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TechTalk

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

Faculty hears reports on health, education

Deborah Halber
News Office Correspondent

A task force chaired by Robert J. Silbey, dean of the School of Science, has been conducting a comprehensive review of the common undergraduate educational experience that will likely result in the first changes in the General Institute Requirements (GIRs) since 1991. The task force presented a progress report at the Nov. 16 faculty meeting, which was held in Room 32-141 of the Stata Center.

Faculty also heard another task force recommend keeping the basic model of services provided by the MIT Medical Department.

Some of the changes that may be in store when the review of the Undergraduate Educational Commons is complete

Task force recommends changes to academic core

include: expanding the scope of required courses with project-based experiences; giving students more individual choice; including engineering as well as science subjects in the core; and making the humanities, arts and social science (HASS) requirements simpler and more focused.

Faculty and students do not understand the goals of the science-engineering core, Silbey said.

"We think these GIRs could be changed," Silbey told the faculty. "We believe the GIRs are taught well and the subject matter is appropriate. The question raised is, why this set of GIRs and not a different set of GIRs?" The committee, he said, is taking a "completely new look" at the content and goals of an MIT education.

Under the proposed recommendations, undergraduate students would be required to take eight subjects in mathematics, physical sciences, life sciences, chemical sciences, computation and engineering, instead of the present six required subjects plus two Restricted Electives in Science and Technology (REST). Silbey said the task force's "design challenge is how to organize these eight classes into a menu that broadens the core but takes departmental programs into account. We will need a strong oversight committee to make this work."

In addition to the current science core, students are required to take eight HASS classes. Silbey said the committee has heard from students that they tend to

sign up for their science core classes and classes in their major first and then take whatever HASS classes fit their schedules. "This gives students exactly the wrong message," he said. The task force is working on a way to make the HASS requirement "simpler and less diffuse."

Meanwhile, Silbey said the current lab requirement may be "a white elephant. Every science and engineering major requires enough labs for us to be satisfied. And those courses that do not require a lab would have a capstone experience of some sort."

Given that no school can teach students "everything they need to know" for a lifetime, Silbey said the "goals of an MIT education should be made more explicit. An

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PHOTO / DONNA COVENEY

Mriganka Sur, head of the Department of Brain and Cognitive Sciences, stands on a balcony overlooking the 90-foot atrium inside the new Brain and Cognitive Sciences Complex, which will be officially dedicated on Friday, Dec. 2.

Mriganka Sur sees 'great synergy' in new complex

In advance of this week's opening of the new Brain and Cognitive Sciences Complex, News Office science and engineering writer Elizabeth Thomson conducted the following interview with Mriganka Sur, head of the Department of Brain and Cognitive Sciences.

Q. What is unique or special about MIT's approach to cognitive science and neuroscience?

A. MIT emphasized — long before it became fashionable — a highly integrated and interdisciplinary approach to understanding the brain and mind. (These fields later came to be known as neuroscience and cognitive science respectively.)

Cognitive science has its roots in [Institute Professor Emeritus Noam] Chomsky's analysis of language, showing that the mind has a structure that can be analyzed in terms of the computations it carries out. Neuroscience has its roots in the analysis of the brain and behavior, which was pioneered by the late Hans-Lukas Teuber when he founded the Department of

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Brain regions 'tune in' to coordinate activity

Deborah Halber
News Office Correspondent

Different brain regions working together may coordinate by locking into an oscillation frequency the way a radio tuner locks into a station, researchers from the Picower Institute for Learning and Memory at MIT report in the Nov. 15 issue of the journal PLoS (Public Library of Science) Biology.

The brain's electrical activity is displayed in the form of brain waves. Matthew A. Wilson, Picower Professor of Neuroscience, and Matthew W. Jones, postdoctoral

associate at the Picower Institute, explore how brain waves help different parts of the brain communicate in a broad-based network. When we are focused attentively on a speaker, for instance, brain waves called theta rhythms oscillate in sync throughout our brains. Other rhythms are prominent when we are resting or involved in intense mental activity.

Researchers have found that neurotransmitters — and antidepressants — can affect these rhythms. To our brains, the inability to shut down these brain wave communication channels is like having to listen to someone talking who won't shut up, Wilson said. Unsynchronized brain

rhythms may be tied to mood disorders or diseases such as schizophrenia, he said.

In the future, analyzing the coordination of patients' brain rhythms at the level of individual neurons and larger networks may help diagnose cognitive disorders, he said.

In the PLoS paper, Wilson and Jones looked at particular theta rhythms in rats. These rhythms are associated with complex behaviors that tap into memory and/or decision-making, such as rats exploring a maze or humans navigating, planning or

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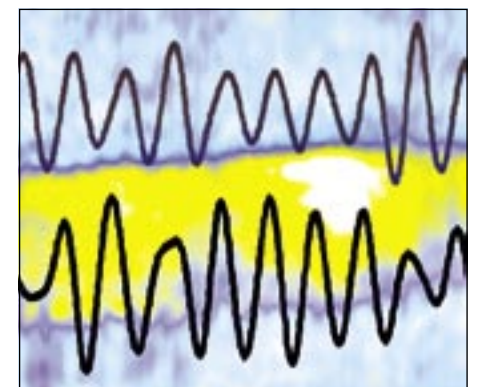


IMAGE COURTESY / MATTHEW W. JONES

The theta rhythm, simultaneously recorded in the hippocampus (grey) and prefrontal cortex (black), is shown reaching peak synchrony (the yellow streak and white blob).

PEOPLE

NATIONAL HONORS

Professors Phillip Sharp and Stephen Lippard will each receive the National Medal of Science.

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STUDENT REMEMBERED

Antimony L. Gerhardt, a graduate student in EECS, died Nov. 17.

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SPEEDY WORK

MIT researchers develop a way to quickly test the properties of hundred of materials.

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MIND MATTER

Part of the brain seems to be keeping tabs on what you've learned and what you might forget.

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The MIT Wind Ensemble plans to celebrate the 80th birthday of composer Gunther Schuller.

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HAPPY ANNIVERSARY

Former members return to MIT to celebrate Dramashop's 50th year.

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Profs to receive Medal of Science

Elizabeth A. Thomson
News Office

President Bush has announced that two MIT faculty members will receive the 2004 National Medal of Science, this nation's highest science honor.

Stephen J. Lippard, the Arthur Amos Noyes Professor of Chemistry, and Institute Professor Phillip A. Sharp are among eight honorees selected for the award.

The White House announced the recipients on Monday, Nov. 14, 2005. The awards will be presented at a White House ceremony at a later date.

Lippard was cited "for pioneering research in bioinorganic chemistry, including the interaction of metal compounds with DNA, preparation of synthetic models for metalloproteins, and structural and mechanistic studies of methane monooxygenase."

"I am very pleased to receive this honor for it recognizes the work of the

many wonderful graduate students and post-doctoral associates who have contributed to the science that we were able to accomplish," Lippard said. "It was most unexpected."

Sharp said, "I am greatly honored to receive the National Medal of Science. It is the highest honor this country bestows on a scientist and the legendary names of previous winners make the recognition very special. I want to thank MIT and my colleagues for creating such a productive environment for education and research."

Sharp's current research includes investigations into RNA interference (RNAi), a method of turning off genes using short pieces of RNA. In 1993 he shared the Nobel



Stephen Lippard



Phillip Sharp

Prize in physiology/medicine for discovering that some of the genes of higher organisms are "split," or present in several distinct segments along the DNA molecule.

The National Medal of Science was established in 1959 to be given to individuals "deserving of special recognition by reason of their outstanding contributions to knowledge in the physical, biological, mathematical or engineering sciences." In 1980 Congress expanded this recognition to include the social and behavioral sciences.

The two join 43 other current and past members of the MIT community who have been awarded the National Medal of Science.

A.L. Gerhardt dies; grad student was 24

Anne Trafton
News Office

A memorial service was held at MIT last Tuesday, Nov. 22, for Antimony L. Gerhardt, a graduate student in electrical engineering and computer science, who died Nov. 17 in her Cambridge apartment. She was 24.

Gerhardt's death appeared to be a result of injuries suffered following an accident in her apartment, said her mother, Gwendolyn Gerhardt.

Gerhardt worked in the Microsystems Technology Laboratories and was also involved in community service as a member of MedLinks, an advocacy group of MIT students who help their peers get medical information.

She came to MIT in the fall of 2000 from Hammond, La. Her mother had been staying with her in Cambridge after Hurricane Katrina struck the Gulf Coast in August.

Her classmates knew Gerhardt as "a beautifully kind, brilliant, inspiring young woman," said Nancy Keuss, a senior in physics.



Gerhardt

Martin Schmidt, director of the Microsystems Technology Laboratories, said she was a "very impressive" student who earned a master's degree only three and a half years after arriving as a freshman at MIT. She was on track to finish her Ph.D. next year. "She just seemed to have everything going for her," Schmidt said. "She was athletic, smart, very outgoing and engaging, and extremely giving of her time to others."

In 2002, she was named a Burchard Scholar in the School of Humanities, Arts and Social Sciences.

"She was very friendly, polite, and a great team member," said her MIT tennis coach, Carol Matsuzaki. "She took things seriously but always had a smile on her face."

She is survived by her parents, Kent L. and Gwendolyn L. Gerhardt of Hammond, La.; her maternal grandparents, Gilbert E. and Mary Shaver of Ottumwa, Iowa; her paternal grandmother, Suzann L. Gerhardt of Moline, Ill.; six cousins and several aunts and uncles.

For full obituary and donation information, go to web.mit.edu/newsoffice.

Posen will direct Security Studies

Sarah H. Wright
News Office

Barry Posen, Ford International Professor of Political Science, has been appointed head of the MIT Security Studies Program (SSP).

In making the announcement, Philip S. Khoury, Kenan Sahin Dean of the School of Humanities, Arts and Social Sciences, said, "Barry Posen is one of America's most talented scholars and teachers of national and international security and is the obvious faculty member to assume the leadership of MIT's nationally acclaimed Security Studies Program."

Posen will succeed Harvey Sapolsky, professor of public policy and organization in the Department of Political Science, effective July 1, 2006. Sapolsky has been SSP director since 1989.

"I am honored to have been chosen by my colleagues to direct the Security Studies Program. SSP has been my intellectual home for nearly 20 years. I could not have found a better one," Posen said.

Posen credited his predecessors and colleagues in SSP for making the program "one of the premier places in the United States to think about and to learn about all aspects of the role of military power in international politics, and the problems of disciplining that power."

"We owe great thanks to Barry for agreeing to offer us his leadership. We also owe great thanks to Harvey Sapolsky for his long and outstanding service as SSP head," said Stephen Van Evera, Center for International Studies acting director and professor of political science.

"Two generations of extraordinary leaders precede me," Posen said. "Jack Ruina created this institution, and Harvey Sapolsky nur-



PHOTO / DONNA COVENEY

Barry Posen discusses the fate of Iraq during a CIS Starr Forum held in Morss Hall on Oct. 27. Posen has just been named the new head of the MIT Security Studies Program.

tured it to adulthood. Harvey has been a great friend, a terrific mentor and an unbelievably committed and responsible director. As I face the many challenges that lie ahead, I do not think I can go far wrong by emulating him."

Posen's research topics include European Union defense policy, Army innovation and the role of force in U.S. foreign policy.

Posen is the author of two books — "Inadvertent Escalation: Conventional War and Nuclear Risks" and "The Sources of Military Doctrine" — both of which won major awards in the field.

He received the B.A. degree from Occidental College in 1974 and the M.A. and Ph.D. degrees from the University of California at Berkeley in 1976 and 1981, respectively. He taught at Princeton University before coming to MIT as an associate professor in 1987.

National Academies honors Levenson's film for NOVA

Sarah H. Wright
News Office

Thomas Levenson, associate professor of science writing in the program in writing and humanistic studies, has been awarded the 2005 National Academies Communications Award in the TV/radio category for "Origins: Back to the Beginning," a film broadcast on the NOVA series on PBS in 2004.

Philip Khoury, Kenan Sahin Dean of the School of Humanities, Arts, and Social Sciences, said, "Tom Levenson has emerged as one of the most important and versatile communicators on science and technology in this country. He's already made significant contributions to televi-

sion and as a writer, and his wonderful new award is one important indication of this fact."

Levenson served as producer, director and writer of the hour-long film. Judges praised "Origins: Back to the Beginning" for its "highly visual and accessible history of the origins and evolution of the cosmos."

Winners in three areas — books, newspapers and TV/radio — were selected from 219 entries. The \$20,000 awards were presented at a conference for the honorees held in California on Nov. 10.

"I'm very grateful to the National Academies for recognizing my film, but I have to confess that it seems almost unfair to be rewarded for doing something that is so much fun," Levenson said.

"What this award really recognizes is the importance of communicating serious science to the broadest possible public," he said.

Neil deGrasse Tyson, director of the Hayden Planetarium at the American Museum of Natural History in New York and an astrophysicist, serves as narrator for the NOVA series, which covers 14 billion years of cosmic evolution.

Levenson's film combines Tyson's fluid narration with dazzling visuals to suggest the bigness of the Big Bang. It also uses antic elements such as clips from "The Jetsons" cartoon series and images of children mastering Hula Hoops to bring physics down to earth.

He described the process of making "Origins: Back to the Beginning" as a

great collegial experience.

"I spent time with enormously creative people working at the highest levels of their disciplines — literally so, in the case of an observatory at 17,000 feet in the Andes — and letting others in on the fun is both a great pleasure and an obligation. People want to know about science. I'm very glad the Academies thought I did pretty well in communicating it," Levenson said.

The awards are administered by the National Academies as part of the National Academies Keck Futures Initiative.

They are designed to recognize excellence in reporting and communicating science, engineering and medicine to the general public.

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Brain studies stroll, explore memory lane

Cathryn M. Delude
News Office Correspondent

Final exams loom, and you must review eight fact-laden textbook chapters and a binder full of class notes. Since you've made it to MIT, you probably know how to learn. A part of your mind seems to monitor your brain, telling you if you need to review a formula again, or if you know it cold, or if you could at least recognize it on a multiple-choice test.

But exactly where is that part of the mind?

It's right there above your eyes, in the ventromedial prefrontal cortex (VMPFC) of your brain. And it's quite a separate system from the medial temporal lobe (MTL), near your ear, that actually encodes facts in your memory.

That's what John Gabrieli, an associate member of the McGovern Institute at MIT, and his colleagues at Stanford University discovered in novel functional magnetic resonance imaging (fMRI) studies peering into the brains of 18 young adults performing learning tasks.

"We've known through psychological studies that the brain performs these two functions, encoding the memory and predicting whether the information will be later recalled," said Gabrieli, lead author of a study in the December issue of *Nature Neuroscience*. "But without these brain imaging studies, we might have thought they occurred in the same brain region. This is our first insight into the different brain mechanisms for memory and prediction, what psychologists call judgments of learning."

The fMRI studies showed that one specific brain region, the MTL, becomes very active when actually encoding facts in memory, while a quite separate region, the VMPFC, lights up when people predict whether they will later remember what they've learned. These two physically and functionally distinct circuits communicate with each other through the lateral and dorsal prefrontal cortex (LDPFC) at the outer end of the cortex.

Predicting is an important part of successful learning because it allows us to judge whether we've studied enough or need to review more, explained Gabrieli, who is also the director of the Martinos Imaging Center at the McGovern Institute and the Grover Hermann Professor of Health Sciences and Technology and Cognitive Sciences. People who make more accurate predictions are better learners and better students. Gabrieli said he hopes that understanding more about the brain mechanisms involved in this type of introspection might help people become better learners.

Yun-Ching Kao and Emily Davis of Stanford contributed to this research. The study was conducted at Stanford with support from the National Institute of Mental Health/NIH.

Sleuths speed materials testing

Elizabeth A. Thomson
News Office

In work that could radically change how engineers search for new materials, MIT researchers have developed a way to test the mechanical properties of almost 600 different materials in a matter of days — a task that would have taken weeks using conventional techniques.

The new process could lead to the faster identification of dental implants that don't crack, tank armor that's more resistant to missiles, and other materials dependent on mechanical properties like stiffness and toughness.

The trick? The team, led by Assistant Professor Krystyn J. Van Vliet of the Department of Materials Science and Engineering, miniaturized the process.

Van Vliet, MSE graduate student Catherine A. Tweedie, research associate Daniel G. Anderson of the Department of Chemical Engineering and Institute Professor Robert Langer describe the work in the cover story of the November issue of *Advanced Materials*.

In 2004 Anderson, Langer and a colleague reported using robotic technology to deposit more than 1,700 spots of biomaterial (roughly 500 different materials in triplicate) on a glass slide measuring only 25 millimeters wide by 75 millimeters long. Twenty such slides, or microarrays, could be made in a single day.

The arrays were then used to determine which materials were most conducive to the growth and differentiation of

human embryonic stem cells. (See web.mit.edu/newsoffice/2004/celltest.html.)

Enter Van Vliet, whose lab studies how the mechanical properties of a surface affect cells growing on that surface. Curious as to whether the Langer team had probed the mechanical properties of the biomaterials, she contacted Langer, who introduced her to Anderson.

And what began as an isolated question turned into a collaboration with wider implications.

Together the researchers showed that the mechanical properties of each biomaterial could indeed be determined — and quickly — by combining the arrays with nanoindentation, a technique key to Van Vliet's work.

In nanoindentation a hard, small probe is pressed into a more compliant material, to depths many times smaller than the diameter of a human hair. By measuring the force applied and how deeply the probe penetrates the material, scientists can learn a great deal about the material's mechanical properties.

"The spots of material Dan was making had diameters about three times that of a human hair, a scale perfect for nanoindentation," Van Vliet said. So the team created new arrays of roughly 600 unique polymers. "Each dot was a combination of two different monomers, or building blocks, so we could map out the effects of the percentage of each monomer on the properties of the material," Van Vliet said. And in 24 hours Tweedie, using the nanoindenter, had that data in hand.

It would have taken many weeks to analyze that many materials using tradi-

tional techniques, which involve "the serial process of bulk-material synthesis, batch-sample preparation, and individual-sample testing," the team writes in *Advanced Materials*. Further, Anderson explained, many materials have been discovered when a scientist thinks about what the perfect properties of a material should be, and then invents it. "But that can take lots of time," he said.

Enter combinatorial libraries. "Instead of trying to engineer perfect materials, let's make thousands at the smallest scale we can, and see if we can find some materials with unexpected or interesting properties," Anderson said.

Tweedie notes that even in this first "proof of principle" experiment there were some surprises. For example, she said, "the stiffness of certain polymers depended more on the combination of monomers used (how much of A and B) rather than the structure of each monomer, with certain combinations resulting in very compliant polymers. These were very large, unanticipated changes in mechanical properties that could then be optimized further in a subset of combinations."

Describing the collaboration that brought about these results, Van Vliet concluded: "It's really made both [of our groups] think in different ways about what we're doing."

This work was funded by the National Institutes of Health, the U.S. Army Research Office through MIT's Institute for Soldier Nanotechnologies, and the National Defense Science and Engineering Graduate Fellowship program.

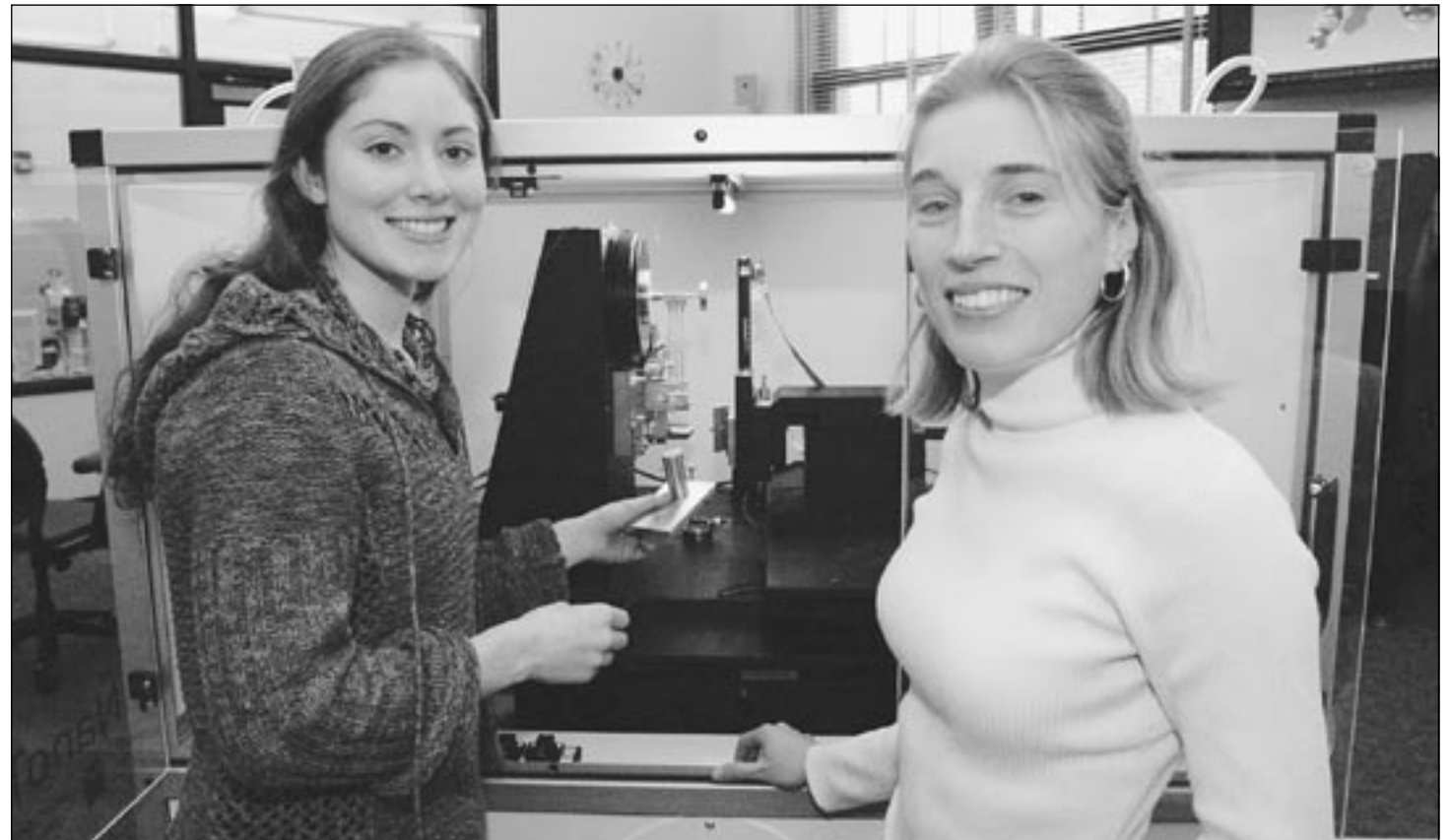


PHOTO / DONNA COVENEY

Graduate student Catherine Tweedie, left, and materials science and engineering Assistant Professor Krystyn Van Vliet, right, use a nanoindenter to measure the mechanical properties of biomaterials.

BRAIN

Continued from Page 1

recalling events.

The MIT researchers' data reveal theta frequency correlation between the memory-centered hippocampus and the decision-making prefrontal cortex when behavioral demands require the two structures to work together and, presumably, communicate. By locking onto certain rhythms, the brain exploits a communication system in which different brain areas can work alone and "tune in" to information from other areas when necessary. This ability to quickly tune information in and out appears to be critical for informed decision-making, Wilson said.

A rat running a maze, for example, needs to integrate spatial information, memory of where the reward is located, route information and rules about how to navigate the space to make the right choice. When its relevant brain structures are all working, its theta rhythms are locked in sync. When these rhythms are not synchronized prior to decision-making, the animals make errors.

"It follows that disruption of such complex cross-structural communication is likely to generate behavioral impairments," Wilson said.

This work is supported by The Wellcome Trust and the National Institute of Mental Health.

Innovation Week fosters networking, competition

Sasha Brown
News Office

Idea sharing, business planning, competition and even LEGO® toys will be part of the third annual Innovation Week, which runs through Dec. 6.

"This is a great way to highlight what goes on all the time at MIT," said Ann Chaney, program manager of the MIT Enterprise Forum of Cambridge.

The week is a collaboration among several student groups, including the Venture Capital and Private Equity Club, 50K Entrepreneurship Competition, Innovation Club, TechLink and SEBC (Science and Engineering Business Club), as well as non-student groups, including the Deshpande Center, the MIT Enterprise Forum of Cambridge and the Entrepreneurship Center.

The week kicked off with a networking reception in Walker Memorial from 7-9 p.m. on Tuesday. Most of the groups involved sponsored at least one event.

"We have worked together to ensure that there is no overlap and that we can really show both the MIT community as well as the outside community, all the interesting groups on campus focused on innovation and entrepre-

neurship," said Katja Wald, program coordinator at the Deshpande Center.

On Thursday, Dec. 1, the 50K Entrepreneurship Competition, which awards hundreds of thousands of dollars in cash and business startup services to teams of entrepreneurs each spring, is sponsoring the 1K awards ceremony. Ten ideas will each be awarded a \$1,000 prize.

"This event is a warm-up for the spring competition," said graduate student Lakshman Pernenkil, the lead on marketing the 50K Competition.

This year there were 124 entries. The event starts at 7 p.m. in Bartos Theater.

Other highlights of the week include a LEGO® Challenge sponsored by the Innovation Club. Open to families, the event gives teams of 4-6 people two hours to visualize, build and display LEGO® creations. A panel of judges will determine the most creative. In the past, teams have created everything from a life-size jukebox to a martini glass.

The week closes on Tuesday, Dec. 6 with a startup clinic, sponsored by the MIT Enterprise Forum of Cambridge, that will help student entrepreneurs bring their ideas to fruition.

For more information on Innovation Week, visit web.mit.edu/innovationweek/.

SUR

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Psychology at MIT in the early '60s.

MIT's Department of Brain and Cognitive Sciences is the only department of its kind, anywhere, in which the study of the brain and mind is carried out by a single faculty, and in which the various levels of analysis for studying the brain — molecular, systems and computational — come together with the cognitive level.

Q. *What will the new complex make possible in terms of research?*

A. It is very special to have these levels of analysis — molecular (the study of the brain's molecules, such as neurotransmitters and receptors), systems (the study of neurons and neuronal networks), computational (the study of theoretical properties of cells and networks) and cognitive (the study of brain modules and the mind) — represented under one roof, with different laboratories, students and researchers in close proximity.

We expect great synergy to come out of this.

As one example, new approaches to studying brain disorders such as autism are already under way by collaboration among researchers in the BCS Complex. Autism is a developmental disorder of the brain that needs to be understood at various levels, including its genetic substrate, characterization of its cognitive symptoms involving deficits in social interaction, language, perception and movement, and the mechanisms by which genetic influences lead to behavioral effects.

Having these various approaches next to one another, in one complex, is unique, and I strongly believe it will lead to unexpected ideas and discoveries.

Proximity and buildings matter a great deal in science. People looking in on science and scientists often think science progresses linearly, with one discovery made after another till a problem is solved. In practice, the greatest discoveries in science often work the other way around. A discovery or solution is first imagined in the mind of the scientist, and then shown to be true by experimentation.

We expect that [the BCS Complex] will expand the imagination of our students and researchers by allowing them easy access to other ways and levels and scales of thinking and knowing. And we believe that the building Charles Correa has designed for us, with its soaring spaces and light, will allow our imaginations to soar as well.

Q. *What are the top three questions in neuroscience that researchers here and around the world are working to understand?*

A. The answer depends on the person you ask. For me, the major questions are: how is the brain wired (or, how does the brain wire itself as it grows and learns and remembers); how do brain networks create function; and how do these cellular and network functions give rise to the mind, including its exceptional features such as language and thought, and up to consciousness.

Q. *What major advances in neuroscience do you foresee in five years? In 20?*

A. In the field of neuroscience, I believe the next five years will see major advances in understanding the molecules that give rise to the growth and plasticity, or adaptability, of connections in the brain; the rapid advancement of tools for imaging single neurons as well as for imaging the entire brain; the development of experimental and theoretical tools for studying populations of neurons; and the novel combination of tools across scales and levels of analysis for addressing the function of neuronal networks.

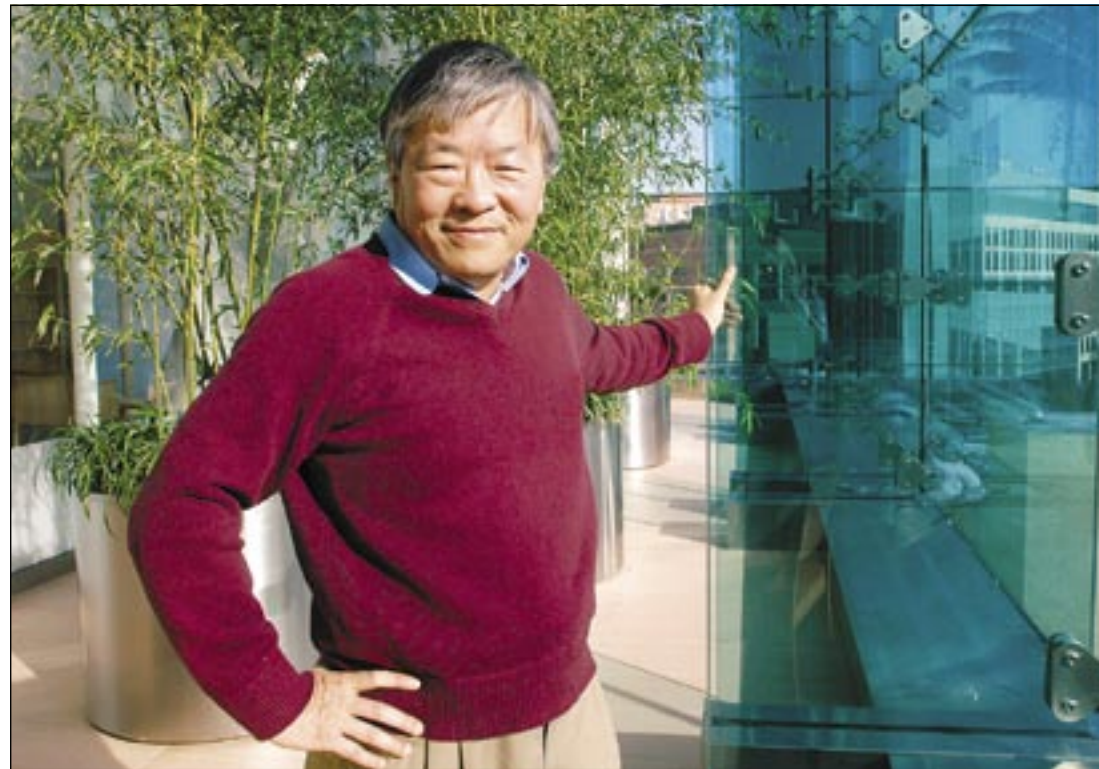
In 20 years, I believe we will have a very good understanding of the rules by which the brain is wired, by which it functions and changes, and by which brain function goes awry in a range of disorders. Specifically, I believe we will have a comprehensive roadmap of the genes that lay down a scaffold for brain development; a very significant understanding of the ways by which the environment interacts with brain molecules to shape the nature of connections in development and in adulthood to enable learning; knowledge of the experimental and computational principles by which neuronal networks give rise to emergent properties and lay the bases for behavior; and significant understanding of the deepest questions in cognitive science, such as the roots of language, perception, reasoning, emotions and social interactions.

These advances will be fundamental to unraveling the causes of, and finding treatments for, a range of brain diseases and disorders. In particular, I believe we will have identified targets for treating several of the degenerative diseases of the brain, and will be well on our way to identifying similar targets for at least a subset of developmental disorders.

New architecture



Portuguese limestone and glass highlight the Main Street entrance of the new Brain and Cognitive Sciences Complex.



Susumu Tonegawa, director of the Picower Institute for Learning and Memory, has an observatory in the new Brain and Cognitive Sciences Complex.



PHOTO / DONNA COVENEY

Robert Desimone, director of the McGovern Institute for Brain Research, stands by the magnetic resonance imaging machine housed inside the new complex.

PHOTO / D

re brings scientists together

Three tenants share neuroscience complex

Kathryn M. O'Neill
News Office

Just over two years ago, MIT broke ground on what would become the largest neuroscience complex in the world.

Since then, an extraordinary facility has risen from a dirt field intersected by a freight rail line: the Brain and Cognitive Sciences Complex. And although it won't be formally dedicated until Friday, Dec. 2, its three occupants — MIT's Department of Brain and Cognitive Sciences, the Picower Institute for Learning and Memory and the McGovern Institute for Brain Research — are already hard at work to foster a more comprehensive understanding of the brain.

Located at the epicenter of biotech and life sciences research in the Boston area, the new complex includes molecular biology laboratories, systems neuroscience laboratories, cognitive science laboratories and a brain imaging center.

Bold and elegant, the Brain and Cognitive Sciences Complex was born of a collaboration between two architecture firms and reflects the extraordinary vision of the lead designer, Charles Correa, and the exceptional design of laboratories and research spaces by Goody, Clancy and Associates.

Charles Correa Associates has designed many of India's most important buildings and a number of major projects around the world. Boston's Goody, Clancy and Associates is one of the leading architecture, planning and preservation firms in the country.

Creating facilities for three distinct entities, each seeking its own identity and its own entrance, posed a design challenge for Correa, who said he briefly considered using different materials for each institution, but ultimately chose instead to create distinctions using "very dexterous shifts in scale."

The 410,000-square-foot complex, situated on Main Street between Albany and Vassar, has a façade of glass and Portuguese limestone, but it looks different from different directions — at one point softly curved, like a stone worn smooth by water; at another more angular, with rows of square windows and sharp corners.

"In response to [the Stata Center's] energetic forms and multiple materials, our building is serene, calm and elegant, restrained in its use of an intentionally limited materials palette," said Roger Goldstein, principal of Goody, Clancy.

The architects faced major challenges in adapting to the odd plot of land, which not only has a rail line running through it, but forms a triangular corner at the intersection of Main and Vassar streets.

Yet these very limitations seem to have become their inspiration. Accommodating the rail line, for example, was the impetus behind one of the key features of the complex — a 90-foot-high daylight atrium.

"The atrium edges are sculpted to create appealing terraces, bridges and interconnecting stairs, with most of the shared tea rooms and seminars clustered around it," Goldstein said. "Large windows put the activity of the building on display, and help daylight penetrate deeper into the building."

The building also comes to a dramatic point at the triangular corner. "It rides along Main Street like an ocean liner, its prow pointing towards Kendall Square," Correa said.

The eight-story complex, designed to accommodate about 500 people, includes a conservatory; an auditorium; large seminar rooms; a cafe; glass-walled reading rooms with spectacular views of campus; and 48 state-of-the-art wet and dry research laboratories.

The dedication ceremony for the complex will be held in the atrium on Friday at 3 p.m.



PHOTO / DONNA COVENEY

The fifth-floor observatory, seen from the sixth floor, provides green space within the new complex.



PHOTO / DONNA COVENEY

The triangular building site posed challenges for the architects, who needed to make use of every inch of space. As a result, the complex comes to a dramatic point at Main Street, below. Above, the building face makes a gentle curve along Main Street.



PHOTO / DONNA COVENEY

Brain and Cog dedication Fri.

The Brain and Cognitive Sciences Complex will be officially dedicated in a ceremony in the atrium on Friday, Dec. 2, at 3 p.m.

Chairman of the Corporation Dana G. Mead will offer a few words of welcome, followed by remarks from President Susan Hockfield and Cambridge Mayor Michael A. Sullivan.

Sullivan will be followed by Mriganka Sur, head of the Department of Brain and Cognitive Sciences; Robert Desimone, director of the McGovern Institute for Brain Research; Susumu Tonegawa, director of the Picower Institute for Learning and Memory; and Robert J. Silbey, dean of the School of Science.

A community reception will follow from 4-5 p.m.

In advance of the dedication, the Department of Brain and Cognitive Sciences will hold a symposium in celebration of the 40th anniversary of the department's graduate program — "Looking Back, Looking Forward: Shaping Neuroscience and Cognitive Science" — from 9:30 a.m. to 12:30 p.m. on Friday in the atrium.

The Picower Institute for Learning and Memory will hold its own inaugural events on Thursday, Dec. 1. The daylong symposium on "The Future of the Brain," which will be webcast live, will feature five Nobel laureates discussing brain research starting at 9 a.m. For more information, visit web.mit.edu/picower/events/inaugural.html.



PHOTO / ANDREW THOMAS RYAN

A wall of windows on the Vassar Street side of the complex allows light into the upper-floor conservatory.



PHOTO / L. BARRY HETHERINGTON

Eye on the ball

Peter Hutchinski tests his continuous motion device at the MIT Museum's Friday After Thanksgiving Mega Chain Reaction event, held Nov. 25 at Rockwell Cage. Artist/inventor Arthur Ganson was on hand to link individual devices together, creating one 'mega' reaction.

Forum examines 'Cell Phone Culture'

Sarah H. Wright
News Office

Cell phones have transformed the micro-culture of classrooms and may shape the macro-culture of global youth, according to two experts in mobile communications and cultural change who gave talks at an MIT Communications Forum, "Cell Phone Culture," held on Thursday, Nov. 17, in Bartos Theater.

The "Cell Phone" panelists were James Katz, professor of communications at Rutgers University and director of the Center for Mobile Communications Studies, and Jing Wang, S. C. Fang Professor of Chinese Languages and Culture at MIT.

Katz focused on how cell phone use has altered social norms in classroom microclimates and in public spaces within the United States.

MIT students in the "Cell Phone Culture" audience seemed especially alert when Katz described research on "teledensity" and the contested "micro-culture" of classrooms at Rutgers.

Due to "teledensity," i.e. number of cell phones owned and used by students, the classroom microclimate has new rules of engagement, Katz said.

According to Katz, only 4 percent of Rutgers students surveyed said it was "OK to talk on a phone in class" — good news for professors, it seemed. Now for the dark side: 41 percent found checking messages OK during class; 45 percent found exchanging text messages permissible and 33 percent of students found it within norms to play games on a cell phone during class.

Katz described newly acceptable behaviors — known as "territoriality and choreography" — that people perform to find space or separate from a group to accommodate a cell phone conversation, and said those behaviors are all ways of "privileging the distant other over co-present friends."

Some interior public spaces, especially restaurants, are still "contested terrains," Katz noted, with certain spaces, notably Amtrak's "quiet car" and New York's Metropolitan Museum of Art, demarcated as cell-phone-free.

Wang portrayed a different cultural landscape in China, where cell phones are widely used in place of standard telephones and where transnational businesses are working to create a profitable youth music market.

Wang described "linglei" — "cool" and alternative — youth in Beijing as very different from Western youth in their experiences of popular music and mobile music technology, particularly iPods.

"Since only people who have U.S. or European credit cards can purchase music from iTunes, Chinese iPod owners use the gadget to convert music from their CD collections, which are made of cheap pirated CDs. The Apple vision — 'iPods and iTunes were born together' — is irrelevant in China," she said.

In her discussion of potential cultural changes arising from cell phone use, Wang noted an "irony: while transnational mobile phone makers are trying to create a youth market for mobile music — for example, Motorola aspires to make music phones that will become an alternative iPod — the notion of mobile music as understood in the West still remains an abstract concept even in urban China, even among the most trendy young generation," she said.

Wang also noted that the impact of the Cultural Revolution gave Chinese audiences only 10 years to digest 50 years of Western music.

"As a result, Chinese 'linglei' youth are extremely hungry for a fusion of musical styles. So jazz, electronic music, rock and roll and hip-hop have all become popular in China, and youth owe no allegiance to a single musical genre," she said.

FACULTY

Continued from Page 1

MIT education should ignite a passion for learning and give students the tools for lifelong learning," he said. In addition, "some time for reflection" should be built into the curriculum, and students should be given more choices while maintaining the ability to change majors and still meet all the requirements.

Silbey acknowledged the difficulty of working out all these changes while also achieving agreement from all the departments on what an MIT graduate should know. "There is not complete agreement around MIT, but this is a time when we can do something different with our core. We believe it will be the right thing to do," he said. The task force plans to make specific recommendations to the faculty and President Susan Hockfield in the spring, with changes probably taking effect for the 2008-2009 academic year.

A model for medical care

Paul L. Joskow, the Elizabeth and James Killian Professor of Economics, presented the final report of the Task Force on Medical Care for the MIT Community. Created by then-President Charles Vest in 2004, the committee completed its work last month and has posted its 120-page report on the web.

The task force was charged with reviewing issues of access, quality and cost for all health care and health insurance programs available to students, employees, retirees and postdocs. The report concludes that the basic model of on-campus health care for the community, combined with the outside health insurance options available to employees and retirees, has served MIT well.

The final report makes more than 40 recommendations to improve the quality of care and the value of insurance options and to reduce costs. It urges strengthened support for the MIT Medical Department and changes in health insurance programs. Hockfield has indicated the administration's intent to retain the basic model and said that she has asked Sherwin Greenblatt, MIT's interim executive vice president, to analyze the financial and operational implications of the report's specific recommendations.

In a project that "turned out to be bigger than anyone thought," Joskow said the committee took a broad look at an on-campus health care center that works on a model shared by only a handful of other universities. While most universities operate student health services that provide only primary care to students, the MIT Medical Department also provides or manages health care for employees choosing one of the MIT Health Plans, as well as hospitalization and extended-care insurance to students requiring such coverage, and optional care to retirees. Fifty-five percent of MIT's Cambridge campus employees, including 78 percent of the faculty who subscribe to one of the MIT Health Plans, and about 25 percent of retirees, including 80 percent of faculty retirees, receive medical care through the MIT Medical Department. The rest of MIT's employees have chosen health insurance options administered by Blue Cross/Blue Shield or the Tufts Health Plan. MIT self-insures all of its health care and self-insur-

ance options.

"MIT is effectively a \$100 million insurance company," Joskow said.

Budget cuts imposed on the Medical Department have led to extended waiting times and the perception that the quality of care provided has been diminished and that physicians are less available and more rushed, the report said. The report recommends that some resources be restored to the Medical Department in order to ameliorate the problems caused by staff shortages.

Joskow said, "This is not a recommendation to 'return to the past.' The Medical Department must continue to pursue opportunities to increase productivity." The report identifies a number of areas where cost-saving opportunities should be explored. In particular, it recommends improving the MIT administration's budgeting and financial management protocols for the Medical Department and making complementary enhancements to the Medical Department's own financial management capabilities.

The task force found that MIT Health Plan costs are competitive with providers such as Tufts Health Plan and Blue Cross/Blue Shield, around \$239 per patient month for MIT compared with \$276 for the outside insurance options available to employees. "If all employees were moved to Blue Cross/Blue Shield and the Tufts Health Plan, we wouldn't save any money," Joskow said.

"To attract and retain the best faculty and students, high-quality medical care at a reasonable cost is important to the community," Joskow said. "The MIT-Harvard-Yale model continues to be in the best interest of MIT as long as we can manage it properly so it continues to provide high-quality and cost-effective care."

Among the task force's 40 recommendations are: looking into a high-deductible and co-payment option; expanding the use of technology for a digital medical records system; expanding wellness and other education and support programs; expanding use of information technology to facilitate exchanges of medical information; creating a closer partnership with one or two of Boston's major hospital groups; bringing retiree medical care into fiscal balance and developing a long-term retiree care strategy; evaluating mental health care services provided to MIT Health Plan subscribers in light of the increase in students being served following the recommendations of the Mental Health Task Force; and changes to the way all of MIT's health insurance options are priced and structured.

The task force also recommended putting a "highly skilled professional" in charge of the community's medical care — someone who would develop health-care strategies and policies that "advance MIT's mission in a comprehensive and sustainable way."

Correction

A story in the Nov. 16 issue of Tech Talk suggested that all BBC TV programs are available for download off the web. In fact, BBC announced it plans to launch such a service next year. Tech Talk regrets the error.

NEWS YOU CAN USE

Book sale

To celebrate its 25th anniversary, the MIT Press Bookstore will hold a weeklong book sale from Nov. 28 through Dec. 4. Every regular priced book in the store will be 25 percent off. The bookstore will also hold a one-day clearance sale in Lobby 13 on Dec. 1; hundreds of MIT Press books will be available at drastically reduced prices.

Benefits enrollment

The Benefits Office reminds members of the MIT community that the annual benefits open enrollment period

will end Friday, Dec. 2. Employees who want to change their health or dental plans or enroll in a Flexible Spending Account for 2006 must do so by that date. You do not need to do anything if you want to maintain your current level of coverage — unless you want to enroll in a Flexible Spending Account for 2006. Enroll or make changes for 2006 through Employee Self Service at web.mit.edu/sapwebss/PS1/home.shtml. For more information, e-mail openenroll2006@mit.edu; call the Campus Benefits Office at x3-5100; or call the Lincoln Benefits Office at 781-981-7055.

CLASSIFIED ADS

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

FOR SALE

Men's jacket. Size large, medium brown leather-look, below hip length, fleece lining, made in Italy, new. \$150 value, asking \$50. Call Rosalie at 781-391-1307.

Prince squash racquets (2), titanium graphite, power ring, excellent condition, new grips and string, sugg. ret. price \$140, \$40 each or \$75 both. Call Ed at 253-6814.

New Rattler DIY remote starter w/keyless entry (369D), \$65/bst. Barely used Nikon LiteTouch AF Zoom 140ED 35 mm camera, \$75/bst. Contact Kimberly at 253-1702 or kmancino@mit.edu.

Peerless steel desk, 60" by 30", 5 drawers plus

file cabinet, free if you pick it up. 781-646-0530.

VEHICLES

1996 Ford Taurus, green, 119K, new tires, great condition, leaving country have to sell. \$1950/bst. Contact Raimo Hamalainen at 617-452-3192, cell 617-938-9734 or raimo@mit.edu.

HOUSING

Newton, sabbatical home available 2/06, period negotiable, bright contemporary, 4 BR, 2.5 baths, study, 2 car garage. Hrdwd floors, no lead paint, beautiful yard, quiet street nr shops, transportation, \$2990/mo. Suzanne_McLaugh@yaho.com.

Furnished room avail. Nov. 1, in spacious Arlington home, near public transportation, parking, kitchen privileges, washer & dryer on premises; own refrigerator & TV. Call 781-648-7425, 24 hrs, leave msg & contact info.

MIT staffer finds everyday life lyrical

This is one in an occasional series of articles on MIT staff members who are also artists.

Lynn Heinemann
Office of the Arts

Tina Brown Celona easily justifies what she calls the alarming frequency with which cute animals turn up in her poems. "Animals disarm the reader," says the poet, an administrative assistant in MIT's Hayden Library, who admitted that winning over an audience is important to her.

An MIT audience will get the chance to weigh in today when Celona reads her poems in an Artists Behind the Desk literary event at noon in Killian Hall.

With or without cute animals, Celona's poems tend to be self-referential. "Lately, they've been clever and philosophical, and intensely personal," she says, noting friends have told her they live in fear of being in her poems.

Her poetry springs from the events of her life — from working on an organic farm in East Hampton, N.Y., to her current job at the library. "I take what's around me and use it," she says.

"Celona's poems often perform a kind of lyric jujitsu, faking us out of banality," Maureen N. McLane wrote in the Boston Globe in 2003. "Celona has a mind like a loosely coiled, latently dangerous whip; her sensibility oscillates between melancholia and a feline wittiness."

Feeling isolated and too far removed from other writers, Celona moved to Boston from East Hampton in 2004 and has worked at MIT's Hayden Library's Administrative Services Department since January. Though she works a full 35-hour week, Celona still finds time to compose her prose poetry on a computer in her Somerville apartment.

"When I'm writing well, I can write for four or five hours at a time," she says.

Reading is also important for her writing, says Celona, citing authors such as Albert Camus, George Orwell, Pablo Neruda and Gertrude Stein as role models and inspirations.

Celona's collection of poems titled, "The Real Moon of Poetry and Other Poems," (Fence Books) won the 2002 Alberta Prize, given for a first or second book of poetry by a woman writing in English. She has since had poems published in The Canary, La Petite Zine, Radical Society, Shampoo, Puppyflowers, Double Room, Monsieur Toussaint Louverture, Born Magazine, and Boog City, Epoch, and Explosive.

Celona is currently working on a manuscript tentatively titled, "Other Answer." To read one of her poems, go to web.mit.edu/newsoffice.

Also reading at today's Artists Behind the Desk event is novelist and web columnist Edmund Carlevale, a computer support assistant in nuclear science and engineering.



PHOTO / THOMAS MAXISCH

Composer Gunther Schuller, left, and MIT Wind Ensemble music director Frederick Harris at a Nov. 21 rehearsal for the ensemble's Dec. 5 concert.

MIT concert to honor Schuller

Paul Crocetti
Office of the Arts

To commemorate the 80th birthday of Gunther Schuller, world-renowned composer, conductor and advocate of jazz and classical music, the MIT Wind Ensemble will perform music he composed and edited in a concert on Monday, Dec. 5.

The recipient of a Pulitzer Prize for composition, Schuller became a leader in a new style of music, said Frederick Harris, music director of the ensemble.

"He is a huge proponent of taking jazz and classical and fusing them together," he said, noting that Schuller is known for this "Third Stream" style. "It was a term he coined describing the respectful co-existence of the stream of classical music with the stream of jazz music creating a 'third stream' — a fusion of the two."

The MIT Wind Ensemble will showcase both the classical and the jazz elements of Schuller's work, but will perform only one piece that he composed, "Blue Dawn into White Heat."

"Rather than do a concert of all his music, we want to highlight his advocacy for other musicians," Harris said. In 2000, the ensemble performed a concert of Schuller's compositions to commemorate his 75th birthday.

From Scott Joplin to Charles Mingus, Schuller has been a proponent of many different styles of music. He helped lead a ragtime revival in the 1970s, even creating a ragtime ensemble at the New England Conservatory.

"He's also worked with Miles Davis and Dizzy Gillespie," Harris said. "I can't think of anyone else who has worked like that, advocating their music. We wanted to honor the jazz element."

To that end, the ensemble will be performing a jazz version of the classic "Blue Moon," that Schuller arranged.

"Jazz is very different," said Jessica Young, a senior oboist in the ensemble. "It's so cool to listen to, but playing is a challenge. We're doing our best to rise to that challenge."

Although Schuller will not be at Monday's MIT concert, he attended the Wind Ensemble's rehearsal in Kresge Auditorium on Monday, Nov. 21 (the day before his actual birthday) and gave the student musicians some feedback on their rendition of his works.

"I'm always pretty nervous to have the composer come in, especially with someone like Gunther Schuller," said Kurt Stiehl, a junior percussionist in the ensemble. "It's an honor just to play for someone like him."

At the rehearsal, Schuller hopped up on stage to listen. After each piece, he gave compliments and suggestions, from "Can you play a little softer, my dear?" to "You gotta play faster, you gotta go crazy!" After one critique, he looked at one student and said, "You look at me like I'm crazy ... maybe I am."

Special guests at Monday's concert will include the MIT Festival Jazz Ensemble and local musician Ran Blake, whom Harris called "one of the great avant-garde jazz pianists."

The performance begins at 8 p.m. in Kresge Auditorium. Tickets cost \$5. For more information, call x3-2826.

Theatrical alums celebrate Dramashop's 50th anniversary

Kendra Gilbert and Mary Haller
Office of the Arts

Traveling to MIT from across the United States and as far away as Singapore, more than 80 former members of MIT's Dramashop returned to the Institute Nov. 19-20 to celebrate the 50th anniversary of the co-curricular theater group.

The alumni, who graduated between 1956 and 2005, joined current Dramashop members for a weekend of festivities held in conjunction with the group's most recent production, "Leocadia." In addition to attending the play, participants enjoyed a formal dinner hosted by the theater arts program, feasted on cake at an after-show celebration and shared experiences at a brunch in Kresge Lobby. In the final event of the weekend, alumni joined current members in a Dramashop tradition: striking the set of the current production.

It's unclear when Dramashop was originally founded, but former MIT Professor Joseph Everingham is credited with transforming the program in the 1950s from an extracurricular activity into a co-curricular program. "With Joe Everingham, Dramashop really became a way not only to have fun, but to learn and improve and make better — and great — theater," said Dramashop President Helen McCreery, a senior in civil and environmental engineering.

Some of the returning Dramashop alumni have gone on to successful careers in theater since leaving MIT. Daniel Michaelson, who participated in Dramashop in the spring of 1967, went

on to earn his M.F.A. from Columbia and become a costume and lighting designer in New York. He now teaches costume design at Bennington College.

While his experience in Dramashop was brief, he recalls it as being one of his most significant experiences at MIT. Studying architecture at the time at Harvard's Graduate School of Design, Michaelson said he "wasn't having success" there and instead found fulfillment with the Dramashop.

Carlos Armesto, who graduated in 1997 with a degree in both chemical engineering and theater, said that when he came to MIT he was "petrified of drama kids." Now Armesto is a producer and director at the Ensemble Studio Theater in New York, where he is producing theater about science and technology.

"Suddenly, for the first time in my life, I've integrated both science and theater," he said, calling MIT "the inspiration for what I've become."

Pursuing careers in theater is "not so terribly uncommon with Dramashop members," said McCreery. "At least, many people continue to do theater, even if not professionally."

What is it about Dramashop that inspires so many to make theater a permanent part of their lives? McCreery gave credit to theater itself. "When you do any play, it takes up enough of your life that it defines that time for you. So people who did a lot of Dramashop plays at MIT will always define their college years, at least partially, in terms of Dramashop," she said. "Plus, it's just so exciting and so much fun!"



Still from Francis Alys' 'El Gringo' (2003), one of the videos in 'Critters,' playing on the Media Test Wall at the List Visual Arts Center from Oct. 31-Dec. 31.

'Critters' offers humans perspective

A dog, a pig, a tarantula and a chick walk into Building 56...

And that's not entirely a joke. "Critters" is now on view at the Media Test Wall in Building 56. It's a compilation of short videos by Francis Alys, David Claerbout and Sam Easterson that uses animal protagonists to offer a perspective on what it means to be human.

"Our attitudes toward creatures can vary wildly, from treating animals as fleshy machines without any rights

or agency to overly anthropomorphizing them," said Jane Farver, director of the List Visual Arts Center, which oversees the Media Test Wall.

Noting that the three artists present individual viewpoints in "Critters," she said that each reveals something "crucial about the business of living on two feet with a large brain and an opposable thumb."

"Critters" is on view 24 hours a day, seven days a week through December.




















MIT EVENT HIGHLIGHTS NOVEMBER 30 - DECEMBER 4

-  Science/Technology
-  Performance
-  Architecture/Planning
-  Humanities
-  Music
-  Exhibit
-  Reading
-  Special Interest
-  Business/Money
-  Film
-  Sports
-  Featured Event



PHOTO / THOMAS MAXISCH

Dante Anzolini will conduct the MIT Chamber Orchestra on Wednesday, Dec. 7, at 7 p.m. in Killian Hall.

























WEDNESDAY November 30	THURSDAY December 1	FRIDAY December 2	SATURDAY December 3	SUNDAY December 4
<p> "Now Playing: Photographs by Joe Seaward" Last day of exhibit. Open 24 hours. Wiesner Student Art Gallery. 253-7019.</p> <p> "The 'Other Proliferation' Problem: Conventional Weapons and Technologies" Talk by Jo Husbands of National Research Council. Noon. Room E38-615. 253-7529.</p> <p> Artists Behind the Desk Reading Poet and writer Tina Celona. Noon. Killian Hall. 253-9821.</p> <p> Israeli Dancing Every Wednesday evening. 8-11 p.m. Lobby 13. 484-3267.</p>	<p> 2005 Biological Engineering Fall Seminar Series Talk by Vince Hascall of the Cleveland Clinic. 4:05-5:15 p.m. Room 56-114. 253-3159.</p> <p> HTC Forum: "Art, Authorship, Archive" Talk by Martha Buskirk of Montserrat College. 6:30 p.m. Room 32-124. 258-8438.</p> <p> "Mission 2009: Coping with Tsunamis" MIT subject. 12,000 final presentations. 6:45-9 p.m. Room 34-101. 253-4074.</p> <p> "Poniente On" 2002 Spanish movie. 7 p.m. Room 56-114. 253-4771.</p>	<p> "Looking Back, Looking Forward: Shaping Neuroscience and Cognitive Science" A symposium in celebration of the 40th anniversary of the Department of Brain and Cognitive Sciences graduate program. 9:30 a.m.-12:30 p.m. Room 46-3002. 253-5748.</p> <p> "Fear and Trembling" 2003 French movie. 6 p.m. Room 3-133. 258-8438.</p> <p> "Inspirations and Influence: Celebrating Gunther Schuller" MIT Wind Ensemble. \$5. 8 p.m. Kresge Auditorium. 253-2826.</p> <p> "The Mikado" MIT Gilbert and Sullivan Players production. Dec. 2-4 and 8-10. \$12, \$10 MIT community, \$8 alumni, seniors, non-MIT students and children, \$6 MIT students. 8 p.m. except Dec. 4 and 10 at 2 p.m. Sala de Puerto Rico. 253-0190.</p>	<p> "iSPOTS: Student Perspectives" On weekends during December, MIT student Chris Waits will be on hand to talk with MIT Museum visitors about the impact of complete wireless coverage on the MIT community and beyond. Noon-3:30 p.m. Room N52-200. 253-4422.</p> <p> Chantey Sing Sea music and chanteys with maritime enthusiasts, professional and amateur singers. 1-4 p.m. MIT Museum.</p> <p> MIT Anime Club Karaoke Party 2-7 p.m. Room 1-135.</p>	<p> Gallery Talk Talk by Jane Farver in conjunction with "Christian Jankowski: Everything Fell Together." 2 p.m. List Visual Arts Center (E15). 253-4680.</p> <p> MIT Concert Band Thomas Reynolds, director. 2 p.m. Kresge Auditorium.</p> <p> MIT Concert Choir William Cutter, music director. Handel's "Messiah." \$5. 7 p.m. Kresge Auditorium. 253-2826.</p> <p> International Folk Dancing Every Sunday evening. 8-11 p.m. Lobdell Dining Hall. 253-FOLK.</p>

Go Online! For complete events listings, see the MIT Events Calendar at: <http://events.mit.edu>.
Go Online! Office of the Arts website at: <http://web.mit.edu/arts/office>.

EDITOR'S CHOICE

<p>WORLD AIDS DAY AT MIT</p> <p>Annual chocolate buffet fundraiser and panels from the AIDS Memorial Quilt.</p> <p>Lobby 10 10 a.m. - 4 p.m.</p>	<p><i>Dec. 1</i></p> <p>STUDENT PLAYS</p> <p>One-act plays written and directed by students. Dramashop production. Dec. 1-3.</p> <p>Kresge Little Theater 8 p.m.</p>	<p><i>Dec. 2</i></p> <p>BRAIN COMPLEX DEDICATION</p> <p>Dedication of MIT's new Brain and Cognitive Sciences Complex.</p> <p>43 Vassar St. 3 p.m.</p>
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MIT EVENT HIGHLIGHTS DECEMBER 5-11

MONDAY December 5	TUESDAY December 6	WEDNESDAY December 7	THURSDAY December 8	FRIDAY December 9	SATURDAY December 10	SUNDAY December 11
<p> Operations Management & System Dynamics Seminar Series Talk by David Gamarnik. Series meets every Monday. 11:30 a.m.-1 p.m. Room E40-298. 253-6653.</p> <p> "The Name of the Disease" Film with introduction by filmmakers Abhijit V. Banerjee and Arundhati Tuli Banerjee. 7 p.m. Room 2-105. 253-4771.</p> <p> Trivia Night 21+. Must have ID. Hosted by Tim Graves. 8-11:30 p.m. The Thirsty Ear Pub. 258-9754.</p>	<p> LIDS Colloquium: Tetsuya Iwasaki Talk by Professor Tetsuya Iwasaki, professor of mechanical and aerospace engineering at the University of Virginia. 4-5 p.m. Room 32-141. 452-2657.</p> <p> "A World of Regions: Asia in the American Imperium" Talk by Cornell University Professor of International Studies Peter J. Katzenstein. 4:30-6 p.m. Room E56-270. 258-8208.</p> <p> Authors at MIT Bill Mitchell, professor of architecture and media arts, shares his reflections on his new book, "Placing Words" (MIT Press). 5:30 p.m. E15-Bartos Theater. 253-5249.</p> <p> Chicks Make Flicks June Peoples and Bill Lichtenstein with "West 47th Street." 7 p.m. Room 6-120. 253-8844.</p>	<p> Gallery Talk Jane Farver speaks on the List Visual Arts Center exhibition "Christian Jankowski: Everything Fell Together." 6 p.m. List Visual Arts Center (E15). 253-4680.</p> <p> MIT Chamber Orchestra Dante Anzolini, music director. 7 p.m. Killian Hall. 253-2826.</p> <p> SAA Holiday Art Sale Student Art Association's annual sale of ceramics and other arts. Dec. 7 and 8. 9 a.m.-5 p.m. Lobby 10. 253-7019.</p>	<p> MIT Student Jazz Combo Keala Kaumehe'iwa, coach. 5 p.m. Killian Hall. 253-2826.</p> <p> Arts and Crafts Fair Sponsored by Artists Behind the Desk. Dec. 8 and 9. 9 a.m.-5 p.m. Lobby 13. 253-9821.</p> <p> "Autobahn" MIT Community Players production of short play cycle by Neil LaBute. Dec. 8-10. \$5 general, \$3 students. Room 35-225. 253-2530.</p> <p> Dance Troupe Fall Concert Dances choreographed by students includes various hip hop pieces, tap, ballet/lyrical, modern, and tango. Dec. 8-11. Thursday's performance \$5; Fri-Sun \$7 in advance, \$10 at the door. 8 p.m. except Dec. 10 at 4 p.m. and Dec. 11 at 2 p.m. Kresge Little Theater.</p>	<p> Symposium in Honor of Robert A. Brown Various speakers, sponsored by the Department of Chemical Engineering. 1-5:30 p.m. Room E15-070. 253-6500.</p> <p> "Leonardo da Vinci and the Search for the Soul" Lecture by Rolando del Maestro, director of the Brain Tumour Research Center at McGill University. 5:30-7 p.m., Room 54-100.</p> <p> MIT Symphony Orchestra: All Russian Concert Alexey Shabalin, conductor. \$5. 8 p.m. Kresge Auditorium. 253-2826.</p>	<p> "Between Samsara and Nirvana" A retreat based on the Bardo teachings with Tenzin Priyadarshi. Free for MIT students, \$60 everyone else. Pre-registration requested. 10:30 a.m.-4:30 p.m. Room W20-306. 324-6030.</p> <p> Emerson Program Student Piano Scholars Recitals 3 p.m. and 6 p.m. Killian Hall. 253-2826.</p> <p> Rambax, MIT Senegalese Drum Ensemble Lamine Toure and Patricia Tang, co-directors. Winter concert. 8 p.m. Lobdell Dining Hall. 253-2826.</p> <p> Ballroom Social Dance (participatory) Evening of social dancing including ballroom and Latin dances. \$6 student, \$10 general. 8 p.m. Morss Hall in Walker Memorial.</p>	<p> Women's Chorale Holiday Concert Nancy Kushlan Wanger, director. 3 p.m. Killian Hall. 484-8187.</p> <p> MIT Chamber Music Society Student Concert. Student recitals. 5 and 7 p.m. Killian Hall. 253-2826.</p> <p> "40 Year Old Virgin" LSC movie. \$3. 7 p.m. Room 26-100. 253-3791.</p>