It’s a taxing time for air travelers

Airline passengers are giving an ever-increasing portion of their travel dollars to Uncle Sam, according to data released by MIT’s Global Airline Industry Program and Daniel Webster College.

Airline ticket prices overall have actually dropped over the past several years, the researchers emphasize. However, many of the taxes and fees passengers pay, which fund a significant portion of the costs of U.S. air-traffic control and airport systems, are not linked to the base price of the ticket and have remained about the same.

As a result, the effective tax rate on airline tickets is steadily increasing, and will increase more under the Bush administration’s recently released federal budget proposal, researchers report.

Which raises the question: Who should pay for the increases? The airlines or U.S. taxpayers?

“The Bush administration’s proposed increase in the security fee added after September 11, 2001, has generated strong reactions from the airline industry,” said MIT Professor Amedeo Odoni, the project’s director. “The increased fees will place further strain on the airlines at a time when several of them are struggling. On the other hand, it is difficult to argue that taxpayers at large should subsidize the security costs of airline customers.”

Odoni believes that the Bush team’s 2004 study and its recent update can add a more factual note to the ticket tax debate.

“This study provides an objective basis for Congress to examine the issue and make informed decisions on airline taxes.”

The study team’s initial results were published in the July 2004 Journal of Air Transport Management. The U.S. General Accounting Office cited the study in U.S. Senate briefings and in a report submitted to Congress.

After the administration’s proposed hike in security fees, passengers would, on average, pay 19 percent in taxes and fees on top of the ticket price, the researchers found in their update of last year’s study.

In 2004, passengers paid 16.1 percent in taxes on top of the price of a domestic ticket. This is up from 15.5 percent in 2002 and 10.9 percent in 1991.

Professor Joakim Karlsson of Daniel Webster College explains the significance of the study’s results. “The airlines have lost the ability to raise airfares, even to just keep pace with inflation. The average round-trip ticket has dropped 40 percent in real terms since 1993. Meanwhile, average ticket taxes and fees have stayed relatively flat.”

See TICKETS

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Global reading on view at CAVS

Sarah H. Wright
News Office

The Center for Advanced Visual Studies is offering a trip around the global art world in the form of an exhibition of contemporary international art magazines on view in the CAVS reception area.

Known collectively as the Traveling Magazine Table, the browser-friendly exhibition offers visitors a chance to dip into race, eccentric and even glossy 'zines, some with ads, some with attitude, all available on Mondays, Tuesdays and Wednesdays, 10 a.m. to 5 p.m. in the CAVS office in NSE 200.

Currently the Table exhibit includes the hefty Cabinet: A Quarterly of Arts and Culture (Brooklyn, in English); Fuse (Toronto, in French); Pass (Hungary, in Hungarian), Agitation (Berlin, in German) and the book-shaped Creating Spaces of Freedom: Culture in Defiance (London and The Hague, in English) among others.

By far the most unusual publication is Transignum, a single sheet of 100 percent pink chewing gum printed with one word, “Trans-gums.” You have to see it to believe it.

Launched by the founders of Nomads + Residents, a sort of global kin-group of artists and itinerant speakers and performers, the Table has already traveled from its starting place in New York City to Lithuania, back to Art in General in New York and to MIT.

Like the art world itself, the Table changes constantly. Each host site sends out an open call for art magazines, and CAVS has received “almost daily contributions,” according to Larissa Harms, associate director of CAVS, and Meg Rotzel, administrative assistant at CAVS, who opens the mail and shelves or stacks new Table items.

Architects honor Simmons Hall

Sarah H. Wright
News Office

Simmons Hall has received the 2004 Harleston Parker Medal. Administered by the Boston Society of Architects, the Parker has been awarded since 1923 to the “most distinguished piece of architecture buildings, monument or structure” in the Boston area.

New York-based architect Stephen Holl designed Simmons, the striking 10-story MIT residence hall for graduate students that opened in September 2002. Holl’s building is home to 350 undergraduates, faculty housemasters, visiting scholars and graduate assistants, and includes a computer cluster, a fitness center, music practice rooms, game room and series of dim rooms with open-air seating.

In an article about the Parker Medal, Boston Globe architecture critic Robert Campbell described Simmons as a “daring, serious, memorable building.” The Parker Medal jury of 10 included practitioners from architecture, development, campus planning, journalism and urban planning.

In their statement, the jurors declared their expectation that “appreciation will stretch far and wide over time” for Sim¬mons, and that the building provided an “exemplary paradigm in its daring and high aspiration” and a “gesture toward greatness consistent with MIT’s philoso¬phy of reaching out to the brightest.”

Acknowledging the dramatic appear¬ance of Simmons Hall in contrast to its sur¬roundings, the panel also wrote, “MIT is an institution that supports innovation and change and, therefore, of how far off the ordinary the project may appear to the outside world, it (Simmons) success¬fully fulfills its academic mission, physically, culturally, socially and intellectually.

Simmons is the second MIT project to win the prestigious award. The Reich Library received a Parker Medal in 1993. Other Parker winners include the New England Holocaust Memorial (1997), the Davis Art and Cultural Center at Wellesley College (2000) and the resolution of the Boston Public Library (2001).
Elzbieta Ettinger, writing professor, novelist, dies at 80

Elzbieta Ettinger, a novelist, biographer and professor of writing who helped build the MIT Program in Writing and Humanistic Studies, died of heart failure in her home in Cambridge, Mass., on Saturday, March 12. She was 80 years old.

A native of Warsaw, Poland, Ettinger survived the Holocaust, escaping the Warsaw ghetto shortly before its liquidation; she then worked for the Polish resistance while maintaining a false identity as a Catholic Pole (she was also known by her wartime pseudonym, Elzbieta Choda- kowska). Her experiences during the Second World War were chronicled in her first novel, "Kindergarteners" (1968), described by the New York Times Book Review as a work "one reads with frozen attention." A self-described rebel who believed in the promise of socialism as an antidote to social and economic inequality, Ettinger refused to be silent about the totalitarian nature of the Soviet-influenced Polish government, and faced repeated interrogations and professional blacklist- ing during the early 1960s. She described post-war life in Poland in her second novel, "Quicksand" (1969).

Ettinger earned a Ph.D. in American literature from Harvard University in 1966; she moved to Cam- bridge the following year and served as a Senior Fellow at the Radcliffe (now Haring) Institute until 1974. She was known for her passionate and incisive lectures on modern Russian literature, as well as her outspoken critiques of the materialism, anti-intellectualism and racial prejudice that she perceived as dominant aspects of American culture.

From 1975 to 1996, Ettinger served as professor of writing at MIT, where she was named Thomas Moley Profes- sor of Rhetoric and Literature. A demanding and forceful teacher, she helped build the Institute's Program in Writ- ing and Humanistic Studies and was instrumental in bringing such writers as I. B. Singer, Bernard Malamud, and Eudora Welty to the MIT community.

Ettinger's biography, "Rosa Luxemburg, A Life" (1987), was translated into several languages. It portrayed the person- ality—the heart and mind—at a brilliant revolutionary who was murdered by her comrades. Love and politics are intimately interwoven throughout Ettinger's narrative.

Ettinger's controversial 1994 book, "Agnieszka Arndt and Martin Heidegger," interpreted the lifelong romantic rela- tionship between the Jewish philosopher and her Nazi- affiliated mentor. In this work, described in the New York Times as "absorbing and crucially fascinating," Ettinger was "unsparing in her exposure of both Heidegger's men- dacity and Arndt's propensity for self-deception" about Heidegger, wrote the reviewer. Shortly afterward, the Heidegger Arndt correspondence was published.

Ettinger was at work on a full-length biography of Han- nah Arendt at the time of her death. She is survived by her daughter, Maia Ettinger, of San Francisco.

A memorial service will be held at the MIT Faculty Club on Sunday, April 10, at 11 a.m. For further informa- tion, please call the MIT Program in Writing and Humanistic Studies at (617) 253-7894.

Elzbieta Ettinger

White House recognizes Ethernet inventor Metcalfe

Ethernet inventor Robert M. Metcalfe, an MIT alumnus, accepted the National Medal of Technology, the nation's highest honor for technical innovation, at a White House ceremony on March 14.

President George W. Bush honored Metcalfe for his leadership in the invention, standardization and commer- cialization of Ethernet.

"I love my country, the United States of America," said Metcalfe. "Now it's official: My country loves me back." Ethernet was invented in a memo I wrote at the Xerox Palo Alto Research Center on May 22, 1973," Metcalfe explained. He shares four patents on Ethernet, the local- area networking (LAN) standard. "Ethernet is plumbing for the Internet, which is in turn plumbing for the World Wide Web, which is plumbing for Google.

In 1979, he founded 3Com Corp. and took it public in 1984. "By 1981, there were people buying Ethernet whom I had not met," Metcalfe recalls. "By 1986, there were people inventing Ethernet whom I had not met. It has proliferated and evolved way beyond what Dave Boggs and I were thinking while building the first Etherneters in the mid-1970s." According to IDC, a global market intel- ligence firm that specializes in information technology, more than 200 million new Ethernet ports were shipped in 2004.

Metcalfe earned double B.S.s in electrical engineering and management from MIT in 1969. He went on to obtain a Ph.D. at Harvard, taught at Stanford and was elected in 1997 to the National Academy of Engineering. During the 1980s, he wrote a popular weekly Internet column in InfoWorld reaching more than 500,000 information tech- nologists. Today, he is a high-tech venture capitalist at Polaris Venture Partners in Waltham, Mass. He serves on the boards of several Polaris-backed startups, including Ember, Narad, Paratek and SCoCores. He has been a mem- ber of the MIT Corporation since 1992 and was elected to a life membership in 2003.

As an MIT student, Metcalfe helped build the hardware that linked MIT to the ARPANET. "Everything I needed to know about Ethernet I learned at MIT," said Metcalfe.

Community joins family in mourning death of grad student

Friends of Zhenxiu Mao gathered yes- terday afternoon to talk about their memo- ries of his life and share their sorrow with Mao's parents, who traveled from China under Chinese law to be with him in his final days.

Mao, a first-year graduate student in chemical engineering where Mao had lived, died in his room in a Cam- bridge apartment on Feb. 28. He was 23 years old.

Mao was a first-year graduate student in mathematics, was found dead in his Cam- bridge apartment on Feb. 28. He was 23 mathematics, was found dead in his Cam-

Students and scholars at MIT also held a memorial service at MIT. To honor their son, the Maos plan to establish the Zhenxiu Fund at his high school for those students in the department are excep- tionally bright, more than 200 million new Ethernet ports were shipped in 2004. Metcalfe helped build the hardware that linked MIT to the ARPANET. "Everything I needed to know about Ethernet I learned at MIT," said Metcalfe.

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Mao and his parents, Shui Liu, arrived Saturday from their home in Ningbo, in the Zhejiang province in China. Friends from Yale University also attended the memorial service at MIT.

Mao is survived by his wife, Jingji Sun, his parents, and his brother, Zhenyi Mao, all of China.

"We know you are an ordinary person, but you achieved extraordinary success in your short life," said Mao's father, touching on his son's generosity and dedication to his fam- ily. Mao had saved money from his MIT stipend to buy his father a digital camera and had plans to help pay for the education of his niece and nephew. "He was a wonder- ful and talented stu- dent," said Professor Michael Sipser, head of the Department of Math- ematics where Mao had been studying since last fall after earning his B.A. and M.S. from Yale University. Sipser said that all the students in the department are excep- tionally bright, and that Mao was "the best of the best." "I am a parent, too, and I really can- not imagine the pain you must be going through," Sipser said to the Mao family.

To honor their son, the Maos plan to use the money that Mao earned in math- ematics prizes, along with money col- lected for the family by the Chinese Stu- dents and Scholars Association at MIT, to establish the Zhenxiu Fund at his high school for students who wish to study mathematics.

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Comparisons of Iraq to post-war Japan fail, historian asserts

Sarah H. Wright

Those who forget the past may be doomed to repeat it, but those who try to rebuild Iraq based on past models are doomed to frustration, according to historians specializing in conditions in Japan and Iraq in the first two decades after World War II.

The two historians, John Dowd, Ford International Professor of History, and Charles Maier, professor of history at Harvard University, presented "Comparative Insights: Marshallese, Japan, and Iraq," at an event sponsored by the Center for International Studies (CIS) and the Department of Urban Studies and Planning (DUSP) and held on March 7 in Building 3-270.

Dowd is the author of "Embracing Defeat: Japan in the Wake of World War II," which won the 2000 Pulitzer Prize, and "War Without Mercy: Race and Power in the Pacific War," which won the 1986 National Critics Circle Award. Dowd showed the stark contrast between conditions during the U.S. occupation of post-war Japan and conditions in contemporary Iraq in his 45-minute talk.

Dowd emphasized the human suffering in all wars and characterized Iraq as a "place of terrible tragedy and heartbreak." He said there is "no viable compari

son," he said, between the two years following Japan's defeat and the two years since President Bush declared Iraq's mission "accomplished."

"The occupation and eventual reconstruction of post-war Japan were successful thanks to 10 significant conditions not present in Iraq," Dowd said. These were:

1) Legitimacy of occupation. A formal war was followed by a victorious defeat and unconditional surrender. U.S. allies also saw the occupation as legitimate. Serious planning for the occupation of Japan began in 1942.

2) Consistency. Japan had an intact government. Emperor Hirohito declared war, surrendered and continued as head of state until 1945.

3) Cohesion. While politically diverse, Japan had socially cohesive, without Iraq's religious, ethnic and cultural conflicts.

4) Security. Japan, an island, faced no domestic security issues. "The hardships were staggering," Dowd said. "But there was no invasion.

5) Civil institutions. Japan had a "deep tradition of democracy and civil society." Dowd said all the structures essential for freedom were in place. "Not so in Iraq, he noted.

6) Exhaustion. Japan was at war from 1931 to 1945, losing 3 million dead, 10 million people homeless, rampant unemployment, malnutrition and disease. Defeat brought "liberation from death. Suddenly, the air raids stopped. They could start over," Dowd said. "It was a psychological relief."

7) Clear goals for the occupation. "The Americans wanted demilitarization and democratization. They were clear about what this would involve-changing the civil code, land reform, etc.," he said.

8) Privacy. "Iraq fell out of the public eye in 1945, as attention turned to the Cold War in Europe. They got breathing space," General MacArthur and his staff did not get involved in U.S. electoral politics.

9) External enemies. After 1947, the United States used the threat of Communism to persuade the Japanese government to support an extended occupation. Today, even after the end of the Cold War, 40,000 troops remain stationed there.

10) Economic conditions and policies. The Japanese economy was crushed after the war. Economic sabotage by Japanese took some toll, but there was no profiteering by Americans. Liberal economic policies inspired by the New Deal gave the Japanese government a larger role in the economy. This is not the "sweeping privatization" expected in Iraq.

Dowd also noted the positive effect of the war for Japan in producing high numbers of engineers and skilled workers. "Post-war Japan possessed extraordinary human resources, people who would now work in a nonmilitary direction and build an industrial base," Dowd said.

In addition, Dowd noted that human rights could be safeguarded at home and abroad. "The war gave Japan the opportunity to create a modern human rights movement that would later become a powerful force in promoting human rights at home and abroad," he said.

The March 7 panel was the third in the series "The Politics of Reconstructing Iraq," sponsored by CIS and DUSP. Yosef Yezhberg, lecturer in DUSP and Bish San-

y, professor of urban planning, served as moderator and respondent.

Upcoming sessions include "Constructing a New Liberal Iraq chopped dating Iraqi Democracy" (April 11), "The Arab Discourse" (April 25) and "Constructing a New Middle East" (May 2).

Light at the end of the tunnel

Construction on the new facilities for brain and cognitive sciences creates a tunnel over the tracks by Kendall Square.

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**TEN SENSES OF SRI LANKA**

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**SRI LANKA**

Continued from Page 1

disaster.

Priyadarshi and Carlo Ratti, a research scientist in urban studies, are forming a team of MIT students and faculty to create a design model for building small homes (about 400 square feet) with interior plumbing that can be built using local materials, mostly wood, which is better able to withstand ocean storms than the concrete block buildings that were there before. "Building a cluster of these houses based on an MIT model would be a way for MIT to reach out and show compasion to the victims and house people in a socially conscious way," said Priyadarshi.

The Prajnapa Foundation was founded by the Dalai Lama and has no paid employees. All donations go directly to building the homes. "Another aspect of the MIT project is Ratti's work with the MIT SENSEable City Laboratory to create an electronic disaster alert system for Sri Lanka. A joint research proposal developed by MIT and the University of Moratuwa in Sri Lanka calls for setting up early warning system that could be set up through cellular service to allow for early evacuation. For more information, contact Ratti at ratti@media.mit.edu or (617) 253-7192 or Priyadarshi at tenun@mit.edu or visit www.prajnapaya.org.

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**NEWS YOU CAN USE**

**NEWS YOU CAN USE**

Faculty meeting scheduled today

A regular meeting of the faculty will be held today, March 16, at 3:30 p.m. in Room 155 of the Stata Center. Agenda items are: a vote on establishing an S.B. in Mechanical and Ocean Engineering, presented by Professor Kim Vandiver; a presentation about graduate student advising by Hector Hernandez, Krishnan Srinivam and Barun Singh; and a presentation on a faculty housing program by Provost Robert Brown and Associate Provost Claudia Ciancare.

**Awards Convocation deadline extended**

The deadline for nominations for MIT's 2005 Awards Convocation has been extended to Friday, March 25. These awards will be announced at the annual Institute Awards Convocation on May 10. For more information, contact Ratti at ratti@media.mit.edu or (617) 253-7192.
Researchers identify target for cancer drugs

David Cameron
Whitehead Institute for Biomedical Research

Researchers at the Whitehead Institute and MIT have discovered a missing piece to the puzzle of how cancer drugs work.

For nearly a decade, scientists have been trying to fully understand a particu-
lar molecule that acts inside of cells that contributes to many malignant brain and prostate cancers. While scientists have identified elements of this pathway, key components have remained a mystery.

The new finding may present drug makers with a significant new cancer target.

The researchers have identified a component that researchers have been look-
ing for since 1996,” says Whitehead Associate Member David Sabatini, who is also an assistant professor of biology at MIT.

At the heart of this new research is a protein called Akt, an important player in the regulation of cell division and survival. Abnormally high activation of Akt has long been implicated in a variety of cancers. If Akt travels to the cell membrane, it is switched on and promotes cell division, often contributing to tumor growth. However, as long as it stays within the cell cytosol, it remains relatively inactive.

That’s because the tumor-suppressor protein PTEN keeps Akt in check by destroying lipids in the cell membrane that normally draw Akt to the face. In a sense, PTEN keeps a leash on Akt and thus suppresses cell division.

But when PTEN is mutated and unable to function, Akt breaks free. It makes its way to the cell membrane where other proteins activate it, thereby enabling Akt to contribute to tumor growth. “When a cell loses PTEN through, say, a mutation, Akt goes gangbusters,” says Sabatini.

The exact means by which Akt switches on when it reaches the cell membrane has only recently been understood. As a result, researchers have lacked a clear idea about how to prevent the process. However, in the Feb. 18 issue of Science, researchers from the Sabatini lab report discovering an important missing piece of the activation process.

This missing component, a molecule called mTOR, is a protein that influences a cell’s ability to expand in size. mTOR has been widely studied as the target for the immunosuppressant drug rapamycin (in fact, mTOR is an acronym for “mammalian target of rapamycin”). In July 2004, Dios Sarbassov, a scientist in Sabatini’s lab, dis-
covered a new protein that mTOR interacts with called rictor, but he wasn’t yet sure of what these two proteins do together. In this latest paper, Sarbassov reports that when mTOR and rictor binds and form a complex, they help activate Akt by adding a phos-
phate group to a sequence of its amino acids (a process called “phosphorylation”).

According to Sarbassov, “If we find a molecule that can block the mTOR/rictor complex, then we may be able to prevent Akt from becoming active and contribut-
ing to tumor formation.”

This work was supported by the NIH, the Pew Charitable Trust, the Rita Allen Foundation, the Anna Fuller Fund, the Damon Runyon Cancer Research Foun-
dation, and the Howard Hughes Medical Institute.

Climate change poorly understood, MIT survey finds

Nancy Stauter
Laboratory for Energy and the Environment

Climate change and the threat of global warming are poorly understood by the U.S. public, and taking action to reduce their impact is not a high priority, accord-
ing to a recent MIT survey.

These results suggest that change in U.S. climate policy will not be led by public opinion. Elected officials will have to pro-
vide leadership—a task they will find dif-
cult because achieving significant reduc-
tion of the greenhouse gases linked to cli-
mate change may involve economic costs well above what the average consumer is willing to pay.

For more than a decade, Howard J. Herzog and his colleagues in the Labo-
rary for Energy and the Environment (L2E2) have been studying one approach to climate-change mitigation. In carbon-
dioxide (CO2) capture and storage (CCS), the CO2 emissions a power plant produces to generate electricity are captured and injected into geologic formations for long-term storage.

CCS has technological and economic promise and, if successful, could be a partial solution to climate-change and environmental issues in general.

So L2E2 Principal Research Engineer Herzog, graduate student Thomas E. Curry, Professor David M. Reiner of the University of Cambridge and Stephen Anstisalber, the Storer & Morison Pro-
fessor in MIT’s Department of Political Science, devel-
oped a survey that included 17 questions about the envi-
ronment, global warming and climate-change-mitiga-
tion techniques. They collab-
ored with Knowledge Networks, a company that specializes in Internet-based public opinion surveys.

The 1,200 respondents proved to be relatively un-ware not only of CCS but also of other energy-
related responses to climate change that were listed in the survey. The research-
ers were not surprised that CCS fell under the radar for the general public. It was even more surprising that many of the respondents also had not recently heard or read about hydrogen cars, wind energy or nuclear energy.

Most striking: Fully 17 percent of the people had heard or read about none of the listed items during the past year.

Other questions demonstrated the pub-
lic’s lack of understanding. For example, when asked what concern CCS would address, well over half of the respondents said they were not sure. Of those that made a choice, 23 percent said (correctly) that CCS could reduce global warming, but 29 percent said (incorrectly) that it could reduce smog.

The survey further found that the envi-
ronment and climate change are not high-priority issues for the public. The environ-
ment came out 13th on a list of 22 possibil-
ities for “the most important issues facing the U.S. today.” And on a list of 10 specific environmental problems, “global warm-
ing” came up sixth, well behind water pol-
lution and toxic waste.

What do the survey results mean for public out-
reach on climate change issues? Researchers con-
cluded that education is crit-
ical. Programs should start with the fundamentals, help-
ing people to understand the links between burning fossil fuels, greenhouse gas emissions and the potential for climate change. Perhaps most important, research-
ers said discussions must include the relative costs of the various technology options, as cost differentials can profoundly influence people’s preferences.

In continuing their work on CCS, the MIT research-
ers plan to administer the same survey in two or three years to measure the evolu-
tion of public awareness. In the meantime, they are working with their Alliance for Global Sustainability (AGS) partners to analyze similar surveys taken in Japan, the United Kingdom, and Swe-
den.

This research was supported by the AGS and the Carbon Sequestration In-
tiative.

For more information, please go to http://live.mit.edu/publications/newslet-
ter/ezc200412.pdf#page=7.
Girls get into engineering

Rachel Pytel decided to become an engineer in seventh grade after attending an enrichment program called "Expanding Your Horizons."

More than a decade later, the third-year materials engineering graduate student is hoping to provide the same inspiration for girls across the country as an instructor in the Women's Initiative, a growing MIT group dedicated to exposing young women to careers in engineering.

For Pytel, who grew up in upstate New York with two mathematician parents, her ambition was an obvious choice. She was selected for the program because of her excellence in school. Over the course of the one-day seminar, Pytel was able to learn some engineering basics and conduct experiments, including one in which the 12-year-old bounces balls from the roof of the MIT Student Center.

"I thought it was the coolest thing," said Pytel. "It made me want to be a scientist."

In January, Pytel joined Anna Michel, an ocean engineering Ph.D. candidate, in South Carolina, and the two women went to dozens of high schools and middle schools across the state, teaching hour-long engineering courses to 12 to 60 girls at a time, designed to spark their interest in engineering.

Their trip was part of the 7-year-old group's annual program that sends women engineers to schools across the United States in January. First sponsored by Microsoft, the program was initially only open to members ofEta Kappa Nu, the electrical and computer engineering honor society, but in 2002, the group opened up to other departments. The group is now sponsored by a variety of organizations, including Texas Instruments.

"We are currently looking for funding," said Alexandra Chau, graduate student in mechanical engineering and co-director of the Women's Initiative who feels that the group really makes a difference.

"I felt really lucky because my parents were very encouraging for me to be a scientist," said Chau. "It is amazing how the girls who did not always have those kinds of back grounds, really respond to us.

Both Michel and Pytel were also surprised by the stereotypes many girls held about engineering. "One student thought it was a dirty job that only men should do," said Michel with a laugh.

In fact, many of the girls did believe that engineering was a job that involved a lot of heavy labor and getting dirty. Both Pytel and Michel worked to combat that image by introducing the girls to the wide variety of engineering jobs available through photos, discussion and hands-on demonstrations.

"They really seemed to enjoy it. In addition to the more practical information, the girls were also invited to participate in a mini-experiment, taking in walks to build clay boats. "They were really receptive," said Pytel. "They really really did enjoy it.

Additionally, Pytel and Michel provided the girls with a road map of courses they could take if they choose to pursue an engineering career. "We gave them stuff to think about," said Pytel. "And we broke down some of the stereotypes.

SURVEY

Continued from Page 1

publicity for such services," said Singh.

The online survey, filled with detailed questions geared toward assessing general satisfaction, received the highest level of participation last fall. Additional focus groups were also convened during that time. The quizzes ran the gamut, from assessing the advisor/advice relationship to gauging how many of the Institute’s resources—things like the gym, dining halls, MIT Medical and MIT Health—were actually used.

Graduate students expressed an interest in seeing greater emphasis placed on peer-to-peer counseling and advising, said Singh. Some departments are stronger than others, he said, and students really need help students help one another.

According to Lydia Snover, assistant to the provost for institutional research, the data will be especially helpful in program review and in planning future years. "The only way to analyze, said Snover, who was pleased to see the large number of respondents. "It went quite well, she said.

The results from the 2004 survey will also be used in the results from a similar survey administered in 2001. "This year, the surveys are given out every three to four years to measure the effect of changes," said Snover, who was pleased to see the high level of participation from the athletic facilities as compared to past surveys. "A lot of money has been put into those changes," she said.

Surveys like this help to inform the Institute’s on-going evaluation process, said Snover. "The data is really used quite a bit in many different areas of the Institute," said Snover.

AWARDS AND HONORS

Five MIT faculty members have won Sloan Research Fellowships. The Alfred P. Sloan Foundation announced this month: Denis Auroux, associate professor of mathematics; Sarah Filz, assistant professor of molecular biology; Nargis Mavalvala, assistant professor of physics; Jason Starr, assistant professor of mathematics; and Alice Ting, assistant professor of chemistry. They are among 125 young scientists and economists to receive the prestigious fellowship, which provides grants of $45,000 for a two-year period. The fellowships are administered by Alfred P. Sloan Jr. in 1955 to provide funds to outstanding researchers early in their academic careers.

Professor David Bartel of biology, a member of the Whitehead Institute for Biomedical Research, has received the National Academy of Sciences Award in Molecular Biology. The award is a $25,000 salary grant to a young scientist for a recent notable discovery in molecular biology. Bartel was chosen for his discoveries on the repertoire of catalytic RNA and the analysis of RNA genes and their interactions.

Professor Rodney Brooks of the Department of Electrical Engineering and Computer Science has a selection to hold the Mahatma Gandhi Professorship for a five-year term. He was recognized for his "outstanding achievement and leadership in the field of robotics". The Professorship is funded through a grant from the Massachusetts Institute of Technology’s Research Foundation.

MIT senior Reid B. Barton has received the AMS-MAA-SIAM Frank and Brennie Morgan Prize for Outstanding Research in Mathematics by an Undergraduate. The prize is presented annually and is sponsored jointly by the American Mathematical Society, the Mathematical Association of America, and the Society for Industrial and Applied Mathematics. Barton received the award in recognition of outstanding research in a paper titled "Tacking Densities of Patterns."

Gautam Mukunda, a Ph.D. candidate in international relations in the Department of Political Science, is one of 30 recipients of the Ford Foundation and Daisy Soros Fellowship for New Americans. The fellowship honors immigrants and children of immigrants. Gautam was born in Washington, D.C., to Indian parents. Fellows receive up to a $20,000 stipend plus half tuition for an academic year after two years of graduate study at an U.S. institute of higher learning.

CLASSIFIED ADS

Members of the MIT community may submit one classified ad each issue. Ads can be resubmitted, but not for two weeks in a row. Ads accepted may be classified up to 30 words maximum; they will be edited. Submit ads to Classifieds, Rm 11-400. Deadlines are noon Wednesday the week before publication.

FOR SALE


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2002 Ford Explorer Sport Trac, 4.0L V6, automatic. Power options, clock, clock. $6,500. 617-699-6893.

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Ocean front summer cabin, Mount Desert Island, Maine, 2BD/1BA, $700/month, includes electricity, water, wood. Summer sublet wanted: MIT administrative staff with first & seq. dep. 617-625-3908.

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EUGENE CHENACK, STAFF REPORTER

**ARTS NEWS**

**Jean Chevrier**

*Of the Arts*

It’s like an electrical current... if you give it a little push it will flow slower, but the same amount of water is flowing through." Ole Nielsen, a Ph.D. candidate in electrical engineering at MIT, was not lecturing to a group of undergraduates on the principles of physics. He was explaining the feel of the final movement of *Four Autumn Sketches*, a new piece by composer and MIT staff member Graham Ramsey that Nielsen will premier at his flute recital on Friday, March 18, at 5 p.m. in Killian Hall.

Nielsen has played the flute since he was an 8-year-old back in Norway. Since entering the Experimental Study Group (ESG) as a freshman, he has performed in a recital every year as a requirement for the Emerson Scholarship, which covers the cost of his flute lessons. Nielsen and Ramsey’s collaboration has been two years in the making. Ramsey, who works for ESG as an administrator and teacher, attended one of Nielsen’s annual recitals and was impressed.

After the concert, he told Nielsen, “It would be interesting to write for you.” They discovered they shared an admiration for French composer Henri Dutilleux and good Scotch. In writing “Four Autumn Sketches,” they said they approached his work as a composer as a photographic lens, listening and getting input from his clients. As he finished each section, he handed it to Nielsen for feedback. As a flutist, Ramsey had some experience with woodwinds, but he relied on Nielsen to ensure that his piece truly worked for the flute. Too many composers write music that doesn’t work for the instrument, said Ramsey, so it doesn’t get performed. He wanted his piece to have a life after this first performance.

“Writing for a particular performer is much more gratifying,” Ramsey said. The piece can be written with specific talents in mind. “Ole has splendid tone, and a wide range of colors available to him.” In addition, he said, a performer’s involvement in the writing process encourages him to bring out the best in the music.

“Four Autumn Sketches” is Ramsey’s only composition. While the four movements were all inspired by Ramsey’s impressions of New England in the fall, they are each, he said, quite different.

The first movement, “Courtyard, Boston Public Library,” is a bit of a lighthearted. Ramsey said its four sections, which are accessible and fairly straightforward, show different perspectives from inside the courtyard. “Ghosts of Blancheard, Maine,” is inspired by Ramsey’s ancestral home in a new compact town where the original stone walls remain, and it is “very, very grey” even in October, Ramsey said. Nielsen said that only the flute part is serially based, making the piece “less harmonically settling” and more “ghostly.”

By contrast, the sun is shining in the third movement. Inspired by Concord’s famous Walden Pond, it is tonal, harmonic and “stays pretty,” Nielsen said.

Nielsen calls the fourth and final movement, “Rock River,” a bit of an exercise that involves rapid scales. The music maintains a driving pace throughout, even while growing calmer in the middle.

The program will also include works by Russ and Robert Muzykalski.

For more information, call 617-253-8800.

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**PHOTO COURTESY/OF THE ARTS, MIT**

**STAFF REPORTER**

**Curt Newton**

The distinctive sounds of traditional Korean instruments will be used to create innovative new music at an Artists Behind the Desk concert at The List Visual Arts Center this Friday, March 18, at 5:15 p.m. The concert is being held in conjunction with “Kimsooja: Seven Series: Witness: A” current exhibition by Korean-born artist Kimsooja that focuses on large Iris prints of fabrics traditionally given to Korean newleyweds.

**PHOTO/CURT NEWTON**
MIT Event Highlights: March 16–20

**Building Heaven, Remembering Earth**

“Building Heaven, Remembering Earth: Confessions of a Fallen Architect” will be shown at the Bartos Theater, March 23, 7 p.m. as part of the List Visual Arts Center Film Night. Other Highlights:

- **March 21**
  - **Spring Break Begins**
  - **2005 Boston Open Badminton Tournament.**
  - **3 p.m., MIT Museum, MIT Campus Center of Culture and Art, Room 10-150**

- **March 22**
  - **Visualizing Physics: Devices for Creating Low-Dimensional Quantum States**
  - **Noon–5 p.m., MIT Museum, 253-4444**

- **March 23**
  - **A Needle Woman**
  - **9 a.m.–6 p.m., Room NS9-390, 462-2484**

- **March 24**
  - **Dante Rossignol: Drawings for Dante’s Inferno**
  - **Opening Reception at 6:30 p.m.,**
  - **Museum of Fine Arts, Boston**

- **March 25**
  - **Spring Fling Dance**
  - **5 p.m., MIT Exhibit Hall, 253-4860**

- **March 26**
  - **Boston College vs. Clark University (Doubleheader)**
  - **Noon to 5 p.m., L Planner**

- **March 27**
  - **Hart Nautical Gala**

**Women and the Media Conference: Mar. 16**

Keynotes by Global Exchange founder Medea Benjamin and authors Daisy Hernandez and Jill Nelson.

**Stata Center Various Times**

**WHO SPONSORS WHAT**

- **March 17**
  - **“Want To Be A High Tech Entrepreneur?”**

- **March 29**
  - **Room E56-100**
  - **Noon–2 p.m.**

**Monk’s Mood**

Mar 17

Kresge Little Theater 8 p.m.

**Field Trip to the MIT Museum**

March 21, 10 a.m. to 5 p.m.

**Holography**

Dining Hall, 253-4860

**New Year’s Eve Dinner**

Dining Hall, 253-4860

**Norouz (Persian New Year)**

Dining Hall, 253-4860

**Saint Patrick’s Day**

Lobdell Chapel, 7:30 p.m.

**Spring Fling Dance**

Exhibit Hall, 5 p.m.

**Easter Breakfast**

Easter Breakfast followed by an egg hunt.

Sponsored by Westgate Community Association, 10 a.m. Westgate Lounge, 777-8880.

**Pavel Braila**

Pavel Braila’s first solo exhibit in the U.S. is a large scale installation which consists of six 11” x 7” video projections and a selection of large-scale photographic images. Noon-6 p.m.

**Spring Fling Dance**

Exhibit Hall, 5 p.m.

**Easter Breakfast**

Finally, the event will conclude with an Easter Breakfast followed by an egg hunt.

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