‘Genius’ grants go to four MITers

Two MIT engineers, a scientist and an alumna have won 2004 MacArthur Fellowships, commonly known as ‘genius’ grants. They were honored for coaxing viruses to manufacture microelectronic devices, inventing inexpensive technologies to solve problems in developing countries, developing potential treatments for diabetes and unraveling the secrets of bacterial infection.

Associate Professor Angela Belcher of the Department of Materials Science and Engineering and the Biological Engineering Division, Edgerton Center Instructor Amy Smith (S.M. 1995), Broad Institute associate Vamsi Mootha, and Julie Theriot (S.B. 1988) will each receive $500,000 in no-strings-attached support.

Belcher, 37, got the news early last week in her MIT office. "She knew something exciting was happening," she said, "because the person who called said, 'Are you sitting down? Are you by yourself?'"

Although she's still getting used to the news ("I was very shocked and very surprised," she said), Belcher said she foresees using the award in two ways. "It will be a catalyst for exploring new ideas in my lab and, equally important, let me contribute more to my community through science outreach to kids."

Coaxing viruses

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According to a biography from the MacArthur Foundation, Belcher has "demonstrated a proclivity for developing new techniques for manipulating systems that straddle the boundary of organic and inorganic chemistry at the molecular scale. In her most recent work, she has genetically modified viruses (strains that only attack bacteria and are harmless to humans) to interact with solutions of inorganic semiconductors, yielding self-assembling metal films and wires with diameters only billionths of a meter across."

"The ability to control this self-assembly process may one day lead to the next generation of microelectronics or other nanoscale machines," the Foundation said. Belcher is excited to further extend her work "to medical applications with some of the materials we're developing," she said, and has also recently become interested in energy-efficient batteries and lighting.

Belcher received the B.S. (1991) and Ph.D. (1997) from the University of California, Santa Barbara. She was a professor at the University of Texas, Austin, before joining the MIT faculty in 2002 as the John Chiplman Career Development Associate Professor of Materials Science and Engineering and Biological Engineering.

Helpful inventions

Amy Smith, 41, is dedicated to using technology to solve problems in the developing world. Smith said the MacArthur award "is pretty exciting, though a little scary.

"I've always operated on a shoestring. I'll be odd to do it differently for a change."

Smith is a mechanical engineer and inventor who designs "life-enhancing solutions and labor-saving technologies for people at the far end of dirt roads in the world's most remote societies—people facing crises that erupt in health clinics with no electricity and in villages with no running water."

DeFrantz taps across the water

Three MIT dancers in tap shoes and street clothes transformed the soundproof Ford Room (3-152) into an international conversation exploring movement, culture and technology's role in teaching conversation exploring movement, culture, and six student dancers performed hip-hop movements to Indian music. Called "Movers Across the Water: Tap and Hip-Hop," the SMA dance dialogue with the National University of Singapore (NUS) is the first in a new series, said Alan Brody, provost for the arts, in his opening comments.

The Singapore-MIT Alliance is a program that engages MIT, the National University of Singapore and Nanyang Technological University. But are any interviews conducted.

Candidate are nominated, evaluated and selected through a confidential process; no one may apply for the awards.

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Aero/astro’s Unified Engineering is largest on OCW site

Jon Paul Potts
MIT OpenCourseWare

Say the words Unified Engineering or Course 16.01 in the hallways of NASA’s headquarters or the Jet Propulsion Lab in California, and at least a few heads will turn.

Mention this famous course from MIT’s Department of Aeronautics and Astronautics to any of the department’s alumni of the last 30 years and you are certain to get a response.

The challenging course is the bane of sophomore year for aero/astro majors. It combines the disciplines of materials and structures, computer programming, fluid mechanics, thermodynamics, propulsion, signals and systems, and systems and labs, into a year-long course designed to introduce the systemic nature of aeronautical engineering.

And it is by far the biggest course ever published on the MIT OpenCourseWare (OCW) site. It’s inclusion marks a major publishing milestone for OCW and a major opportunity for the aero/astro department to share its unique pedagogical approach with the world.

“Unified Engineering” is a true MIT course—about 1,500 different students have taken the course since 1973, and nearly 2,500 students have struggled with it. The department has always had the philosophy that the course would be open to the world, OCW lets us do that.”

Professor Steven R. Hall, a 2002 MacVicar Faculty Fellow, is a lead instructor on the course. He and professors Gregory Dness, Ian Waitz, and Peter Young contributed material to the semester project.

Last fall, MIT President Charles M. Vest and Caltech President David Baltimore initiated the voting technology project in October 2000, following the election fiasco the previ-ous month. The group, composed of both political scien-tists and engineers, is charged with evaluating the current state of reliability and uniformity of U.S. voting systems, establishing uniform attributes and quantitative guidelines for performance and reliability of voting systems, and pro- posing specific uniform guidelines and requirements for reliable voting systems.

The researchers recommend the following seven steps.

1. Make sure you are registered. Look on the Internet or call the local election office to find out if you are on the precinct’s list of registered voters and if you need to bring identification.

2. Get a sample ballot from your local election office.

3. Bring your sample ballot to help you in the voting booth.

4. Try to vote between 10 a.m. and 4 p.m. or allow extra time for long lines. The times before work, during the lunch hour, and after work are especially busy, so if you can avoid voting at these times, you should try to do so.

5. Know your rights and ask for help if you need it. You can obtain information beforehand from your local election office, but don’t be afraid to ask officials at the polling site for help.

6. Don’t leave the polling place without casting your vote. You have a right to vote if you are registered, even if your name does not appear on the voters roll. Ballots vary across the nation, so ask the poll workers in your precinct if you can cast a “provisional” or “false name” vote. In some parts of the country, if you cast a provisional ballot in the wrong precinct, your vote may not get counted, so be certain you vote in your home state.

7. Double-check that your ballot reflects how you want to vote before you turn it in. Common problems include unnecessarily voting for more than one candidate for an office or a measure. If you are certain you wish to vote for all the candidates and measures you wish, vote for both the front and back of a two-sided ballot. If you make a mistake, ask a poll worker for a new ballot.

This information, as well as information about local elec-tions, has been compiled at http://vote.mit.edu.

Aero/astro’s Unified Engineering is largest on OCW site

Senior Ben Wagner (center) helps graduate student Sian Kleindienst (foreground) register to vote during a Rock the Vote event on Kresge Oval Friday.

Rockin’ event registers voters

Sasha Brown
News Office

In an attempt to draw more young voters to the polls, MIT came up with Rock the Vote 14 years ago. Thanks to a number of campus groups, Rock the Vote came to MIT Friday, Sept. 24.

Rock the Vote is unique in its approach. The organi-zation uses pop culture and other entertainment to appeal to voters aged 18-24, a group traditionally showing low numbers at the polls.

Offering free lunch, loud music, dancing and even salsa lessons, the event drew a steady stream of students to Kresge Oval through the afternoon and into the evening. Students could register to vote and apply for absentee bal- lots in their home states. Fifteen organizations, including the MIT Arab Student Organization, MIT Black Graduate Student Association, MIT College Republicans and MIT College Democrats, sponsored the outdoor event.

Fresman Zandle Williams of Houston, Texas, was a registered voter, but applied for an absentee ballot.

“Just the other day I was at work and a co-worker said, ‘I’m just out here buying plants in the Student Center and saw this,’ said Williams. ‘It seemed like the best time to go ahead and do it.’

Though Rock the Vote is a non-partisan organization, most of the students already knew who they were going to vote for this year. Williams thought it important that she vote in Texas, home of President George W. Bush.

“I am voting for Kerry, absolutely,” said Williams. “But it is obviously not the norm in Texas.”

Greg Dennis, graduate student studying computer science, was helping to register people. Though he is a member of the MIT Green Party, he was not trying to sway voters.

“I am non-partisan here,” said Dennis, who said he’d never seen so many people register at a single campus event. “There’s a lot at stake in this election, he said.

In fact, the numbers of MIT students voting in the last election are significantly higher than the nationwide average for the 18-24 age group. According to an editorial in the New York Times on Sept. 28, the national average voter turnout for that age group in the last presidential election was about 35 percent.

City of Cambridge records from the 2000 presidential election indicate that the two MIT precincts reported 45 percent and 42 percent turnout. (Overall, the turnout in Cambridge was 64 percent.) These numbers belies the fact that many more students vote by absentee ballot in their home state.

Toya Pujol-Mitchell, a sophomore in mechanical engi-neering, applied for an absentee New York ballot for this year. “I am a New Yorker,” she said. “And I want to vote in New York.”

She was not alone. Of the 184 forms filled out Friday, 60 percent were out-of-state forms and requests for absentee ballots, said graduate student Shahab Elborai, president of the Arab Student Organization.

Voting experts list 7 steps to ensure all votes count

Voting experts from MIT and the California Institute of Technology say that American voters can take seven crucial steps to ensure that their votes are counted in the Nov. 2 presidential election.

In the 2000 presidential election, as many as six mil-lion votes were lost, including three million due to voter registration mix-ups. Two million additional votes were lost due to faulty voting equipment and confusing ballots, and another one million, as the result of polling-place problems.

Researchers with the California Technology Project made the announcement Sept. 21 after studying U.S. elections for four years.

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Subscribers may call 617-252-3550 or send e-mail to mailsvc@mit.edu.

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MACARTHUR

Continued from Page 1

clean water,” according to the MacArthur Foundation biography.

Striking in their simplicity and effectiveness, her inventions include grain-grinding hammer mills, water-purification devices and field incubators for biologic testing, each reflecting her inordinate creativity and ingenuity,” the biography said.

“I currently have very little funding for my projects, so this gives me a lot more flexibility,” said Smith, who is working on two projects in Haiti. “I will be able to move forward a lot faster now. There’s so much to do in Haiti, it’s really nice to have the resources to keep these projects going, and start new projects, too.”

Smith said she often meets people in the countries where she works who have had problems for projects of their own, but no resources. “Now I’m in the position where I can help with those resources, which is pretty cool,” she said.

Smith received the S.B. (1984) and S.M. (1995) from MIT, between undergraduate and graduate school, she was a Peace Corps volunteer in Botswana. In 2000 she joined the staff of the MIT Edgerton Center, where she codirected the MIT IDEAS Competition (Innovation, Development, Enterprise, Action, Service) for students who developed designs to solve community problems.

She teaches a class at MIT called D-Lab that combines many of her interests—teaching, international development, invention and design.

“I think we’ve worked out a pretty nice model, where we start by teaching about international development and appropriate technology and begin working with community partners in developing countries. Then we travel to work with these partners in the field, spending the Independent Activities Period implementing some of what we learned in the class, and identifying additional projects to work on back at MIT during the next semester,” said Smith. Students working on the projects are often able to go back to the field in the summer for the next round of fieldwork supported by the IDEAS Competition or MIT Public Service Center fellowships.

Treating diabetes

Vamsi Mootha, 33, told the Boston Globe that he initially thought the call from the MacArthur Foundation was a prank. “It was a very odd, surreal conversation,” said Mootha, who in addition to being an associate member of the Broad Institute of MIT and Harvard is also an assistant professor of systems biology at Massachusetts General Hospital.

According to the foundation, Mootha is converting the “promise of new technologies such as genomics and proteomics into tangible, important insights regarding basic biological processes and the sources of human diseases.” Earlier this year Mootha and colleagues reported a discovery that suggests a new treatment for adult-onset diabetes. Specifically, they found a gene that revs up the energy-producing ability of muscle cells. Doing so could lessen the harmful effects of the disease.

Mootha was also honored by the MacArthur Foundation for pioneering “powerful, adaptable computational strategies for mining data collected in laboratories throughout the world, providing an efficient means to hunt down gene interactions that lead to a wide variety of diseases.”


In September 2004, he completed a postdoctoral fellowship at the Whitehead Institute for Biomedical Research and the Broad Institute, as well as an instructorship in medicine at Brigham and Women’s Hospital.

Understanding bacteria

Julie Theriot O.B. (1980) was cited by the foundation for “unraveling the secrets of bacterial infection by illuminating basic biophysical processes underlying movement of cells and the pathogens that invade them.” Theriot, 36, is an assistant professor of biochemistry, microbiology and immunology at Stanford University.

MANDARIN

Continued from Page 1

ball—he ran cross-country throughout high school—He and his friends organized games of tackle football every other weekend. These were no light games, he said. In one game, a player hurst his spleen. “I guess we played pretty rough,” he said with a laugh.

But for He, football is about more than brute force.

“It’s a beautiful sport,” he said. “Each play is skilfully thought out.”

Until 1997, his experience of football was limited to watching college games. But that year, he turned on the television to watch the New England Patriots play the Green Bay Packers in Super Bowl XXXI. New England lost, but that day in late January, a future star was born.

“They are a great franchise,” said He.

After coming to MIT two years ago, He expected to watch the Patriots, but never to get as close as he is now.

Last summer, he was living on campus when he received a group e-mail noting that the Patriots were looking for someone to translate their news into Mandarin—he knew He was right for the job.

When Kirsch received He’s audition tape—an audio recording of He translating the Patriot’s video news into Mandarin—he knew He was right for the job.

After two Super Bowl wins, the team was looking to expand globally, said Fred Kirsch, director of interactive services.

“In September 2004, he completed a postdoctoral fellowship at the Whitehead Institute for Biomedical Research and the Broad Institute, as well as an instructorship in medicine at Brigham and Women’s Hospital.

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Better rates for MIT calling cards

Information Services and Technology (IS&T) has negotiated a new calling card contract with Qwest that has significantly lower rates than those available through AT&T. New Qwest calling cards have been activated for every member of the community who has an MIT AT&T or Verizon calling card.

Effective Oct. 1, the new Qwest calling cards will use the 1-800-63-TMIT number, and that number will no longer work for AT&T calling cards. To use the AT&T calling card, dial 1-800-CALLATT. How ever, IS&T encourages those with MIT calling cards to use the new Qwest cards instead. For details, see the IS&T web site.

Awards nominations due

The deadline for nominating co-workers for the 2005 MIT Excellence Awards is Wednesday, Oct. 13. This is a great opportunity to recognize peers and colleagues for their exceptional contributions in five categories: Bringing Out the Best, Work/Life Balance, Going Above and Beyond, Creating Connections, and Innovative Solutions. Go to the Human Resources web site for details on award criteria, useful tips for writing a nomination and to get a nomination form (online and downloadable forms are available). Contact Kande Culver, Rewards & Recognition program administrator, at 253-5086 or rewards@mit.edu if you have questions.

Gallery seeks student art

Students are welcome to apply to put up an exhibit of their artwork in the Wiesner Student Art Gallery on the second floor of the Student Center. Call the Office of the Arts at 253-7019 for more information.
A leader in the field of mitotic cell cycle regulation, Angelika Amon has discovered regulatory networks that govern and ensure the fidelity of chromosome segregation during mitosis and meiosis. Deciphering the networks that ensure accurate chromosome segregation is vital to understanding normal cell division as well as the abnormal events that lead to cancer and birth defects.

John W.M. Bush
Mathematics
Joined MIT faculty: 1998

Bush is a fluid dynamicist whose recent work has focused on problems in interfacial phenomena and biocomotion. He has worked on bubble dynamics, the tears of wine, the form and stability of fluid jets and sheets, and recently, the locomotion of water-walking creatures.

Daniel A. Spielman
Mathematics
Joined MIT faculty: 1996

Spielman’s research bridges discrete mathematics with a wide range of studies in theoretical computer science. He has been especially influential through his constructions of error-correcting codes and his introduction of smoothed analysis.

Leonid Kogan
Physics
Education: M.Sc. 1993 (Moscow State University), Ph.D. 1995 (Cornell University), Ph.D. 1999 (MIT).
Joined MIT faculty: 2001

Lecturer Matthew Lang
Physics
Education: B.S. 1979 (University of California, Santa Cruz), Ph.D. 1986 (MIT).
Joined MIT faculty: 1998

Kogan's research interest is in the general area of asset pricing, focusing mainly on the links between observed asset prices, firms technology and investment decisions and the preferences and beliefs of market participants.

Roberto Rigobon
Economics
Joined MIT faculty: 1997

Rigobon is a researcher in international economics whose publications stand out in three fields: international finance, monetary economics and econometrics.

Several MIT faculty members have been appointed to named professorships. All appointments are effective July 1, 2004.

Assistant Professor Jongyoon Han of electrical engineering and computer science (EECS) is the next holder of the three-year Karl Van Tassell Career Development Professorship, established by Van Tassell (S.B. 1925) in 1986.

Assistant professors Marco A. Baldi of EECS and Daniela Pucci de Farine of mechanical engineering each will hold the Esther and Harold E. Edgerton Professorship for a three-year term. The professorships were established in 1973 by the MIT Corporation to honor the Edgertons.

Professor Henry Jenkins of the literature section in the School of Humanities, Arts and Social Sciences will hold the Peter de Florez Professorship for a five-year term. The professorship, established by de Florez (S.B. 1938), recognizes Jenkins’ devotion to the study of comedy in media.

Assistant Professor Eric Hudson of physics will hold the three-year Class of 1958 Career Development Professorship, established by the class at its 40th reunion.

Assistant Professor Matthew Lang of mechanical engineering and biological engineering will hold the W.M. Keck Career Development Professorship for three years. The professorship was established by the Keck Foundation to aid work in science, engineering and medical research.

Assistant Professor Sarah O'Connor of chemistry will hold the three-year Latham Family Career Development Professorship, established by Allen Latham Jr. (S.B. 1930) and his wife Ruth.

Assistant Professor Christopher Burge of biology will be the Whitehead Career Development Professor for a three-year term.

Professor Nancy Kanwisher of brain and cognitive sciences will hold the Ellen Swallow Richards Professorship for a five-year term. The professorship was established in 1973 to honor MIT’s first woman graduate and first woman teacher.

Professor Barbara Imperiali of chemistry will be the Class of 1922 Professor for a five-year term.

Assistant Professor Fiona Murray of the Sloan School will hold the Class of 1922 Career Development Professorship for three years.

Assistant Professor John Curran, assistant professor of organization studies at Sloan, will hold the MIT Sloan Career Development Professorship for a three-year term. The professorships were established in 1980 by the Sloan Group in 1980.

Assistant Professor of History Meg Jacobs will hold the Class of 1947 Career Development Professorship for a three-year term.

Associate Professor of Design and Computation John Maeda of media arts and sciences is the next holder of the Rudge and Nancy Allen Professorship for a five-year term. E. Rudge Allen (S.B. 1948, S.B. 1949) was a member of the MIT Corporation at the time of his death in 1990.

Assistant Professor J. Meein Yoon of architecture will hold the Class of 1948 Career Development Professorship for a three-year term. The professorship was established by the class at its 40th reunion.

Assistant Professor Martin Culpepper of mechanical engineering will be the next Rockwell International Career Development Professor for a three-year term. The professorship was endowed in 1985 by Rockwell International Corp.
School of Humanities, Arts and Social Sciences

Daniel Fox
Linguistics and philosophy
Education: M.A. 1993 (Tel Aviv University), Ph.D. 1998 (MIT).
Joined MIT faculty: 2001

Fox’s main research specialty is the interface between syntax and semantics. His publications contain important new linguistic data, and his claims that quantifier scope and pronominal binding are governed by optimization principles initiated a whole new research program in the field.

Norvin W. Richards III
Linguistics and philosophy
Joined MIT faculty: 1999

Richards, who is well known for his ability to learn languages, has taken over the field methods course formerly taught by Ken Hale. Richards’ main research focus is on issues of movement in syntactic theory, and he has made important breakthroughs in the field. Richards has also devoted significant time to preserving endangered languages such as Lardil (Australia) and Wampanoag (New England).

Thomas F. DeFratz
Music and theater arts
Joined MIT faculty: 1997

As a dance scholar and historian, DeFratz’ areas of inquiry range from ballet to all forms of modern and popular dance. A gifted tap performer, DeFratz uses this genre to explore the history of movement and of music. He also has challenged MIT dance students to perform at a new level of sophistication and creativity.

Helen Elaine Lee
Writing and humanistic studies
Joined MIT faculty: 1997

Lee is a highly regarded author whose general subject, the lives and families of African-Americans, has come vividly to life in two well-received novels, “The Serpent’s Gift” (1994) and “Water Marked” (1999). An inspired teacher and mentor at MIT, Lee has also served as fiction editor of “Callaloo,” a major literary journal, and as a volunteer writing teacher in Boston-area correctional facilities.

School of Engineering

William H. Green, Jr.
Chemical engineering
Education: B.A. 1983 (Swarthmore College), Ph.D. 1988 (University of California, Berkeley).
Joined MIT faculty: 1997

An expert in chemical kinetics, Green uses detailed chemistry, quantum mechanical calculations and advanced numerical methods to build accurate simulations. These make it possible to predict chemical kinetics even when no experimental data are available, and thus to design rationally new engines, fuels and chemical manufacturing processes.

Saman Amarasinghe
Electrical engineering and computer science
Joined MIT faculty: 1997

Amarasinghe specializes in the areas of programming languages and compilers. His chief interests are compiler optimizations, computer architecture, compiler-driven engineering and parallel computing. Amarasinghe is currently working with some of his students on a solution to the Internet worm problem.

William T. Freeman
Electrical engineering and computer science
Education: B.S. and M.S. 1979 (both from Stanford University), M.S. 1981 (Cornell University), Ph.D. 1992 (MIT).
Joined MIT faculty: 2004 (as associate professor without tenure).

Freeman’s current research interests include machine learning applied to computer vision and interactive applications of computer vision. His previous research topics include steerable filters and pyramids, color constancy, and computer vision for computer games. He holds 18 patents.

Tommi Jaakkola
Electrical engineering and computer science
Education: M.Sc. 1992 (Helsinki University of Technology), Ph.D. 1997 (MIT).
Joined MIT faculty: 1998

Jaakkola’s primary research areas include statistical inference and estimation, machine learning and computational biology.

School of Management

Edward Steinfield
Political science
Joined MIT faculty: 1996

The author of “Forging Reform in China,” Steinfield is a sinologist and comparative whose focus is Chinese political economy. His research aims to show that to function successfully, markets depend on their institutional and cultural setting as well as on privatization and deregulation.

Charles M. Oman
Director of the Man Vehicle Lab in MIT’s Center for Space Research, has been elected a Corresponding Member of the International Academy of Astronautics (IAA). Oman, who is a senior lecturer and senior research engineer in the Department of Aeronautics and Astronautics, has served as the principle investigator for shuttle/spacelab and International Space Station projects, and chairs the NASA Advisory Council Space Station Utilization and Advanced Design Panel. He is one of only 11 individuals worldwide elected to IAA Life Science Section membership this year. IAA fosters the development of astronautics for peaceful purposes and enables its members to contribute to international endeavors and cooperation in the advancement of aerospace science.

The Sloan School of Management Buck Weaver Award was presented on Sept. 11 to David Aaker, professor emeritus at the Haas School of Business at the University of California, Berkeley, at a conference at MIT in honor his. The award, which is sponsored by General Motors Corp., was established last year to honor individuals who have made important contributions to the advancement of theory and practice in marketing science. Aaker is the author of 13 books and 100 articles, focusing primarily on the field of branding.

“David Aaker has been a pioneer in preaching the doctrine of brand equity. He has brought a rare blend of analytical thinking and practical insight to the field of marketing strategy,” said Professor Glen Urban of Sloan. Members of the selection committee also noted his leadership in the marketing community.

Professor Stanford Anderson, head of the Department of Architecture, was presented the 2004 Topaz Medalion for Excellence in Architecture Education by the American Institute of Architects (AIA) and the Association of Collegiate Schools of Architecture. The Topaz Medalion honors an individual who has made outstanding contributions to architectural education for at least 10 years. Anderson founded the Ph.D. program in architecture and has taught for more than 40 years, concentrating on history and architecture. The AIA cited Anderson’s “intellectual and institutional leadership. He has made history and theory relevant to practice and education. Graduates of the MIT program practice, teach and govern all over the world.”

Cisco Systems presented the Cisco Achievement Program Award to Varun Parnar, a graduate student in the Systems Design and Management program. Parnar, who has an internship at the company while conducting his thesis research, received the award for his contribution to the redesign of Cisco’s optical technology supply chain. “Varun has gone way beyond the level of performance expected of an intern by challenging the status quo of our business and initiating fundamental changes in the way we do business in the optical networking group,” said Andrew Buckley of Cisco.

“Cisco could not have made many of these mental leaps without his tremendous understanding of supply chain principles and his outstanding ability to influence.”

AWARDS AND HONORS

- Charles M. Oman, director of the Man Vehicle Lab in MIT’s Center for Space Research, has been elected a Corresponding Member of the International Academy of Astronautics (IAA). Oman, who is a senior lecturer and senior research engineer in the Department of Aeronautics and Astronautics, has served as the principle investigator for shuttle/spacelab and International Space Station projects, and chairs the NASA Advisory Council Space Station Utilization and Advanced Design Panel. He is one of only 11 individuals worldwide elected to IAA Life Science Section membership this year. IAA fosters the development of astronautics for peaceful purposes and enables its members to contribute to international endeavors and cooperation in the advancement of aerospace science.

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- “David Aaker has been a pioneer in preaching the doctrine of brand equity. He has brought a rare blend of analytical thinking and practical insight to the field of marketing strategy,” said Professor Glen Urban of Sloan. Members of the selection committee also noted his leadership in the marketing community.

- Professor Stanford Anderson, head of the Department of Architecture, was presented the 2004 Topaz Medalion for Excellence in Architecture Education by the American Institute of Architects (AIA) and the Association of Collegiate Schools of Architecture. The Topaz Medalion honors an individual who has made outstanding contributions to architectural education for at least 10 years. Anderson founded the Ph.D. program in architecture and has taught for more than 40 years, concentrating on history and architecture. The AIA cited Anderson’s “intellectual and institutional leadership. He has made history and theory relevant to practice and education. Graduates of the MIT program practice, teach and govern all over the world.”

- Cisco Systems presented the Cisco Achievement Program Award to Varun Parnar, a graduate student in the Systems Design and Management program. Parnar, who has an internship at the company while conducting his thesis research, received the award for his contribution to the redesign of Cisco’s optical technology supply chain. “Varun has gone way beyond the level of performance expected of an intern by challenging the status quo of our business and initiating fundamental changes in the way we do business in the optical networking group,” said Andrew Buckley of Cisco.

“Cisco could not have made many of these mental leaps without his tremendous understanding of supply chain principles and his outstanding ability to influence.”
Love the look of high heels, but can’t stand the pain? MIT alumni Brian G.R. Hughes (S.B. 1977) and Paul Rudovsky (S.B. 1964) have found a way to benefit society with it.

Hughes and Rudovsky met while serving on the MIT Corporation in 1996, and neither of the former Alumni Association presidents expected to be involved in the fashion industry. Hughes’ resume includes building the first private trans-Atlantic telecommunication system and running his own hybrid rocket development company. Rudovsky has served as CFO of several public and private companies as well as CIO of a clothing manufacturer.

Ironically, it was Hughes, the former rocket builder, who first came up with the idea of using raw data to help others. “One old guy, sitting in a rocking chair, was talking about ingenuity and cost-effective fabrication that could enable a whole new range of applications, such as catalysis, drug delivery, and photonics. ‘The world’s cellular network: amplifiers based on a new ribbon-brain vacuum tube technology’”

Graduate students who dream of bringing technologies from the test tube to the market can learn how to do it in a new hands-on course called i-Teams. The course kicks off officially tonight (Sept. 29), at 7 p.m., in the three-week, team-building process.

I-Teams (short for Innovation Teams) is a joint effort of the Sloan School and the School of Engineering. Each i-Team consists of five to seven students who develop go-to-market strategies for innovations created in Institute laboratories using grants from the Deshpande Center for Technological Innovation.

“Everybody talks about how MIT innovation and ingenuity have fueled the engine of American commerce, but nobody understands how that happens,” said Ken Zolot, a senior lecturer at Sloan who is an i-Team instructor. “How do you go from being a scientist in a lab to a founder of a company, taking raw data and figuring out how to benefit society with it?”

Alumni Brian Hughes, chairman of Insolia shoe company, explains the engineering used in his product to make high heel shoes more comfortable.

Hughes and Rudovsky launched a student-run business in 2006, and switched from a grassroots marketing strategy to a technology licensing strategy and Rudovsky had signed on as CFO.

Currently, Insolia is already utilized in women’s shoes sold in the United States, China, Hong Kong, Japan, Canada, and the Czech Republic.

I-Teams course readies technologies for market

Lauren Clark
School of Engineering

“MIT is so big when it comes to innovation. I wanted to experience it myself,” said Darrel Quah, a student in the Systems Design and Management program who is involved in a project developing low-cost X-ray systems.

The syllabus is designed to reflect the way early entrepreneurship works. “You don’t spend all semester thinking about your grand vision and then present it. You present your grand vision in the second week and then test it,” said Zolot. “The most important thing the students do is go out and talk to potential customers, license your technology, and develop commercialization plans. Then when they apply for the course, students must show that they have professional or research experience relevant to their chosen lab.

They spend the first three sessions building teams according to Professor Deborah Ancona’s ‘X-teams’ philosophy, which emphasizes flexibility. They hash out the roles—leader, technology specialist, marketing specialist—that each team member will play as a company founder. The idea is to put together the most effective team possible for bringing a technology to market. In the process, the students experience the ‘intangible human element of entrepreneurial team formation,’ said Zolot.

In the next phase of the course, each team tests and retests its commercialization strategy. Guided by the lab’s principal investigators, faculty from MIT’s Entrepreneurship Center and leaders from the local business community, the graduate students identify a market for their lab’s scientific breakthrough, develop an intellectual property strategy, perform competitive analysis, and identify the appropriate business model.

The end result is a go-to-market plan that might actually go somewhere. For example, after some PR, the company that won last spring’s 50K Entrepreneurship Competition, credited the fulfillment of a dream to their i-Teams course. Active Joint Brace is developing an electro-mechanical orthotic device that augments physical capability in people with spinal cord injuries and other disabilities.

The MIT Venture Capital and Private Equity Club, and the MIT Entrepreneurship Center also provide support for the teams. Course instructors are Zolot, Professor Charles Cooney, faculty director of the Deshpande Center; and Edward Rob- ert, the David Sarnoff Professor of Management of Technology.

I-Teams projects for the fall semester are:

• Low-cost X-ray systems: a low-cost x-ray imaging system made with off-the-shelf consumer digital imaging equipment that could be used in the developing world.

• Microfluidic platform for biosciences: a microfluidics-based hybridization platform for faster, easier biological assays.

• Fuel cell breakthrough: an innovative approach to using fuel cells and metalair batteries that could break the cost barriers impeding mass marketing of these devices.

• Collodial crystals in minutes: rapid, cost-effective fabrication that could enable a wide range of new applications, such as catalysis, drug delivery and photonics.

• Powering the world’s cellular network: amplifiers based on a new ribbon-brain vacuum tube technology.

Members of the MIT community may submit one classified ad. Ads can be resubmitted no later than two weeks in a row. Ads should be 20 words maximum; they will be edited. Submit by e-mail to techads@mit.edu or mail to Tech Ads, 2-100, 77 Massachusetts Ave., Cambridge, MA 02139. Deadline is noon Monday the week before publication.
List launches season with trio of shows

The List Visual Arts Center launches its Fall 2004 season with three shows and an opening reception from 5:30 to 7:30 p.m. on Thursday, Oct. 7. The shows will be on view through Dec. 31. Artist talks, film nights and special gallery tours will accompany the exhibitions.

The Aging Body

“Body Parts: A Self-Portrait by John Coplans” showcases a series of 26 large-scale, center-mounted self-portraits of the artist’s aging body taken shortly before his death in August 2003. As an art critic and curator for most of his career, Coplans abandoned these paintings in 1985, at age 60, an almost immediately successful photographer: Intent on an unusual process of self-deconstruction, he told Art Journal in 1990 that “the principal thing is to present my work as our culture views age: that old is ugly.”

“The exhibition was organized by Charles Stainback, director of SITE Santa Fe, and List Center Director Jane Farver, in consultation with the artist.

Poetry and science

Welsh artist Cerith Wyn Evans’ new site-specific projects explore the complex relationships between image and word, poetry and science, and spoken and written language. The exhibition’s centerpiece, Cerith Wyn Evans: Thoughts unsaid, now forgotten…” is presented simultaneously with a celebration of Wyn Evans’ work at the Museum of Fine Arts (MFA). Evans will give an artist’s talk on Saturday, Oct. 9 at noon at the List Center.

The List presentation, organized by curator Bill Arning, consists of several installation components, including “The Slide Rule Man,” an MIT audio recording from the 1960s of a man who traveled to science-based schools inscribing students’ names on their slide rules.

One of Wyn Evans’ pieces, “WMBR Radio Station,” is the original 1960’s wood-paneled broadcast studio from WMBR, MIT’s radio station. The piece pays respect to technologies that were around before the Internet, when radio was a more important tool for communication. On this equipment, the station explored disco and reggae in 1974 and punk in 1975. “The major themes of Wyn Evans’ work—information, poetry, art, science and communication—are all incorporated in these exquisite reliefs,” said Arning.

Filming Israel

A still from the film “When Adar Enters” by Yael Bartana shows a young boy celebrating Purim.

An alchemist who believed he had unraveled revelation, Sir Isaac Newton was a genius with a medieval mind in the beginning of the modern age, obsessed with finding the unity of God’s designs through science, alchemy and the Bible.

Such is the premise of “Small Indifi-
ties,” a new play by Alan Brody, associ-
ate provost for the arts, that explores the life and paradox of the father of modern science.

“I was originally urged to write a play about the Leibniz-Newton controversy without provoking the writing of the calculus,” said Brody. “As I began to research the material, I became more and more fascinated by Newton, the man,” he said.

Here was the postenlightenment father of modern science with a thoroughly medieval mind, a man who may well have believed he was the prophet of God. I realized I needed to deal with more than the Leibniz controversy to begin to explore his rich contradictions,” he said.

The Underground Railway Theater in association with the MIT Office of the Arts will present a stage reading of the play on Wednesday, Oct. 6 at 7:30 p.m. in Room 10-250. Jon Lipsky will direct the reading, which will feature actor Richard McElvain as Newton.

The reading will be followed by a dis-
cussion with panelists from the Greater Boston theater and science communi-
ties, moderated by physicist/novelist Alan Lightman.

—Mary Hailer, Office of the Arts

‘Beyond Exile’ focuses on creativity in Central Europe

Foreign Languages and Literatures and The Center for Bilingual/Bicultural Studies are hosting a month-long festival of film, poetry and politics titled “Beyond Exile: Central European Writing and Film.”

On Monday, Oct. 4, poet, novelist and essayist Adam Zagajewski, called the “pre-
eminent Polish poet of his generation” by The New Republic, will present a reading at 7 p.m. in Room 32-155 in the Stata Cen-
ter.

Zagajewski was born in Lvov in 1945, a largely Polish city that became a part of the Soviet Ukraine shortly after his birth. His ethnic Polish family, which had lived for centuries in Lvov, was forcibly repatri-
ated to Poland. His most recent books are Canvas and Mysticism for Beginners,” “Two Cities and Another Beauty” and “Without End: New and Selected Poems,” which was nominated for a 2002 National Book Critics Circle Award. Zagajewski is also the author of a book of essays and literary sketches.

On Tuesday, Oct. 5, Zagajewski will join fellow poets Robert Pinsky, U.S. Poet Laureate 1997-2000, and Derek Walcott, winner of the 1992 Nobel Prize for litera-
ture, in a conversation titled “Poetry and Politics” at 6 p.m. at Boston University’s Photonics Center (68 S. Mary’s St.). Pinsky and Walcott are both professors of English and Creative Writing at Boston University.

Artist provost explores Isaac Newton in new play

An alchemist who believed he had unraveled revelation, Sir Isaac Newton was a genius with a medieval mind in the beginning of the modern age, obsessed with finding the unity of God’s designs through science, alchemy and the Bible.

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ties,” a new play by Alan Brody, associ-
MIT EVENT HIGHLIGHTS SEPTEMBER 29 - OCTOBER 3

WEDNESDAY September 29

Halit - Moving Forward After Failed Revolt

How to Understand Syrian Politics: One Historian's View
Dejan P. Kouchy. Noon-1:30pm. Room 3-133. 253-8438.

THURSDAY September 30

Tuesday: Tell It Like it is: Student Activism at MIT during the Vietnam War
Last day of display of posters from the campus-wide protest in the 1970s. 10am-5pm. Free with an MIT ID. MIT Museum. 253-4444.

Transportation Fair
11am-1pm. Lobby 10. 253-9325.

FRIDAY October 1

Voting Technology Conference 2004: Transition, Caltech/MIT Voting Technology Project 8:30am-8pm. Room 3-341.

FRIDAY October 1

Men’s Varsity Tennis hosts ITA New England Championship Begins 9am Friday. Saturday and Sunday. du Pont Tennis Courts, Cam Tennis Bubble, Johnson Athletic Center. 258-5265.

SATURDAY October 2

Fresh Pond Clean-Up
Join Sloan alumni in clean-up trails at Fresh Pond in Cambridge. Registration required. Photos show locations. 9:30am-1pm. Fresh Pond, Cambridge. 508-858-3149.

Volunteer on the Esplanade
Join the Student Volunteer Corps for a day of painting and pruning along the Esplanade. 10am-2pm. Charles River Esplanade, Boston.

SUNDAY October 3

Mooncake Festival
Celebration of mooncakes and play with lanterns with MIT Singaporean students. Dinner provided. 7-10pm. Lobby 10.

*Fahrenheit 9/11*
LSC $3. 7pm. Room 26-100. 253-3791.

Movie Night in the Sukkah
Bring a blanket and watch “The Big Lebowski” in the sukkah. 7:30pm. Kresge Oval.

International Folk Dancing (participatory)
Folk Dance Club. Admission $1; MIT/ Wellesley fee, 8-11pm. Student Center, Lobdell Dining Hall. 253-FOLK.

*Dodgeball: A True Underdog Story*
LSC $3. 10pm. Room 26-100. 253-3791.

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

MIT EVENT HIGHLIGHTS OCTOBER 4 - 10

MONDAY October 4

Mars Settlement Brainstorming
Help plan the first permanent settlement constructed on another world. 6-8pm. Bldg 33, first floor.

“7 Up South Africa” Screening
by filmmaker Angus Gibson. 7pm. Room 4-231. 253-2341.

Poetry Reading by Adam Zagajewski
Part of the "Bayonid Exile: Central European Writing and Film" symposium. 7pm. Stata Center. Room 105. 253-4771.

Music Under the Stars
An evening of live music and kosher food in the MIT Sukkah. 8-10pm. Krege Oval. Open to all graduate students. 253-2982.

TUESDAY October 5

50th Anniversary of Inter-University Committee on International Migration
Manuela Ramphal, former managing director of the World Bank, will deliver keynote address. 4:30-6pm. Wong Auditorium. 253-8306.

Poetry and Politics
Panelists Robert Pinsky, Derek Walcott and Adam Zagajewski. Part of the “Beyond Exile: Central European Writing and Film” symposium. 6pm. Boston Univ., 8 St. Mary’s St., Boston.

On Production Architecture
lecture by Marc Angeli. 6:30pm. Room 10-250. 253-2791.

“Yao Yee” Screening
talk by filmmaker Angus Gibson. 7pm. Stata Center. Room 124. 253-2341.

WEDNESDAY October 6

Artists Behind the Desk
Writers Jani Moskalyk and Marielle Frass read from their work. Noon-1pm. Killian Hall. 253-9201.

The Changing Nature of State Sponsorship of Terrorism
Daniel Byman. Noon-1:30pm. Room E38-615. 4:30pm. 253-2542.

Starr Lecture

THURSDAY October 7

Black Alumni of MIT INFORMAL LECTURES
Room 34-101 1pm.

Friday:“Cünde and the开水" Screening and talk by filmmaker Cünde and the开水. 6:30pm. Room 10-250. 253-2791.

WEEDING October 7

*“Kundanhar"* 2001 Pakistan movie. 8-6pm. Room 3-133. 253-8438.

*“Small Infidels”* Stage reading of play about Isaac Newton by Alan Brody. 7:30pm. Rim 10-250.

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“Kundanhar" 2001 Pakistan movie. 8-6pm. Room 3-133. 253-8438.

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