New web site delves into energy issues

EnergyClasses, a web-based tool that identifies MIT classes that revolve around or include energy research, policy or technology in their curricula, launches today (energyclasses.mit.edu).

Under the leadership of the Energy Research Council's (ERC) education subcommittee, a group of faculty, students and staff created the energy classes database. EnergyClasses will be managed initially by the education program of the Laboratory for Energy and the Environment (LFEPE).

The ERC, created by MIT President Susan Hockfield in June 2002 to come up with an MIT strategy for dealing with the global energy crisis, is made up of 16 faculty members from every school across the Institute.

Cochaired by Chevron Professor Robert C. Armstrong, head of the Department of Chemical Engineering, and Cecil and Ida Green Professor Ernest J. Montiz, co-director of LFEPE, the council is working on a set of recommendations for Hockfield about how MIT can have an even bigger impact on addressing the world's energy problems in the future.

EnergyClasses will be part of a larger ERC web site that will feature a comprehensive database of energy initiatives on campus related to seeking out and manipulating primary sources of energy; innovative ways to harvest, store and transport energy; new ways to make buildings, vehicles, utilities, etc., more efficient; and port energy; new ways to make buildings, vehicles, utilities, etc., more efficient; and how the science, technology, policy and politics behind energy's impact on people and the planet.

In addition, the site will highlight individuals, student groups and laboratories involved in energy research, provide links to global energy news and promote upcoming energy-related MIT events.

Inquiries and new class suggestions for EnergyClasses can be forwarded to Amanda Graham at agraham@mit.edu.

—Deborah Halber

Researchers find cloning yields normal stem cells

Scientists generally agree that all cloned animals are biologically flawed. But they don’t agree about what that means for stem cells derived from cloned embryos, the basis for therapeutic cloning.

Also known as somatic cell nuclear transfer, therapeutic cloning is a promising approach to creating individually customized cellular therapies for treating certain disorders. Demonstrated in mice but not in humans, it begins with stem cells derived from a cloned embryo. But if cloned embryos can’t produce normal organisms, how can they produce normal stem cells?

Analyzing the complete gene-expression profiles of both cloned and fertilization-derived stem cells in mice, scientists at MIT and the Whitehead Institute for Biomedical Research now have concluded that the two are, in fact, indistinguishable.

This paper demonstrates clearly that it doesn’t matter if a stem cell has been derived from a cloned embryo or from a fertilized embryo,” says Whitehead member and MIT biology Professor Rudolf Jaenisch, senior author on a paper that will appear online the week of Jan. 16 in the Proceedings of the National Academy of Sciences. “Both can be equally good for therapy.”

To create a clone, a scientist removes the nucleus from a donor cell, then places it into an egg from which the nucleus has been removed. The researcher then tricks the egg into thinking it’s been fertilized. The egg develops into a blastocyst, an early-stage embryo consisting of no more than 100 or so cells. The scientist can then either remove the stem cells from this blastocyst, or use the cells to clone more embryos.

“Although these two strategies may allow us to clone both embryos and stem cells, it turns out that the mechanisms for both are rather similar,” says research team member David Cameron, a white male, a graduate student in stem cell biology.

Scientists succeed in multiplying stem cells. Read about this breakthrough at web.mit.edu/newsoffice

E=mc\(^2\) passes tough MIT test

In a fitting cap to the World Year of Physics 2005, MIT physicists and colleagues report the most precise direct test yet of Einstein’s most famous equation, E=mc\(^2\).

And, yes, Einstein still rules.

The team found that the formula predicting that energy and mass are equivalent is correct to an incredible accuracy of better than one part in a million. That’s 50 times more precise than the best previous test.

Why undertake the exercise? “In spite of widespread acceptance of this equation as gospel, we should remember that it is a theory. It can be trusted only to the extent that it is tested with experiments,” said team member David E. Pritchard, the Cecil and Ida Green Professor of Physics at MIT, associate director of MIT’s Research Laboratory for Electronics (RLE) and a principal investigator in the MIT-Harvard Center for Ultracold Atoms.

Pritchard and colleagues from the National Institute of Standards and Technology (NIST), the Institut Laue Langevin (ILL), Florida State and the University of Oxford report their results in the Dec. 22 issue of Nature. They write: “If this equation were found to be even slightly incorrect, the impact would be enormous — given the degree to which [it] is woven into the theoretical fabric of modern physics and everyday applications such as global positioning systems.”

In the famous equation, E stands for energy, m for mass, and c for the speed of light. “In the test, we at MIT

EINSTEIN

Michael MacConnell

—Deborah Halber

Point of No Return

New research helps explain the enigmatic behavior of black holes.

IAP Roundup

Independent Activities Period offerings run the gamut from economics to fishing to mine removal (pits).
Physicist earns share of Bruno Rossi Prize

Elizabeth A. Thomson
News Office

MIT physicist Deepthi Chakrabarty and two other scientists will share this year’s Bruno Rossi Prize for their pioneering work on understanding the exotic environment around fast-spinning neutron stars, where matter can whirl about at nearly light speed and where space itself is warped.

The prize, named for the late MIT President Emeritus Bruno Rossi, is awarded each year by the High Energy Astrophysics Division of the American Astronomical Society. Announced at an earlier meeting, the prize will be officially awarded at an AAS meeting next January in Seattle.

“Bruno Rossi was a giant at MIT, and as an MIT professor, I am humbled to receive an award named in his honor,” Chakrabarty said.

Chakrabarty, an associate professor of physics at MIT and a researcher at MIT’s Kavli Institute for Astrophysics and Space Research, shares the prize with Ted Strohmayer of NASA Goddard Space Flight Center and Rudy Wipfands of the University of Amsterdam.

Their work, which is independently and in collaboration, has been described as a breakthrough in interpreting the complex signals emitted as X-ray light from millisecond pulsars. A millisecond pulsar is a type of fast-spinning neutron star in a binary system with an ordinary star. Gas pulled away from the surface of the companion star crashes onto the neutron star, spinning it up to rotation rates of hundreds of revolutions per second.

These scientists have revealed that oscillations in the emitted X-ray light can be used to measure the pulsar’s spin rate and other key parameters. Their observations were made with NASA’s Rossi X-Timing Explorer, which marks its 10th year in orbit this month.

Chakrabarty described his prize as “a powerful tool to probe the environments of black holes and neutron stars,” and said, “It has been thrilling to work with my collaborators in so many different ways to understand the exotic environments around these objects.”

In the 1980s and 1990s, Chakrabarty was an expert on millisecond pulsars. He credits his MIT colleagues and collaborators, especially research scientist Edward Morgan, with making his discoveries possible.

Senior Senate aide to head MIT’s Washington office

Sarah H. Wright
News Office

William Boone Bonvillian, an attorney with experience in the legislative and executive branches of national government, expertise in science and technology policy, and knowledge of the university community, has been appointed director of federal relations for MIT. He will head MIT’s Washington, D.C., office.

MIT President Susan Hockfield described Bonvillian as “widely respected on both sides of Capitol Hill and in the federal agencies. He has earned that respect through years of major contributions in the policy arena, including drafting many pieces of legislation and ferrying them through the process.”

Bonvillian’s “understanding and skill in matters of national science policy and higher education are extraordinary, and I am delighted to welcome him to MIT,” she said.

Bonvillian will assume his MIT duties on Jan. 30. He succeeds John C. Crowley, vice president for government relations and foundation affairs, in 1993, of MIT’s Washington Office, which works with Congress and the executive branch to raise understanding of the contributions of higher education and research to the national economy.

Bonvillian said he is looking forward to his new role: “I have long viewed MIT as a critical institution in the future of our society and economy and have respected its historic role in national science policymaking. I am excited about supporting the flow that flows from its great talent base,” he said.

Bonvillian has served as legislative director and chief counsel to Sen. Joseph Lieberman (D-Conn.) since 1989. In that senior role, he has directed the senator’s legislative staff and drafted and managed action on the senator’s legislative policy initiatives, including initiatives in science and technology, economic growth, and defense research and development.

Bonvillian served in the executive branch as deputy assistant secretary for the U.S. Department of Transportation, from 1979 to 1980. There he worked on major legislation covering transportation deregulation and funding.

Bonvillian received the B.A., with honors, from Columbia University in 1964. He received his J.D. from Yale University in 1967 and the J.D. from Columbia University School of Law in 1974.

He and his wife live in Great Falls, Va.; they have two children.


Moses named Engineering Systems Division acting director

Dean of Engineering Thomas Magnanti announced that he has appointed Institute Professor Joel Moses as acting director of MIT’s Engineering Systems Division, an academic and research division formed to tackle the large-scale engineering challenges of the 21st century.

Magnanti also said he will convene a faculty advisory committee to search for a replacement for Professor Daniel Hastings, who has been acting director since 2003. Hastings, a professor of aeronautics and astronautics and of engineering systems, was appointed Dean of Undergraduate Education in June.

“I would like to take this opportunity to thank Dan Hastings for the spectacular job he has done as ESD director and to congratulate him on his well-deserved appointment as Dean of Undergraduate Education,” Magnanti said. “It has been an enormous pleasure to work closely with Dan and I look forward to continuing to work with him in his new position.”

Moses, who is an electrical and computer engineering professor, joined the faculty in 1992. He was the inaugural holder of the Chua Chair, named in honor of professor of electrical engineering and computer science Leon O. Chua. He is a fellow of the Institute of Electrical and Electronics Engineers (IEEE) and a member of the National Academy of Engineering.

Moses is known for his contributions to communication theory and to a new field of engineering he calls “cybernetics,” which combines principles of communication, control, and computing.

He received the B.S. and M.S. in electrical engineering from the University of Illinois in 1981 and the Ph.D. in engineering and applied science from the University of California, Berkeley. He is a member of the National Academy of Engineering and a fellow of the IEEE.

For more information, visit http://web.mit.edu/newsoffice/2006/jm/doi.html.

The News Office is in Room 11-400, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA 02139-4307.

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DigitalK is compiled by Information Services and Technology.
MIT announced last week that it intends to sell some share in the seven buildings of Technology Square while retaining ownership of the land itself. This transaction will not affect current tenants, including about half a dozen MIT offices and departments in the development, which is located a few blocks from Kendall Square in Cambridge.

"MIT is looking to recapitalize the property at this time to take advantage of favorable market conditions," said Steve Marsh, managing director of MIT's real estate investments office.

"We are fully committed to keeping the space leased by MIT offices and departments in Technology Square fully integrated into our campus and to making a smooth transition to the new building owners," said MIT Provost L. Rafael Reif.

MIT's decision to sell its interest in the buildings is a prudent investment decision that will enhance our overall financial strength. Decisions to recapitalize in this way occur frequently in the real estate investment world and usually result in a seamless transition with no impacts on the tenants," he said. "MIT intends to retain ownership of the land at Technology Square and therefore would be the landlord to anyone who owns an interest in the buildings."

MIT purchased Technology Square from Beacon Capital Partners for $278.8 million in January 2001. At that time, there were four buildings on the property and three more under construction. MIT converted the parcel from an office park to a life sciences and technology center with laboratory, office, and retail space, and a parking garage. The parcel is bounded by Main, Portland and Broadway streets, with Draper Laboratory on the fourth side.

In addition to large biotechnology firms, including Novartis, the 1.5 million-square-foot development is home to MIT's Institute for Soldier Nanotechnologies, Center for Biomedical Engineering, Facilities, Central Accounting Office and the MIT Federal Credit Union. Before moving into the Stata Center in 2004, the Laboratory for Computer Science and the Artificial Intelligence Laboratory were tenants of 200 Technology Square for many years when MIT did not own the property.

At the city's request, MIT marketed first-floor space to small retailers as a way of bringing foot traffic to the area. Quince's Sushi, 7-Eleven Convenience Store, Kinko's, Filene and Bank of America all lease space in the development, and the university is working to identify new retail establishments to take space recently vacated by Polcari's restaurant.

High-tech and life sciences firms, including Novartis, Dyax, Tolerex, Forrester and Elsevier publishing company, lease office and lab space at Technology Square. The increase in property values since 2001 has meant increased real estate taxes revenue for Cambridge. MIT paid the city $28 million in taxes on the parcel in 2001, and will pay nearly $82.4 million in 2006. Because MIT will continue to own the land at Technology Square, even after the recapitalization, the Institute will continue to pay the city real estate taxes for the entire parcel.

MIT announced last week it plans to sell some share in Technology Square, which is a few blocks from Kendall Square in Cambridge.

Happy birthday, Endicott House

Endicott House is celebrating 50 years as part of MIT with a new book detailing the history of the families who once lived on the estate in Dedham, Mass. The original house, Rockweld (photo at far left), was built around the time of the Civil War by the grand-father of Rose Weld Baldwin (right). Baldwin attended a Jan. 17 celebration at the house, with Priscilla and Bradford Endicott, siblings whose father built Endicott House on the site after Rockweld once stood. For full story, visit web.mit.edu/newsoffice.

Challenger anniversary recalls MIT’s contributions

This week the world will mark the 20th anniversary of the explosion of the space shuttle Challenger, a disaster felt deeply at MIT, which has a long history of close connections to the space program.

When the Challenger exploded, 73 seconds after liftoff on Jan. 28, 1986, all seven crew members were killed — including MIT alumnus Ronald E. McNair (Ph.D. 1979) — and the disaster shocked the nation, inspiring many to consider careers in space exploration.

"MIT has had a long and lasting association with NASA’s success. Our peo- ple, technology development and scientific investigations have been intertwined since the earliest days of the space program," said William Readly, NASA associate administrator for space operations.

NASA was founded in 1958. As of July 2004, MIT had 32 alumni astronauts, among them Buzz Aldrin (Sc.D. 1960), Franklin Chang-Diaz (Sc.D. 1977) and Janice Voss (Ph.D. 1987), alternate payload specialist for the 1993 Columbia mission. Some highlights of the MIT-NASA collaboration:

• 1961, the MIT Instrumentation Lab wins the first major contract of the Apollo program.
• 1960-1968, Robert C. Seamans Jr., alumnus (S.M. 1942, Sc.D.) and professor emeritus, serves as NASA’s deputy administrator.
• 1973, Professors Harry G. Gatos and the late August F. Witt lead MIT materials scientists in the first experiments to grow crystals aboard NASA’s first space station, Skylab.
• 1968, Frederick H. Hauck (S.M. 1960) commands Discovery, the first shuttle mission.
• 1977, NASA astronaut Wendy Lawrence (S.M. 1988) participates in the first shuttle landing at the Kennedy Space Center.
• 2000, astronaut William M. Shepherd (OCE 1978) commands the first crew to live and work aboard the International Space Station.

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Brazile served as senior strategist and campaign manager for Democrat Al Gore’s 2000 presidential bid. A native of New Orleans, she is currently chair of the Democratic National Committee’s Voting Rights Institute, an adjunct professor at Georgetown University and managing director of her own political consulting firm, Brazile and Associates, in Washington, D.C.

Brazile’s 2004 book, “Cooking With Grease: Stirring the Pots in American Politics,” is a memoir of her career as a political strategist, including such accomplishments as organizing demonstrations to make Martin Luther King Jr. ‘s birthday a national holiday as well as working in senior roles in the presidential campaigns of Jesse Jackson, Richard Gephardt, Michael Dukakis and Bill Clinton.

According to “Cooking With Grease,” Brazile discovered her flair for political organizing as a younger, when she campaigned for a candidate who promised her neighborhood a playground. She committed her professional life to political and social activism the day after King was assassinated in 1968.

Prior to managing the Gore-Lieberman campaign in 2000, Brazile was chief of staff and press secretary to U.S. Representative Eleanor Holmes Norton of Washington, D.C. A frequent contributor and political commentator on CNN’s “Inside Politics” and “Crossfire,” Brazile is a cohost for Roll Call, the newspaper of Capitol Hill, and a con-
Black hole's 'point of no return' found

Scientists have found new evidence that black holes are performing the disappearing act for which they are known.

A team from MIT and Harvard has found that a certain type of explosion common on neutron stars is never seen around their black hole cousins, as if the gas that gives the explosion its energy has vanished into a void.

This is new evidence, the team said, for the existence of a theoretical horizon around a black hole called an event horizon, around which nothing, not even light, can escape.

In describing celestial objects that are black as opposed to white, as black holes are, the team said, it is occasionally possible to see the event horizon.

Gas released by a nearby star can accumulate on the hard surface of a neutron star, and it will eventually crater in a thermonuclear explosion.

The more massive compact objects in this study suspected of being black holes appeared to have no surface. Gas falling toward the black hole seems to disappear.

Event horizons are invisible by definition, so it seems impossible to prove they exist, said Remillard. "Yet by looking at the gas, we can infer whether that gas crashes and accumulates on a hard surface or just quietly evaporates, as happens in a black hole."

"In analyzing the case for black holes, we considered the evidence that black holes are real, the event horizon around them, and whether large stars would make black holes," said Madson. "The results are what we predicted for black holes, and that's the first piece of new evidence we have that black holes exist in the universe, which are associated in the Milky Way galaxy with neutron stars."
Tarot, fishing, landmines round out IAP

Independent Activities Period (IAP) offered MIT students the chance to take part in some out-of-the-ordinary offerings — from planning a trip to Mars to trying their hand at fly fishing. To read more about these and other activities, visit http://web.mit.edu/newsoffices/topic/iap.html.

Teaching tarot

Economic Aid Director Daniel Barkowitz uses IAP as a time to share his interests — both professional and personal. “In Financial Aid 101,” Barkowitz walks students, staff and faculty through the mysterious and sometimes daunting world of financial aid for school. He shifts gears to teach his other annual IAP offering, “History and Mystery of the Tarot.” “IAP really gives everyone the chance to get out of the daily rut,” Barkowitz said. (Published Jan. 11)

Dating analysis

In a lecture sponsored by the Department of Economics, economist Ray Fishman, who has studied speed dating, analyzed men’s and women’s dating preferences. Fishman found that men are less likely to date women they believe are smarter or more ambitious than they are. They also place higher value on physical attractiveness than women do. On the other hand, women’s interest in dating a man grows with his intelligence, even if they believe it exceeds their own. (Jan. 11)

Trip to Mars

Planning for a colony on Mars is well underway, according to MIT graduate student Joseph Palia, who presented the Mars Homeostatic Foundation’s vision for settling the red planet by 2025. The foundation sponsored several IAP brainstorming sessions for students who want to get involved in the project. (Jan. 12)

Taste of Middle Ages

Participants in “Old Food: Ancient and Medieval Cooking,” a one-session IAP course led by Anne E.C. McCants, associate professor of history and MacVicar Faculty Fellow, “ate exceptionally well,” she said. The jolly crew of 25 enjoyed a medieval meal that included sourdough bread, fresh butter churned right in Next House, roast pork in a strong wine and spice marinade, a green “porece” with spinach and chard, a white “porece” with leek whites and milk, and lasagna with handmade noodles but no sauce, as tomatoes are a New World food. (Jan. 13)

Kid-friendly engineering

Contrary to popular belief, engineering concepts can be taught to children as young as 5 can explore math, science and engineering concepts. (Jan. 17)

Cleaning up landmines

IAP sessions titled “MIT Design for Demining” challenged students to clean up the cruellest litter of war. The sessions introduced humanitarian engineering — the process of detecting, removing and disposing of landmines — and demonstrated inventions or improvements in hand tools, protective gear, safety equipment, educational graphics and teaching materials developed by past students in Andrew Heafitz’ spring course on demining. SP776. (Jan. 17)

Faith and science were not mutually exclusive for many great scientists, including astronomer Johannes Kepler. A series of lectures sponsored by the Department of Nuclear Science and Engineering is exploring the work of Kepler, Sir John Carew Eccles, Robert Boyle and James Clerk Maxwell. (Jan. 19)

Wal-Mart is good for you

Wal-Mart enters their community. (Jan. 20)

Einstein on E=mc²

“It followed from the special theory of relativity that mass and energy are both different manifestations of the same thing — a somewhat unfamiliar conception for the average mind. Furthermore, the equation E is equal to mc², in which energy is put equal to mass, multiplied by the square of the velocity of light, showed that very small amounts of mass may be converted into a very large amount of energy and vice versa. The mass and energy were in fact equivalent, according to the formula mentioned above. This was demonstrated by Cockcroft and Walton in 1932, experimentally.”

To hear an audio clip of Einstein explaining this, go to http://www.aip.org/history/einstein/voice1.htm.
Biological engineering may become Course 20  
Kathryn M. O'Neill  
News Office

Biological engineering faculty put forward an ambitious proposal for a new Course 20 at the faculty meeting held Dec. 21 in Building 32. The proposal, received in February 2005 to accept undergraduate majors. The course number, which was unassigned for nearly two decades. Changing or renaming a course occurs only after careful deliberation by the faculty and generally in response to developments in academic engineering practices.

Only one course has remained constant throughout the Institute's history — Course 2 (mechanical engineering) was named in 1868, while many others have been renamed as education and practices have changed. One example is Course 3, established in 1946 as food technology, it was renamed in 1961 to nutrition, food science and technology, refined in 1963 to nutrition and food science, and known from 1985 to 1989 as applied biological sciences.

The Committee on Curriculum and the Faculty Policy Committee have both approved the division's request for a course number, which was endorsed by Dean of the School of Engineering Professor Douglas Lauffenburger, the Whitaker Professor of Bioengineering and director of the Biomedical Engineering Division, presented to the proposal.

He said the division had to meet the following six criteria to attain a course number:

• The entity wishing to assume a course number should hire, promote and tenure its own faculty.
• The entity should have a clear place in the organization of the school.
• The entity should be assured of resources and autonomy of the dean of the school should attest to its permanence.
• The entity should be authorized by the Corporation to grant degrees, preferably both graduate and undergraduate.
• The entity must be authorized to admit graduate students, serve as the focus of registration for them, teach all of their course work, and be expected to graduate and shall be designated by the students, commented, “We see the MLOG program as one of our core strengths. We are working toward the time of the meeting, Hastings was the director of the Engineering Systems Division. He became the dean for undergraduate education on Jan. 1.

In other business, the faculty approved a change to the rules for electing members to standing committees. The change is designed to provide the faculty with more information about candidates nominated to serve on these bodies, said Professor Bruce Tidor, associate chair of the faculty.

OBITUARIES

FRANK T. CARY  
Frank T. Cary, former IBM chair and life member emeritus of the MIT Corporation, died Jan. 1 at his home in Darien, Conn. He was 85.

Cary spent his entire career at IBM, where he started as a marketing representative and eventually served as president, chair, chief executive officer and director. He retired from IBM in 1991.

Cary joined the MIT Corporation in 1974, was elected a life member in 1984 and became a life member emeritus in 1986. He also served on the boards of Science and Engineering, the Corporation for Arts, J.R. Morgan, Texas and Merck, and of several non-profits, including the American Museum of Natural History, the Museum of Modern Art and Rockefeller University.

For full obituary information, visit web.mit.edu/newsoffice.
I'll be a jarring night at the Museum of Science as humans, computers and robots join forces to present a musical hybrid of Western and traditional Balinese music. “Music and the Invasion of Technology,” featuring premieres by Professor Evan Ziporyn and alumnus Christine Southworth, will take place at the Boston Museum of Science’s Cahners Theater on Wednesday, Jan. 25, at 7 p.m.

Southworth, who graduated from MIT in 2003 in music with a minor in music, is co-founder of Ensemble Robot, which premiered “Zap!” — a work for Van Graaff generator, robots and musicians — at the Museum of Science in February 2005. The Boston Phoenix called the work “truly electrifying.”

Southworth’s “Zap” and Ziporyn’s “Belle Labs” both use the Heliphon robot, a Musical Instrument Digital Interface (MIDI)-controlled double-helix shaped xylophone that plays by striking metal keys with solenoids.

Southworth, who is currently pursuing a master’s degree in computer music and multimedia composition at Brown University, will premiere “Heavy Metal,” a new piece for Balinese gamelan, robots and electronic strings. The work will feature MIT’s Gamelan Galak Tika, Ensemble Robot, Reynolds on violin, Whalen on guitar, Erik Nugent on lyric and Blake Newman on bass. “Heavy Metal” will also introduce Ensemble Robot’s two newest members, the Bot(i)Cello and the BlowBot.

The Bot(i)Cello uses windshield wiper motors to reed in guitar strings, puckered by counter fans rotating at varying speeds. The strings are attached to bows made of tempered spring-steel, which hold them at a constant tension. When the motor reeds in a string, the pitch of the string goes up, and vice versa. “The instrument looks like a three-legged spider, or perhaps a strange metal tree,” says Southworth, who designed and built the robot with Boston artists Giles Hall and Andy Cavatorta.

The BlowBot, developed by Cavatorta, is a dancing tetrahedron made of air cylinders that expand from 2 to 4 feet in length, according to Southworth. As each of its six cylinders expands and contracts, one of 12 flutes is played. “It’s very beautiful, quite organ-like and very active,” says Southworth.

The concert will be followed by a discussion of the impact of technology on music with Ziporyn, Southworth and Reynolds, as well as a dessert reception with a cash bar. Tickets are $10. Limited additional seating is available in a separate theater with simulcast projection of the event for free.

The program is the third in a Museum of Science Series titled “When Science Meets Art,” which examines how both art and science investigate and involve theories and transforming information into something else.

The next “When Science Meets Art” event on Wednesday, Feb. 1 also features MIT talent. Titled “Seamless: Computational Couture” and produced by Nick Kroun and Christine Liu of the Media Lab, the program will be a runway fashion show, showcasing innovative, wearable works of interactive and technology-based design. Emceed by Assistant Professor Chris Culvermenthal of the Media Lab, the show will take place in the Galaxy Cafe at 7 p.m. Tickets are $10 and a dessert reception is included.

The Museum of Science is located at Science Park, in Boston. For more information, call (617) 723-2500 or visit www.mos.org/brainyacts.

Annual origami competition gets under way

Will you join the fold?

Folding’s fine, but not spindling or mutilating. Folding, trimming and adhering are taboo.

Submissions for the fourth annual Student Origami Competition are due in the Office of the Arts (Room E15-205) by 5 p.m. Tuesday, Feb. 21.

The competition, open to MIT students and sponsored by the Office of the Arts/Student and Artist-in-Residence Programs, the MIT Jay Program and the office of Associate Professor Erik Demaine, is designed to promote interest in origami within the MIT community and to showcase student work.

Models must be made entirely by folding — no glue or tape can be used — although they may be colored. Both original designs and credited executions of existing designs are welcome and will be judged in separate categories by a jury of origami experts. Past submissions have included everything from bugs and flowers to stars and bolines. Winning entries will be exhibited in the Wiener Student Art Gallery.

For more information, or to see images of past submissions, visit http://web.mit.edu/arts/special_programs/students/origami.html. Or, e-mail Irene Brison, irony@mit.edu.

Origami skimmer dragonfly folded by graduate student Brian Chan, who won Best Technical Folding and Best Original Design for his leaves and insects collection in the 2005 origami contest.

Rockin’ robots take stage

MIT Provost L. Rafael Reif has announced that Associate Provost for the Arts Alan Brody will step down at the end of the academic year after 10 years in the position. Brody will return to full-time teaching in the music and theater arts section and to his own playwriting. In making the announcement, Reif called Brody an “unswerving and passionate advocate of the arts at MIT,” who had worked well with faculty, staff, students and alumni to “guide, support and enhance MIT’s arts dynamic community.

President Susan Hockfield said, “The arts at MIT are simply extraordinary — reflecting the creativity and insight that are hallmarks of the Institute. As associate provost for the arts, Alan Brody has fostered a climate where the talents and imagination of our faculty and students can find their fullest artistic expression.”

Brody, a professor of theater at MIT since 1988, was promoted to the position of associate provost for the arts in 1996, succeeding Ellen T. Harris, the first position of associate provost for the arts in the School of Humanities, Arts, and Social Sciences. “In so doing, he has expanded and integrated MIT’s various arts programs,” said Philip S. Khoury, Kenan Sahin Dean of the School of Humanities, Arts, and Social Sciences. “He invites confidential comments and/or advice to be e-mailed to assoc-prov-arts@mit.edu.

MIT Tech Talk
Exhibit
Featured Event
Reading
Award
Music
Business/ Money
Film
Sports
Science/ Technology
Performance
Architecture/ Planning
Humanities
Special Interest
CALENDAR
MIT EVENT HIGHLIGHTS
JANUARY 25-29

MIT EVENT HIGHLIGHTS
JANUARY 30-FEBRUARY 5

Science/ Technology
Performance
Architecture/ Planning
Humanities
Business/ Money
Music
Film
Sports
Editor's Choice

Go Online! For complete events listings, see the MIT Events Calendar at: http://events.mit.edu.

"URINETOWN"
Musical Theatre Guild production.
Jan. 25-29 and Feb. 1-4. 2-4. 8 p.m. except 2 p.m. on Jan. 29.

"AN EVENING OF SILENT FILM"
Markin Martin's and Dawn Perner provide live musical accompaniment to classic silent films.
Jan. 26
Room 14-111
8:10-30 p.m.

"THE ANATOMY OF RECONCILIATION"
Webcast from New York includes keynote speech by Sister Helen Prejean, author of "Dead Man Walking." Jan. 31-Feb. 1.

Jan. 25
Sala de Puerto Rico 8 p.m.

Jan. 26
Room 14-111
8:10-30 p.m.

Jan. 27
Museum of Natural History
5:30-7 p.m.

Monday January 30
Undergraduate Study Abroad Information Session
2:30-4:30 p.m. Room 56-114, 253-0676.

"Introduction to Anthropology"
Talk by Louis Kuchnir. MIT premedical advisor. 3-4 p.m. Room 26-204. 253-4733.

"The Joy of Clinical Medicine"
Talk by Dr. Louis Kuchnir, MIT premedical advisor. 4-5 p.m. Room 26-204.

Trivia Night
Must be over 21. 10:00 p.m.

Thrusd Early Pub. 258-9754.

Tuesday January 31
"An Epistemological Mathematics of the Culture of Ancient China"

Ethnomedicine and Bioprospecting Conference
Panel discussion with Kathy Moran of the Healing Forest Conservancy, Steven King of Shamar Pharmaceuticals and Christopher Herndon of the Amazon Conservation Team. 11-4 p.m. Room 10-250.

IDEAS Competition Project Expo
6-8 p.m. Room 4-402.

Wednesday February 1
Kosher Chocolate Taste Test

Israel Dance Beginner's Night
Lobby 13-247 FOLDER.

"Google, or Googol? What is the Question?"
Learn about databases and other tools to search for scholarly information. 3-4 p.m. Room 14-132, 253-9320.

Thursday February 2
"Amorous Intent: Looking for Love at MIT"
Curated exhibition exploring the cultural, the sweet, the humorous, the bitter and any other interpretation on the theme of love at MIT 24 hours. Winner Student Art Gallery, 253-7019.

Lean Engineering: Doing it the Right Thing Right Away!
Talk by Professor Earl M. Murman. 2-3:30 p.m. Room 32-206, 253-2279.

Friday February 3
"Christian Marcley: Mixed Signals (American Sign Language)"
American Sign Language (ASL) interpreter. Jonathan Kovacs signs a long collaged text by artist Christian Marcley from reviews of musical performances. On view 24 hours. Media Theater, Bray Hall, Building 56, 253-5941.

"Arnold Newman: 20th Century Portraits"
Forty photographs on exhibit. 9:30-5 p.m. Room 10-150. 253-4444.

"Airforce Fire and Explosion? How Safe Are You in the Friendly Skies?"
Multimedia presentation by Albert Mous. 9:30-5 p.m. Room 10-206, 253-2279.

Karate Practice
6:30-8 p.m. Room W31-225.

Saturday February 4
"Collision Box: Cars and Stars"
Zimmerman's multimedia installation. "Cars and Stars," projects digital animation and video onto a three-dimensional sculpture, with accompanying sound composition. $5 adults; $2 students and with MIT ID. Noon-5 p.m. MIT Museum, 253-2444.

Balloon Social Dance (participation encouraged)
Come social dancing including ballroom and Latin dances, along with favorites such as salsa, hustle and merengue. $6 students, $10, general. 8 p.m. Mons Hall in Walker Memorial.

Grads on Ice: Three-level tournament plus a match pitting MIT alumni against current students. Noon-5 p.m. Stata Center Lounge.

Sunday February 5
"Deep Frontiers: Ocean Engineering at MIT"
Exhibit. 9 a.m.-8 p.m. Hart Nautical Gallery, 253-5942.

"Scopes, Station Wagons and Solder: Unexpected Images From the Rad Lab and RLE Collections"
Collection of photographic negatives from the MIT Radiation Laboratory and the Electronic Research Laboratory of Electronics. $5, adults; $2 students; free with MIT ID. Noon-5 p.m. MIT Museum, 253-2444.

International Folk Dancing
8-11 p.m. Every Sunday. Student Center Lounge. 253-FOlk.