In Special Recognition

In addition to the presidential transition, the academic year 2005 saw a number of changes to MIT's senior academic and administrative leadership.

As the year drew to a close, Boston University announced the selection of MIT provost Robert A. Brown as that university's 9th president, effective September 1, 2005. Professor Brown, a chemical engineer who has been elected to the National Academy of Sciences as well as the National Academy of Engineering, had spent his entire faculty career at MIT and served with great distinction as provost: president emeritus Charles M. Vest, who appointed him to the position in 1998, called Professor Brown "the best academic administrator I've ever worked with." Shortly after the end of the academic year, President Hockfield announced the selection of Professor L. Rafael Reif, head of the Department of Electrical Engineering and Computer Science, to succeed Professor Brown as provost, effective August 1, 2005.

Professor Deborah K. Fitzgerald of the Program in Science, Technology, and Society was named associate dean of the School of Humanities, Arts, and Social Sciences. New academic department or program leaders whose service began during the academic year included Chris Kaiser, head, Department of Biology; Daniel Hastings, head, Engineering Systems Division; Michael Sipser, head, Department of Mathematics; L. Rafael Reif, head, and Duane Boning and W. Eric L. Grimson, associate heads, Department of Electrical Engineering and Computer Science; and Charles Stewart III, head, Department of Political Science.

Notable changes in the leadership of research activities included the appointments of Robert Desimone, director, McGovern Institute for Brain Research, and David Page, interim director, Whitehead Institute for Biomedical Research.

Among significant changes in the administration during the past year were the appointments of William J. Anderson Jr., chief facilities officer; William M. Fischer, associate dean for student conflict and risk management; Patrick W. Fitzgerald, director, Office of Sponsored Programs; Christopher M. Jones, assistant dean for graduate students.

The awards received by MIT faculty, students, and staff testify to the distinction of the Institute's programs and its people. Here we note only some of the honors and recognition earned by members of the Institute community during 2004–2005.

Professor Frank Wilczek, Herman Feshbach professor of physics, received the 2004 Nobel Prize in Physics for his identification of the dominant, or "color" force between quarks. His work has proved critical in its application to several major problems in particle physics and other areas. Wilczek shared the prize with David J. Gross of the

University of California at Santa Barbara and H. David Politzer of the California Institute of Technology. Professor Wilczek was also named as one of five 2004 Kavli Scholars through MIT's Center for Space Research.

Robert M. Metcalfe, an alumnus with degrees in both electrical engineering and management and a life member of the MIT Corporation, received the National Medal of Technology, the country's highest honor for technical innovation. Dr. Metcalfe was recognized for his leadership in the invention, standardization, and commercialization of Ethernet.

Two MIT engineers, a research associate, and an alumna were awarded a MacArthur Fellowship—the celebrated "genius" grant—in 2004. The grants went to Professor Angela M. Belcher of the Department of Materials Science and Engineering and the Biological Engineering Division; Edgerton Center instructor Amy B. Smith; Broad Institute associate Vamsi Mootha; and Julie Theriot, a member of the Class of 1988. The fellowship provides each recipient with $500,000 in support with no strings attached.

Six MIT students received Marshall or Rhodes scholarships this year: Virginia L. Corless, Jessica A. Lee, and Brian A. Mazzeo (Marshall scholars), and Laurel Young-Hwa Lee, Elizabeth Masiello, and Javed K. Samuel (Rhodes scholars). Both programs select students on the basis of outstanding scholarship, noteworthy service, and potential for future contribution to national or international welfare. Five students received two other highly selective awards—the Churchill Scholarships, honoring the memory of former British Prime Minister Winston Churchill, and the US Fulbright Fellowships. Emily Schwartz received a Churchill Scholarship. Fulbright Fellowships went to Edward A. Cunningham, Marc S. Schwartz, Daniel E. Stein, and Janine M. Waliszewski.

Robert S. Langer, the Germeshausen professor of chemical and biomedical engineering, was named an Institute Professor. The title of Institute Professor is reserved for those few individuals who have "demonstrated exceptional distinction by a combination of leadership, accomplishment and service in the scholarly, educational and general intellectual life of the Institute or wider academic community." During the year, Professor Langer also shared the $1 million 2005 Dan David Prize for his pioneering work in tissue engineering and biomaterials and received the $500,000 Albany Medical Center Prize in Medicine and Biomedical Research, America's top prize in medicine.

Institute Professor Mildred S. Dresselhaus was the recipient of the 11th Heinz Award for Technology, the Economy, and Employment, granted by the Heinz Family Foundation. The award recognized scholarship that has helped keep the United States on the cutting edge of nanostructures and related technologies and Professor Dresselhaus's abiding commitment to supporting the advancement of women in the sciences.

John W. Dower, Ford International professor of history and a leading expert on 20th-century Japan, received what is perhaps the most prestigious award granted within the field of the humanities—the Mellon Distinguished Achievement Award—in recognition of scholarship that has contributed decisively to the study of history and which promises to influence teaching and learning in the humanities at large. Other faculty across MIT received the leading national and international awards in their respective fields.

New members are elected to the United States' national academies—the National Academies of Engineering and of Science, and the Institute of Medicine—by the current members, in recognition of scholarly and professional contributions of the highest distinction. This year, the National Academy of Engineering elected to membership two MIT faculty members: Professors Dimitris J. Bertsimas, the Boeing professor of operations research in the Sloan School of Management, and Shafrira Goldwasser, the RSA professor of computer science and engineering. Two members of the faculty were elected to the Institute of Medicine: Professors James G. Fox of the Biological Engineering Division and Jonathan Gruber of the Department of Economics. MIT's new members of the National Academy of Sciences were Nancy Kanwisher, Ellen Swallow Richards professor of cognitive neuroscience and an investigator at the McGovern Institute for Brain Research; adjunct professor Butler Lampson of the Department of Electrical Engineering and Computer Science; and David Page, professor of biology, interim director of the Whitehead Institute for Biomedical Research, and a Howard Hughes Medical Institute investigator.

Five members of the MIT faculty were elected to fellowship in the American Academy of Arts and Sciences: Professors Edward DeLong of Civil and Environmental Engineering and Biological Engineering; John V. Guttag of Electrical Engineering and Computer Science; Daniel G. Nocera of Chemistry; Harriet Ritvo of History; and Richard J. Samuels of Political Science.

The American Association for the Advancement of Science named six from MIT as fellows: Professors James G. Fujimoto and Gerald Jay Sussman of Electrical Engineering and Computer Science; Elias P. Gyftopoulos of Nuclear Science and Engineering; Bora Mikic of Mechanical Engineering; Morgan Sheng of Brain and Cognitive Sciences; and Carl I. Wunsch of Earth, Atmospheric, and Planetary Sciences.

MIT colleagues honored Institute Professor Isadore M. Singer, a world-renowned mathematician, with the James R. Killian Jr. Faculty Achievement Award, which recognizes extraordinary professional accomplishment by a member of the faculty.

This year, three faculty members were named Margaret L. A. MacVicar Faculty Fellows in honor of their accomplishments and innovative methods in undergraduate education: professors Haynes R. Miller of Mathematics, Ruth Perry of Literature, and David Pesetsky of Linguistics and Philosophy.

The 2005 Harold E. Edgerton Faculty Achievement Award was shared by associate professors Emma J. Teng of Chinese Studies in Foreign Languages and Literatures and Erik D. Demaine of Electrical Engineering and Computer Science. This award recognizes junior faculty for achievements in teaching, research, and service to the MIT community.

This year the Institute presented the Gordon Y Billard Award, recognizing special services of outstanding merit to MIT, to two administrators: assistant dean of engineering Sheila M. Kanode and Alan F. White, senior associate dean in the Sloan School of Management.

The accomplishments and honors of MIT's current faculty, staff, and students are links in a chain of distinguished achievement by members of the MIT community. The memory of colleagues who passed away during the year is a source of inspiration for us, and for future generations of the MIT family.

Professor emeritus of history Lynwood S. Bryant died on March 16, 2005, after a brief illness. He was 96 years old. A native of Keene, New Hampshire, Professor Bryant received AB and AM degrees from Harvard University and came to the Institute in 1937 after teaching at the Roxbury Latin School, joining what was then the Department of English and History—later, Humanities. Prior to his retirement in 1975, Professor Bryant taught courses in areas as diverse as constitutional law, the development of the American West, and the history of the automobile; much of his research focused on the inventors of the internal combustion engine. Professor Bryant was an early member of the Society for the History of Technology, and his teaching and research anticipated the work of the Program in Science, Technology, and Society, established not long after his retirement. At MIT, Professor Bryant and his wife, the former Louise "Dolly" Graham, also served as the first housemasters of McCormick Hall. After retirement, Professor Bryant was a senior resident scholar at the Hagley Foundation in Delaware.

Institute Professor emeritus Morris Cohen died at his home in Swampscott, Massachusetts, on May 27, 2005, at the age of 93. A world-renowned metallurgist, Professor Cohen had received both the National Medal of Science and the Kyoto Prize for Advanced Technology, and was Institute Professor from 1974 until his retirement in 1987. Professor Cohen paved the way for materials science and engineering to emerge from its roots in metallurgy: his own research contributed greatly to the understanding of the structure of matter, and was central to the development of modern high-strength steels. Born in Chelsea, Massachusetts, Professor Cohen grew up with metals, for his family's business produced and refined the lead-based alloys used in type and solders. A member of the MIT Class of 1933, he received the ScD from the Institute in 1936 and immediately joined the faculty. He was promoted to full professorship in 1946 and named Ford professor in 1962; he received the James R. Killian Faculty Achievement Award in the same year that he became an Institute Professor. The Morris Cohen professorship in materials science and engineering was established in June 1988 in celebration of Professor Cohen's 75th birthday.

Professor Emeritus Aaron Fleisher, a pioneer in the use of computers in urban planning, died on August 12, 2004. Professor Fleisher was born in Brooklyn, New York, in 1919 and graduated Phi Beta Kappa from New York University in 1939; he then attended Columbia University until he began service in the US Air Force in 1943. In 1946, he resumed graduate study, this time at MIT, earning the SM degree in 1947 and the ScD in 1950. After graduation, he joined the Department of Meteorology as a research associate. He began teaching in the Department of Urban Studies and Planning in 1960, receiving tenure in 1964. Professor Fleisher was most widely known for his use of mathematical modeling to describe, project, and simulate urban areas. He retired in 1988, but remained active in his department. A resident of Brookline, Massachusetts, he passed away at the age of 85 after a brief illness.

Alumnus James A. Levitan, life member emeritus of the MIT Corporation, died in Bridgeport, Connecticut, on May 14, 2005, after suffering a heart attack. Mr. Levitan received the SB in chemical engineering and was associated with the Class of 1945, although he completed his degree in 1948 following service in the US Navy from 1944 to 1946. He earned the LLB from Columbia University in 1951 and went on to become a leading tax attorney in New York City; at the time of his death, at the age of 80, he was of counsel to Skadden, Arps, Slate, Meagher & Flom, where he had headed the tax department. Mr. Levitan was elected to the Corporation in 1990 and became a life member in 1995. He served on the Auditing Committee, the Corporation Development Committee, and the Investment Committee, as well as the visiting committees for the humanities and the departments of Earth, Atmospheric, and Planetary Sciences; Nuclear Engineering; and Ocean Engineering. He was closely associated with the humanities and supported the creation of the Levitan Prize in the Humanities for innovative scholarship by junior faculty. He received the Bronze Beaver, the Alumni Association's highest award for distinguished service to MIT, in 1991.

Professor emeritus John P. Longwell died on October 6, 2004. A native of Colorado, he received the BS from the University of California at Berkeley and went on to earn the ScD from MIT in 1943. During World War II, he was a member of the Talos missile research team at the Applied Physics Laboratory of The Johns Hopkins University. He joined the Department of Chemical Engineering in 1976 after a 30-year career with Exxon Research and Engineering Company. At MIT, Professor Longwell worked to develop energy-related programs in association with the MIT Energy Laboratory. He studied coal, oil shale, and biomass conversion, as well as the formation and control of emission from combustion, and was perhaps best known for his role in developing the well-stirred reactor, which is widely used for the study of combustion kinetics. A member of the National Academy of Engineering, Professor Longwell held 23 patents and received wide recognition for his work, including the Sir Alfred Egerton Medal of The Combustion Institute in 1974. An avid conservationist and lifelong outdoorsman, Professor Longwell passed away at age 86 as a result of congestive heart failure.

On April 22, 2005, Institute Professor emeritus Philip Morrison died at his home in Cambridge. A distinguished theoretical astrophysicist, he made important contributions to quantum electrodynamics, nuclear theory, radiology, isotope geology, gamma-ray astronomy, and other topics in high-energy astrophysics and cosmology. An outspoken critic of the nuclear arms race, Professor Morrison had first-hand experience of its genesis as a member of the Manhattan Project from 1942 to 1946. In 1945, riding in the back seat of an automobile, he had taken the plutonium core from Los Alamos into the desert for the first test of the atomic bomb. Professor Morrison taught at San Francisco State University, the University of Illinois, and Cornell University before coming to MIT in 1964. He was not only a distinguished scientist himself but also an exceptionally effective interpreter of science and technology for the general public, in print and on radio, film, and television. He was named an Institute Professor in 1973, and his faculty colleagues awarded him the James R. Killian Jr. Faculty Achievement Award in 1984. Born in Somerville, New Jersey, and educated in Pittsburgh, Professor Morrison graduated from the Carnegie Institute for Technology in 1936 and received the PhD in

theoretical physics from the University of California at Berkeley in 1940. He was 89 at the time of his death.

Life member emeritus of the Corporation Ellmore Clark Patterson—known throughout his life as "Pat"—died at his home in Locust Valley, New York, on November 5, 2004, at the age of 90. A distinguished banker who led J. P. Morgan & Company and its subsidiary the Morgan Guaranty Trust Company of New York through most of the 1970s, he also played an important role in the financial community's response to the fiscal crisis that brought New York City to the brink of bankruptcy during the middle of that decade. Mr. Patterson was born in Western Springs, Illinois, and was graduated from Lake Forest Academy and the University of Chicago. With the exception of one year at Morgan Stanley, and five years of naval service during World War II, he spent his career at the Morgan bank. Over the course of his career he served on the boards of many leading businesses and also gave generously of his time to not-for-profit organizations. Mr. Patterson was first elected to membership on the MIT Corporation in 1965 and was elected a life member in 1983, becoming a life member emeritus in 1988. He served on the Investment Committee and on the Visiting Committee for the Department of Economics.

Noted philanthropist Laurance S. Rockefeller, a life member emeritus of the MIT Corporation, died at home in New York City on July 11, 2004, at the age of 94. Born in New York, Mr. Rockefeller graduated from Princeton University in 1932 and attended Harvard University Law School before enlisting in the Navy in World War II. After the war, he served as president of Rockefeller Brothers, Inc., a pioneer in venture capitalism, and as chairman of the board of Rockefeller Center, Inc. His passion for wilderness led to activities including the creation of public sanctuaries in Wyoming, California, Hawaii, and the US Virgin Islands, and in 1969 he received the Presidential Medal of Freedom for his efforts on behalf of the environment. Mr. Rockefeller also served for more than two decades as chairman of the Memorial Sloan-Kettering Cancer Center, which he helped establish. He joined the MIT Corporation as a special term member in 1960, was elected life member in 1965, and became life member emeritus in 1985; he was a member of the visiting committees for the Center for International Studies and the School of Architecture and Planning. The establishment in 1963 of the Abby Rockefeller Mauzé Professorship reflected Mr. Rockefeller's commitment to improving opportunities for women; in 1983 he and his wife Mary established the Institute's first endowed professorship in philosophy, the field he had studied at Princeton more than 60 years earlier.

Ascher Shapiro, Institute Professor emeritus, died of liver cancer at his home on November 26, 2004. He was 88. Professor Shapiro, a New York native, was a member of MIT Class of 1938 in mechanical engineering. Professor Shapiro's early career focused on power production and high-speed flight: during World War II, he led a US Navy laboratory that developed turbine-powered engines for torpedoes to be dropped from aircraft. A renowned teacher, he gained worldwide influence in fluid mechanics and engineering education: his filmed lectures on fluid mechanics from the early 1960s, now digitized, remain in wide use. Collaborating with physiologists, physicians, and surgeons, Professor Shapiro also helped pioneer the field of biomedical engineering.

Holder of 13 patents, he was elected to the American Academy of Arts and Sciences, the National Academy of Engineering, and the National Academy of Sciences. Appointed an assistant professor in 1942, he received the ScD from the Institute in 1946, was named a full professor in 1952, and served as head of the Department of Mechanical Engineering from 1965 to 1974. Professor Shapiro was named an Institute Professor in 1975 and became an emeritus professor in 1986. Outside MIT, he was long active in the development of the Technion–Israel Institute of Technology, serving on its board of governors from 1968 to 1989.