana, brain and cogni-

tive sciences with a minor in biomedical engineering (MIT-France Program)

Geoffrey Kigongo '06, New City, N.Y., linguistics and philosophy (MIT-Germany Program)

Kyoung-Hee Yu G, Seoul, Korea, industrial relations (MIT-India Program)

Virginia Corless '05, Lowell, Mass., physics with a minor in applied international studies (MIT-Italy Program)

Janice Lin '06, Taiwan, management with concentrations in finance and information technology (MIT-Japan Program)

## School of Engineering

**Barry Goldwater Scholarship**—for students who plan to pursue careers in mathematics, the natural sciences, or an engineering discipline that contributes to the technological advances of the United States

Peter G. Miller '05, chemical engineering, Atlanta

Kathy C. Lin '05, civil engineering, Naperville, Ill.

Andrew J. Danford '05, chemistry, Omaha, Neb.

Vivek Venkatachalam '06, physics, Berkeley Heights, N.J.

**Henry Ford II Award**—to a senior engineering student who has maintained a cumulative average of 5.0 at the end of his or her seventh term and who has exceptional potential for leadership in engineering and society

Michelle Seitz '04, materials science and engineering, Phoenix, Ariz.

**Junior Bose Award**—to the outstanding contributor to education on the School of Engineering faculty who is being proposed for promotion to associate professor without tenure

Assistant Professor David Perreault, EECS

### Ruth and Joel Spira Awards for Distinguished Teaching

Associate Professor Kim Molvig, nuclear engineering

Assistant Professor Erik Demaine, EECS

Assistant Professor Martin Culpepper, mechanical engineering

## Center for International Studies

All awardees are graduate students unless otherwise indicated.

### Mellon-MIT Program on Forced Migration

Daniel Esser, research fellow in the Special Program for Urban and Regional Studies, Lueneburg, Germany

**Travel Fellowship**—for doctoral students in international studies who intend to present a paper on international affairs

Daniel Metz, political science, Bethesda, Md.

Cory Welt, political science, Arlington, Va.

**Energy, Technology and International Affairs Research Grants**—for advanced doctoral students working on any international aspect of energy, environment and international affairs

Marcos Ancelevici, political science, Arlington, Mass.

Boaz Atzili, political science, Kibbutz Zikim, Israel

James Patrick Boyd, political science, Madison, Va.

Danny Breznitz, political science, Jerusalem

Dana Brown, political science, Brighton, Mass.

Nora Libertun de Duren, DUSP, Buenos Aires

Vanda Felbabova, political science, Belmont, Mass.

Rachel Guisselquist, Political Science Department, Honolulu, Hawaii

Zhan Guo, DUSP, Cambridge, Mass.

Wenkai He, political science, Jiangsu Province, China

Llewelyn Hughes, political science, Cambridge, Mass.

Apiwat Ratanawaraha, DUSP, Chiangmai, Thailand

Sunil Tankha, DUSP, Calcutta, India

Adam Ziegfeld, political science, Boston

## Chemical engineering

All award recipients are chemical engineering majors unless otherwise indicated.

### Robert T. Haslam Cup

Sudha Amarnath '04, Lansing, Mich.

### Roger de Friez Hunneman Prize

Sonali Rudra '04, Sugar Land, Texas

### Undergraduate Special Service Award

Cindy Chung '04, Parsippany, N.J.

### Graduate Student Special Service Awards

uate student events

Hal Alper G, Owings Mills, Md.

Ryan Bennett G, Longwood, Fla.

Theis Clarke G, Valparaiso, Ind.

Malancha Gupta G, Flushing, N.Y.

Joel Moxley G, Richmond, Va.

Jane Rempel G, Milwaukee, Wis.

Mark Styczynski G, Freehold, N.J.

Benjamin Wang G, Santa Monica, Calif.

### Edward W. Merrill Outstanding Teaching Assistant Award

Saeeda Jaffar G, Dubai, United Arab Emirates

### Outstanding Seminar Presentation

Brian Baynes G, Sewell, N.J. (fall semester)

Andre Ditsch G, Alliance, Neb. (spring semester)

**Outstanding Employee Award**  
Gwen Wilcox, administrative assistant

## Chemistry

All students are chemistry majors unless otherwise noted.

**CRC Press Freshman Chemistry Achievement Award**—for academic achievement by a freshman in chemistry

Joel Yuen, Mexico City

**ACS Analytical Chemistry Award**—for achievement by a junior in analytical chemistry

Torsak Luanphaisarnnont, Bangkok

**Merck Index Award**—for outstanding scholarship

Elisa Calimano '04, San Juan, Puerto Rico

Michelle Nyein '04, Buffalo Grove, Ill.

Peng Wu '04, Ames, Iowa

**American Institute of Chemists Foundation Award**—for outstanding achievement, ability, leadership and character

Sonya Tang '04, Great Neck, N.Y.

**Chemistry Service Award**—for significant service to the department

Neal Mankad '04, Williamsport, Penn.

**Frederick D. Greene Teaching Award**—for outstanding teaching

Jeremy Baskin '04, Westmont, Canada

Neal Mankad '04, Williamsport, Penn.

Sonya Tang '04, Great Neck, N.Y.

**Strem Prize**—for excellence in undergraduate research

Neal Mankad '04, Williamsport, Penn.

### Chemistry Research Award

Kathryn Duffy '04, Port Washington, Wis.

Jennifer Lee '04, Moraga, Calif.

Neal Mankad '04, Williamsport, Penn.

**Alpha Chi Sigma Award**—for achievement in research, scholarship, and service to the department

Jeremy Baskin '04, Westmont, Canada

## ▶ Fraternities, sororities and independent living groups

### Panhellenic New Members of the Year

Rachel Ellman '07 (Alpha Chi Omega)  
Stephanie Yeh '06, EECS, Buffalo Grove, Ill. (Alpha Phi)

### Panhellenic Chapter Education Award

Kappa Alpha Theta

### Panhellenic Campus Involvement Award

Alpha Epsilon Phi

### Panhellenic Commitment to Philanthropy Award

Alpha Chi Omega

### Panhellenic Spirit and Participation Award

Sigma Kappa

### IFC Chapter of the Year Award

Phi Delta Theta

### IFC New Member Education Program Award

Delta Upsilon

### Outstanding Alumni/ae of the Year

Dan Geer (S.B. 1972), Theta Delta Chi—for persistence in creating the FSILG Cooperative

David Latham (S.B. 1961), Delta Upsilon—for creativity in turning delinquent members into contributors to a new computer room for the Delta Upsilon chapter house

Bryan Adams (S.B. 1999, M.Eng.), Phi Sigma Kappa—for support and volunteerism on behalf of the FSILG community

Yolanda Fan (S.B. 2002), Alpha Chi Omega—for persistence in reestablishing Alpha Chi Omega's house corporation and collaboration with other sorority house corporations

Laura Dean, Epsilon Theta (S.B. 2000, M.Eng.)—for volunteerism with Epsilon Theta and FSILG Task Force

### Outstanding Resident Advisor of the Year

Ayanna Samuels G, aero/astro, Kingston, Jamaica (Kappa Alpha Theta)

Honorable mention:

Michael Pope G, nuclear engineering, Houston (Chi Phi)

Michael Kalin, assistant sailing master (Beta Theta Pi)

Sarah Culgin and Michael Saltsman (Tau Epsilon Phi)

Bryan Adams G, EECS, Gahanna, Ohio (Theta Xi)

Charles Broderick G (Zeta Psi)

**James R. Killian Jr. Award**—for outstanding community service programs and excellence in community relations

Zeta Beta Tau

**Kenneth R. Wadleigh Award**—for promoting faculty-student interaction and fostering positive faculty relations through scholarship and academic program innovation and excellence

Phi Delta Theta

**D. Reid Weedon Jr. '41 Alumni/ae Relations Award**—to the FSILG that has promoted the greatest interaction between members and alumni

Phi Kappa Sigma

**Fredrick G. Fassett Jr. Award**—to the FSILG community undergraduate man and women of the year

Joshua Yardley '04, management, Bangor, Maine (Zeta Psi)

Victoria Davis '04, aero/astro (Alpha Chi Omega)

## ▶ Mechanical engineering

All student awardees are mechanical engineering majors unless otherwise noted.

### Mechanical Engineering Department Service Award

Tim Suen '05, University Heights, Ohio  
Christina Laskowski '05, Yardley, Penn.

**Joseph H. Keenan Award**—for outstanding graduate student in thermal sciences

Youssef Marzouk G, Warson Woods, Mo.

**Meredith Kamm Memorial Award**—for an outstanding graduate student

Alicia Hardy G, Philadelphia

**Carl G. Sontheimer Prize**—for creativity and innovation in design

Christopher Khan '04, Charlotte, N.C.

Melissa Read '04, St. Petersburg, Fla.

Jonathan Rohrs G, S. Deerfield, Mass.

**Padmakar P. Lele Student Award for Outstanding Undergraduate Assistants**

Ross Hatton '05, Sudbury, Mass.

Courtney Browne '04, Sugar Land, Texas

Marissa Jacovich '05, Middlebury, Conn.

Melissa Read '04, St. Petersburg, Fla.

**Padmakar P. Lele Student Award for Outstanding Thesis**

Kristin Wolfe '04, Pittsburgh

**Luis de Florez Award**—for outstanding ingenuity and creativity

Nicholas Powley '04, Weston, Mass.

Melissa Read '04, St. Petersburg, Fla.

Wey-Juin Lin '05, Los Altos Hills, Calif.

**Peter Griffith Prize**—for an outstanding experimental project

Tina Shih '04, Flushing, N.Y.

Roy Esaki '04, Kapaa, Hawaii

**Amp Inc. Award**—for excellence in "Mechanics and Materials II"

Mika Tomczak '06, Maplewood, N.J.

Michael Wolf '06, Waukesha, Wis.

**Whitelaw Prize**—for originality in design in "Design and Manufacturing I"

Mika Tomczak '06, Maplewood, N.J.

Chandler Hatton '06, Portland, Ore.

**Wunsch Foundation Silent Hoist and Crane Award**—for outstanding performance in "Design and Manufacturing II"

Lynn Kamimoto '05, Honolulu

Ethan Crumlin '05, Worcester, Mass.

**Wunsch Foundation Silent Hoist and Crane Award**—for outstanding project or thesis

Bryan Ruddy '04, Lewes, Del.

Erin Hult '04, Carlisle, Mass.

**Thomas Sheridan Prize**—for creativity in man-machine integration

Matthew Carvey '05, Bedford, Mass.

**John C. and Elizabeth J. Chato Award**—for outstanding performance in bioengineering

Dawn Wendell '04, Farmington, Conn.

**International Design Competition Awards**

Dean Ljubcic '06 (chemistry), Mystic, Conn.

Bryan Woodruff '06, Dallas, Ore.

Adam Kaczmarek '06, Ballston Lake, N.Y.

Samuel Felton '06, Greenland, N.H.

## ▶ Aeronautics and astronautics

**Andrew Morsa Prize**—for ingenuity and initiative applying computers to the field of aeronautics and astronautics

Chinwe P. Nyenke '04, Chicago, and Shen Qu '04, Duluth, Ga., for designing a display evaluation procedure for an advanced terrain warning system

Michael S. Fritts '05, Batavia, N.Y., and Robert W. Grimes '05, Los Alamitos, Calif., for designing an autonomous airspeed control system

**Yngve Raustein Award**—for a student who best exemplifies the spirit of Yngve Raustein and to recognize significant achievement in Unified Engineering

Lauri O. Kauppila '06, Espoo, Finland

**David Shapiro Award**—to pursue special aeronautical projects that are student-initiated and/or to support foreign travel to enhance scientific/technical studies

David A. Broniatowski '04, Cleveland Heights, Ohio, to attend the International Space University summer program

Thomas M. Coffee '05, Torrance, Calif., to study an integrated organizational and analytical tool for systems engineering

William K. Chen '04 (EECS), Edina, Minn., Jordan J. McRae '05, Phoenix, Ariz.,

and Allen D. Wu '04, Southborough, Mass., for study of "The Basilisk: A Versatile Robotic Air Cushion Vehicle"

Carl Engel '07, Clear Lake, Wisc., and Adam Woodworth '07, Plymouth, Mass., to enter the 2005 International Micro Air Vehicle Competition.

### AIAA Undergraduate Advising Award

Col. John E. Keesee

### AIAA Undergraduate Teaching Award

Professor Karen E. Willcox

**Apollo Award**—for the best undergraduate research project on humans in space or successful participation in a Course 16 design project

Laura R. Messeri '04, West Orange, N.J., and Dominic A. Rizzo '04, Menomonee Falls, Wisc., for a haptic feedback glove for remote grasping

**Thomas Sheridan Award**—for work in human-machine integration or cooperation

Chinwe P. Nyenke '04, Chicago, and Shen Qu '04, Duluth, Ga., for display evaluation of an advanced terrain warning system

**Leaders for Manufacturing Prize**—for students in "Experimental Projects II" whose project deals with the interaction between manufacturing and engineering

Miguel Macias '04, South Gate, Calif., and Melanie A. Miller '04, Saline, Minn., for exploring the reliability and cost reduction of using shear pins to control rocket launches.

**United Technologies Corp. Prize**—for outstanding achievement in designing, building and reporting on an undergraduate experimental project

Julie A. Arnold '04, Guilford, Conn., and Paula Echeverri '04, Bogota, Colombia, for developing a method for protecting payloads during parachute drops

**Admiral Luis De Florez Prize**—for original thinking or ingenuity

Emily Schwartz '05, Lawrence, Kan., and Christopher J. Sequeira '05, North Richland Hills, Texas, for an apparatus to measure the propulsive efficiency of a flapping wing

Kathleen M. McCoy '04, Portsmouth, N.H., and Darlene A. Utter '04 for their project on long-range visibility and driver braking reaction

### James Means Award for Excellence in Space Systems Engineering

Philip N. Springmann '04, Racine, Wis., for analysis of low Earth orbit communications satellite systems with subsequent publication in the 21st AIAA International Communications Satellite Systems Conference and in the Journal of Spacecraft and Rockets

### James Means Award for Excellence in Flight Vehicle Engineering

Charles T. Wesley '04, Vernon Hills, Ill., for engineering analyses, systems testing and systems integration of the propulsion system in the 16.82x "Phaeton" quad-rotor aero capstone project

### Sigma Gamma Tau Society Graduate Teaching Award

Professor Dava J. Newman

### Henry Webb Salisbury Award—for academic achievement

Glenn P. Tournier '04, Cary, Ill.

### Aero/Astro Teaching Assistantship Award

Farmey A. Joseph G, Hackett, Australia





PHOTO / GRAHAM GORDON RAMSAY

Winners of Fiekowsky Awards given by the Experimental Study Group are Claudia Gold (left) and Suki Dorfman.

## Experimental Studies Group

**Peter and Sharon Fiekowsky ESG Community Service Award**—to undergraduates who have made an outstanding contribution to the ESG community

Susannah Dorfman '05, EAPS and physics, Lebanon, N.J.

Claudia Gold '06, political science, Boca Raton, Fla.

**Todd Anderson ESG Teaching Award**—to seniors who have demon-

strated sustained excellence in teaching at ESG

Daniel Zaharopol '04, mathematics, Vestal N.Y.

Megan Dybvig '04, chemistry, St. Louis, Mo.

Rachel Elizabeth Dillon '04, writing, Cranston, R.I.

Erica Lynn McEvoy '04, mathematics and physics, Chicago

## IDEAS

*The MIT IDEAS Competition, sponsored by the Public Service Center and the Edgerton Center, encourages innovations that benefit communities worldwide. Lists of winning team members do not include those who are not from MIT. For more information, see <http://web.mit.edu/ideas/www/spotlight.html>.*

**Chlorination in Honduras**—a system that automatically adjusts the chlorination concentration of water to its flow rate to ensure safe drinking water for a village in Bonito Oriental, Honduras

Will DelHagen G, EECS, Manhattan Beach, Calif.

Marta Fernandez Suarez G, chemistry, Oviedo, Spain

Jamie Fleischfresser '05, environmental engineering, Bainbridge Island, Wash.

Guy Hoffman G, media arts and sciences, Tel Aviv

Ran Tao '04, EECS, St. Paul, Minn.

**Test Water Cheap**—a device to allow communities in developing regions to test water quality frequently and cost-effectively

Juhi Chandalia G, physics, Cheshire, Conn.

Brittany Coulbert G, CEE, Seattle

Philip Hou '04, management, Los Angeles

**Parabolic Power**—an improved design for a modular core unit that concentrates solar energy using a reflective parabolic trough for use in rural Lesotho

Matthew Orosz G, Technology and

Policy Program, Bridgewater, Mass.

Daniel Ramage '04, computer science and mathematics, Westfield, N.J.

Michael Yates '04, economics, Dhahran, Saudi Arabia

**Sistema de Alerta Temprana**—an automated early-warning system for floods for use in the Rio Aguan Basin area in Honduras

Elizabeth Basha G, EECS, Woodland, Calif.

Emma Brunskill G, EECS, Seattle

Vanessa Hsu Chen '04, electrical engineering, San Jose, Costa Rica

Victor Grau-Serrat, a consultant from Barcelona, Spain

**Speakeasy**—a community-based telephone referral service that allows immigrants to connect with volunteer translators and social services

Tad Hirsch G, media arts and sciences, Boston

**WearAnEye**—a real-time, portable system that uses computer vision technology to help blind or visually impaired pedestrians cross streets

Meg Aycinena G, EECS, San Mateo, Calif.

Sam Davies G, EECS, Tenafly, N.J.

Michael Ross G, EECS, Somerville, Mass.

Professor Leslie Kaelbling of EECS

Professor Tomas Lozano-Perez of EECS

Kevin Murphy, a postdoctoral associate in CSAIL

## Ilona Karmel Writing Prizes Competition

### Boit Manuscript Prize—drama

1st prize: Nancy Keuss '04, physics, Plano, Texas

2nd prize: Amy Fisher '05, BCS, Manalapan, N.J.

### Boit Manuscript Prize—essay

2nd prize: Rachel Dillon '04, writing, Cranston, R.I.

Alex Khripin '04, EECS

### Boit Manuscript Prize—fiction

1st prize: Arthur Musah '04, EECS, Ghana

2nd prize: Jean Young Choi '06, writing, Brookline, Mass.

Honorable mention: Eun J. Lee '04, biology, Houston, Texas

### Boit Manuscript Prize—poetry

1st prize: Aaron Parness '04, mechanical engineering and creative writing, DeKalb, Ill.

2nd prize: Arthur Musah '04, EECS, Ghana

Honorable mention: Aman-

da K. Sorenson '04, CEE, Townsend, Mont.

### Dewitt Wallace Prize for Scientific Writing for the Public

1st prize: Christine E. Casas '04, biology, San Antonio, Texas

2nd prize: Ingrid Lawhorn '06, chemical engineering, Peachtree City, Ga.

Honorable mention: Jolene Singh '05, biology

### Ellen King Prize for Freshman Writing

1st prize for drama: Theresa Eugenio '07, physics, Bothell, Wash.

2nd prize for essay: Anicham Kumarasamy '07, mathematics, Edison, N.J.

Honorable mention for short story: Scott Ostler '07, Edmonds, Wash.

### Writing Science Fiction

1st prize: Scott Berdahl '07, geology, Yukon Territory, Canada

2nd prize: Nancy Hua '07, computer science, Pittsburgh

Honorable mention: James Skelley '04, computer science, Joplin, Mo.

### Robert A. Boit Writing Prize—essay

1st prize: Anna Wexler '07, BCS, Fair Lawn, N.J.

2nd prize: Emily Levesque '06, physics and EAPS, East Taunton, Mass.

3rd prize: Theresa Shyr '05, biology, Lafayette, La.

Honorable mention: Sarah A. Laszlo '04, BCS, Billings, Mont.

### Robert A. Boit Writing Prize—poetry

1st prize: Vladimir Fleurima '05, EECS, Ocoee, Fla.

2nd prize: Michelle A. Nadermann

'04, mathematics, Leominster, Mass.

3rd prize: Jessica Young '06, writing, Pleasantville, N.Y.

Honorable mention: David Jackson '04, chemical engineering, Spring, Texas

### Robert A. Boit Writing Prize—short story

1st prize: Anita Kris '06, materials science and engineering, Merced, Calif.

2nd prize: Eric M. Mibuari '06, aero/astro, Laare, Meru Kenya

3rd prize: Melissa Latigo '05, biology, Addis Ababa, Ethiopia

Honorable mention: Bethany D. Patten '06, writing

### S. Klein Prize for Scientific and Technical Writing

1st prize: Monica W. Ho '04, chemical engineering, Columbus, Ohio

2nd prize: Eun J. Lee '04, biology, Houston

Honorable mention: Tanya Y. Cheng '04, materials science and engineering, Los Altos Hills, Calif.

### Writing and Humanistic Prize for Engineering Writing

1st prize: Monica Ho '04, chemical engineering, Columbus, Ohio; Cem Albayrak '05, biology, Istanbul; Carly Saylor '04, EECS, Moon Township, Penn.; Edward Song '05, chemical engineering, Lake Mary, Fla.

2nd prize: Sean J. Leonard '04, EECS, San Diego

Honorable mention: Stephen Lee '05, biology, Pittsburgh; Krish (Ketul) Parikh '05, EECS and management, Dallas

### Vera List Prize for Visual Arts

1st prize: Cecilia Ramos '05 architecture, Concord, Mass.

2nd prize: Tiffany Kanaga '04, french and management science, Greenville, Del.

## Kelly-Douglas Fund

**I. Austin Kelly III Essay Prize**—for scholarly or critical essays in one of the humanities or some interdisciplinary combination

Virginia L. Corless '05, physics, Lowell, Mass., for "Invisible Emotions: Marital and Parental Relationships in Gaul and England, 500-1000 A.D."

Ethan M. Fenn '04, mathematics and

music, of Painted Post, N.Y., for "The Hebrides Overture, Fingal's Cave and the Poems of Ossian"

Mahni M. Ghorashi, '05, literature and music, Knoxville, Tenn., for "Re-Membering the Past: Memory and the Body in Toni Morrison's 'Beloved'"

### Kelly-Douglas Traveling Fellowships for Juniors

Jennifer J. DeBoer '05, mechanical engineering and music, Western Springs, Ill., for research at the Bibliothèque du Film in Paris

Caroline A. Niziolek '05, brain and cognitive sciences, Parlin, N.J., for experimental work at a language laboratory

in Marseille, France

Farhan I. Merali '05, brain and cognitive sciences, Toronto, for cross-cultural research in Ndejeje Village, Uganda

Sinae A. Vogel '05, biology, Radcliff, Ky., for tropical disease research in Puerto Escondido, Mexico