



Six World War II military planes flew past the MIT campus over the Charles River in recognition of the 50th anniversary of the end of World War II as a part of the Class of 1945 Technology Day. (Special thanks to Professor John Hansman of the Department of Aeronautics and Astronautics, who piloted the helicopter from which this photo was taken).  
Photo by Donna Coveney

## Tech Day talks review war and MIT

■ By Alice C. Waugh  
News Office

Speakers at Technology Day last Friday morning addressed the many contributions that MIT made to the country's efforts to win World War II and the ways that the war in turn transformed the Institute.

Delivering the keynote address was historian Doris Kearns Goodwin, who recently won the Pulitzer Prize for her book on Franklin and Eleanor Roosevelt and the home front. She recounted anecdotes and statistics that painted a

portrait of the wartime President and First Lady for the capacity audience in Kresge Auditorium.

Roosevelt's defining quality, Dr. Goodwin said, was "an absolute confidence in himself and his country, and in the democratic system of government." Despite his heavy responsibilities, he was also able to relax and enjoy himself at cocktail parties, poker sessions and on fishing trips. "The equanimity he felt within himself freed up psychic resources that allowed him to be extremely receptive to the needs of others," she said. Ironically, the war began with Roosevelt's strength guiding a country at a low ebb; by 1945 America was a world power while its president became ill and died.

Eleanor increasingly used her talents for activism and organization on behalf of social causes during her husband's presidency, traveling the country and acting as FDR's eyes and ears. She made the war "a vehicle for social reform at home... her contributions on civil rights were the most affirming moments in the history of the home front," Dr. Goodwin said. The war era also saw significant gains for

women and a redistribution of income that created a middle class for the first time, she added.

Professor emeritus Robert C. Seamans Jr. '42 of the Department of Aeronautics and Astronautics discussed MIT's scientific and engineering work in aid of the military during the war in his talk entitled "World War II Comes to MIT." Dr. Seamans has also been dean of engineering, Secretary of the Air Force and president of the National

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## Joy predominates as 1,794 get degrees

■ By Charles H. Ball  
News Office

In a day of shared joy for the graduates, their relatives and guests, MIT awarded degrees June 9 to 1,794 seniors and graduate students at its 129th Commencement exercises on sunlit Killian Court.

There was pomp, circumstance and prayer—and playfulness, too.

## Williams appointed undergraduate dean

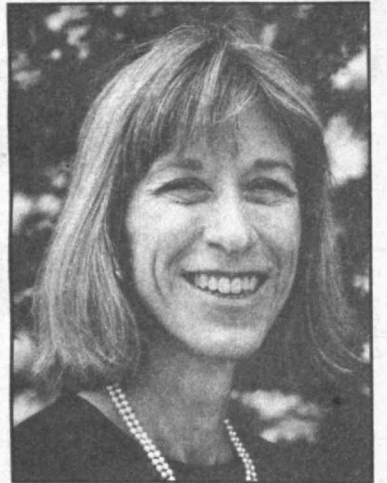
Dr. Rosalind H. Williams, a cultural historian and Robert M. Metcalfe Professor of Writing, has been named to succeed Professor Arthur C. Smith as Dean of Undergraduate Education and Student Affairs, effective September 1, President Charles M. Vest has announced.

Professor Williams, whose appointment is contingent upon confirmation by the Academic Council, will report directly to Provost Joel Moses, serve as a member of the Academic Council, and work closely with the president and deans in setting and implementing the Institute's educational agenda, Dr. Vest said.

In addition, he said, "she will work with all senior officers and the UESA staff to provide for a high quality of experience and well-integrated living and learning environment for all of our undergraduate students."

Dr. Vest continued: "She has had a distinguished scholarly career, and has shown a constant and creative dedication to undergraduate education at MIT. Her long service in faculty governance, including a term as associate chair of the faculty, her broad campus experience, and her scholarly interest in the culture of technology and science uniquely prepare her for this role. I look forward to her creative and energetic leadership and strong administrative role on behalf of undergraduate education and experience at MIT."

Dr. Vest said that Dean Smith, "consistent with his deep dedication to MIT and its students, has graciously agreed to remain as dean until September 1 to allow for an orderly transition."



Rosalind H. Williams

Dean Smith has served five years in the post and announced earlier that he was stepping down to resume his role as a professor in the Department of Electrical Engineering and Computer Science, where he has been a faculty member since 1959.

Dr. Vest and Professor Moses also thanked Professor Linn W. Hobbs and the members of the advisory committee he chaired "for their thoughtful and thorough work that was so essential in leading to this exciting appointment."

Professor Williams had been appointed in May as head of the Program in Writing and Humanistic Studies, effective July 1, but will not assume that post. Dean Philip S. Khoury of the School of Humanities and Social Sci-

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## IN BRIEF

### NEW NUMBERS

Professor Joel Moses, who has assumed office as MIT's new provost, has moved into offices in Rm 3-208, x3-4500 (fax x3-8812), e-mail <moses@mit.edu>.

Messages for former Provost Mark S. Wrighton, who will become chancellor of Washington University in St. Louis in July, may be left at x3-1971 or x3-1597.

### LIBRARY CHANGE

Effective July 1, the Humanities and Science Libraries will be open 8am-midnight Sunday through Thursday and 8am-8pm on Friday and Saturday.

Round-the-clock hours, for members of the community only, will be restricted to the weeks before and during final exams.

### SUMMER TECH TALK

Summer issues of Tech Talk (and deadlines) are scheduled for July 19 (July 14), August 16 (August 11) and August 30 (August 25). Positions Available will appear in those issues, as well as independently on July 12 and August 2.

### HOLIDAY REMINDER

The Institute will observe the Independence Day holiday on Monday and Tuesday, July 3 and 4.

## Rep. Torkildsen optimistic about funding for Bates

Rep. Peter Torkildsen (R-MA) said Tuesday he is optimistic that the House Science Committee will restore the \$31 million cut in nuclear physics research. The cut threatens the operation next year of the MIT Bates Linear Accelerator Center and accelerators at four other universities.

Rep. Torkildsen's office informed John C. Crowley, director of the MIT Washington Office, at noon that the Tuesday afternoon markup by the chairman of the House Science Committee, Rep. Robert Walker (R-PA), would propose authorizing funding of nuclear physics by the Department of Energy (DOE) at the \$321 million level recommended by the Clinton Administration for fiscal year 1996. The Bates center in Middleton is budgeted to receive \$18.6 million. The House Science Subcommittee on Energy and Environment on June 8 had voted only \$290 million and had specified closing down the accelerators at MIT, Yale, Duke/University of North Carolina, University

of Washington, and Texas A&M.

Meanwhile, the House Appropriations Committee yesterday was marking up its subcommittee bill on nuclear physics. Its subcommittee last week reportedly recommended \$304.5 million—a cut of \$16.5 million or five percent. The subcommittee reportedly said the DOE should determine where to cut. As Tech Talk went to press, it was not known what the full Appropriations Committee would do.

The budgetary suspense is expected to last until the beginning of October of federal fiscal year 1996 as the budget goes through the process—the House authorizing subcommittees and committees, the House appropriations subcommittees and committee, and a vote by the House; a similar process in the Senate; a conference committee to resolve differences between the House and Senate; and approval or veto by the President, possibly followed by attempts to override a veto.

of Science, 351; School of Architecture and Planning, 115, and School of Humanities and Social Science, 96.

The degree recipients included 509 women.

In the morning, prior to the exercises, the MIT Corporation, the Institute's board of trustees, elected two life and nine term members at its quarterly meeting (see story, this page).

In the afternoon, 23 graduating cadets and midshipmen in MIT's Army, Air Force and Navy Reserve Officers Training Corps (ROTC) units received their commissions at the frigate *USS Constitution* berthed at the Charlestown Navy Yard Historical Park.

The formal commencement activities began with the traditional academic procession, led by the chief marshal, R. Gary Schweikhardt, 1994-95 president of the MIT Association of Alumni and Alumnae.

Dr. Paul E. Gray, chairman of the MIT Corporation, presided at the exercises, which began with a stirring rendition of the National Anthem by Professor Ellen T. Harris, who is stepping down as associate provost for the arts.

The invocation was given by the Rev. Betsy Draper, MIT Baptist chaplain (see text, page 5.)

The commencement speaker, Dr. Hanna H. Gray, former president of the University of Chicago, told the graduates that much of the current criticism of higher education derives from a resistance to change, but that change is a positive force in universities (see text, page 5.) The previous day, Dr. Gray received an honorary doctorate at Harvard University's commencement.

MIT President Charles M. Vest, in

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# Reunion gifts top \$14.6 million, as classes recall WWII

By Charles H. Ball  
News Office

Reunion class gifts of more than \$14.6 million were announced Friday, June 16, at MIT's annual Technology Day luncheon for alumni and alumnae.

The luncheon in the Howard Johnson Athletics Center was attended by more than 1,000 alumni, alumnae, family and guests, some of the more than 2,700 who participated in alumni/ae activities in the week following commencement. This year's program focused on the 50th anniversary of the end of World War II (see story, page 1).

The luncheon program was conducted by R. Gary Schweikhardt (SM in management, 1973), the 1994-95 president of the Association of Alumni and Alumnae, which has some 90,000 members in 128 countries.

Mr. Schweikhardt announced that the most senior alumnus at the luncheon was Malcolm S. "Buzz" Burroughs, 95, of Topsfield, a member of the Class of 1920, observing the 75th anniversary of his graduation. Mr. Schweikhardt also welcomed 243 members of the Cardinal and Gray Society, including the "freshmen" members of the Class of 1945. The Society is an informal association of alumni/ae who have reached their 50th reunion.

Also present, he said, were 15 international alumni and alumnae representing Canada, England, France, Germany, Switzerland, Taiwan, Thailand and Venezuela. They included the alumnus who traveled the greatest distance, Anita Horton '75, from Bangkok.

As a highlight of the program, Mr.

Schweikhardt announced that the Alumni/ae Association, in keeping with tradition, was bestowing honorary membership on individuals "whose dedication, commitment and loyalty to MIT make them truly extraordinary."

Two were at the luncheon but did not know they would receive the honor. They were Dr. Philip Morrison, Institute Professor Emeritus, and Mary L. Morrissey, director of special events and the Information Center.

The third honorary membership was bestowed on MIT's departing provost, Dr. Mark S. Wrighton, at the meeting of the MIT Corporation last week.

Mr. Schweikhardt said that Professor Morrison "has repeatedly given up weekends and evenings for Association programs and Association needs... It seems he has never used the word 'no' when called upon by the Association. His long and distinguished MIT career has been marked with sustained assistance to the Association, supporting our programming and Institute development."

Ms. Morrissey, he noted, is retiring from MIT this year "after 45 years of stellar service." He said she "has played a seminal role in every Commencement and presidential inauguration for years, imparting a style and a substance to Commencement that has had an effect on every graduating class. Most would agree that she has established a wonderful tradition and brought school spirit to the ceremony while understanding MIT's importance on the world stage. She has always felt that Commencement's emphasis should be primarily for the students and their families, but has



Mary Morrissey and Institute Professor Emeritus Philip Morrison congratulate one another as Gary Schweikhardt introduces them as honorary alumni.  
Photo by L. Barry Hetherington

welcomed the alumni and recognized their importance at the proceedings."

Before announcing the gifts from the undergraduate reunion classes, Mr. Schweikhardt said it was "very important to recognize the significant initiative of graduate alumni and alumnae who contributed generously to the

Alumni Fund.

"The graduate alumni population is fast approaching half of MIT's total alumni population, one-third of these being international alumni," he said.

Gifts for the major reunion classes were presented by Gregory K. Arenson for the 25th Reunion Class of 1970,

DuWayne J. Peterson and L. Dennis Shapiro for the 40th Reunion Class of 1955, James A. Levitan for the 50th Reunion Class of 1945 and Samuel R. Spiker for the 70th Reunion Class of 1925. Of the 71 living members of the Class of 1925, eight returned to celebrate their reunion.

- The Class of 1925 announced a gift of \$1,886,800.

- The Class of 1945 announced a gift of \$4,066,000.

- The Class of 1955 announced a gift of \$3,048,000.

- The Class of 1970 announced a gift of \$865,000, with record participation by 76.5 percent of the class, and which included the establishment of a Jerome Wiesner Fund to honor the late MIT president.

The gifts of these reunion classes comprise all gifts made to MIT by members of the classes during the five-year period preceding the reunion and all pledges to be paid in the five years following the reunion.

Other reunion gifts announced at the luncheon by Mr. Schweikhardt included: \$1,716,400 from the Class of 1930; \$968,600 from the Class of 1935; \$603,600 from the Class of 1940; \$188,800 from the Class of 1950; \$377,000 from the Class of 1960; \$225,000 from the Class of 1965; \$480,500 from the Class of 1975; \$99,000 from the Class of 1980; \$53,000 from the Class of 1985; \$25,000 from the Class of 1990; and the 1995 Senior Class gift and pledge of \$54,400.

It also was announced that the Alumni Fund is expected to reach the \$21 million mark by June 30, the second highest amount ever.

Mr. Schweikhardt acknowledged the gifts of non-reunion class alumni/ae and MIT graduate alumni/ae to the Alumni Fund. He said 30 percent of graduate alumni/ae made contributions to MIT and their departments, resulting in a record-setting gift of \$4 million. It has been estimated that by the year 2000, he said, there will be more alumni/ae with graduate degrees than undergraduate degrees.

In his response, President Vest, who was made an honorary member of the Association last year, thanked the alumni/ae for their "splendid reunion class gifts."

"This kind of sustained, generous support is essential to the vigor and excellence of MIT," he said. Such support has made the difference over the years, he said, "as MIT grew from a small technical institute in 19th century Boston to a truly world-class research university located in Cambridge." He  
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## Dibner's Buchwald joins ranks of MacArthur Fellows

By Charles H. Ball  
News Office

When Professor Jed Z. Buchwald read a message left by his son last week that he had been called at home by a Catharine Stimpson at the John D. and Catherine T. MacArthur Foundation in Chicago, he didn't think much about it.

"I knew who she was—the director of the fellows program at the foundation—but I get many calls from people asking for references and that sort of thing," he explained.

He was working at his desk at the Dibner Institute when she called again. This time she asked him if he

was familiar with the foundation's MacArthur Prize Fellows program which awards no-strings-attached cash grants to highly talented individuals working in a wide range of fields.

"I hope you'll be happy to join them," she told Professor Buchwald, who came to MIT three years ago in the dual post of director of the Institute and the first Bern Dibner Professor of the History of Science and Technology on the history faculty and in MIT's Program in Science, Technology, and Society.

Thus did Professor Buchwald learn, "out of the blue," that he was one of 24 grant recipients this year.

"I was pretty knocked down," he told *The Boston Globe*. "Then, of course, I assimilated the full implications of it."

Dr. Buchwald is the 11th person connected with MIT to have won one of the awards, often referred to as "ge-

nius grants," since the program was begun in 1981. The MacArthur Fellowships range from \$235,000 to \$375,000, or \$45,000 to \$75,000 annually, depending on the age of the recipient. Along with the five-year stipend, the Fellows are offered full health insurance. Recipients are free to use the money as they wish.

Names of potential fellows—this year's group included scholars, writers, artists and scientists—are proposed to the Foundation by more than 100 designated nominators in a variety of professions who serve anonymously for one year.

Professor Buchwald, who will receive \$285,000 over five years, said he has "no idea at this point" how he will use the money "but will start thinking about that soon." He said the experience has been "thrilling."

The MacArthur Foundation cited him for examining "the history of science in terms of its great ideas and the figures who generate them."

MIT became home to the Dibner Institute for the History of Science and Technology and the Burndy Library—an advanced research center with one of the world's premier private collections of historical scientific books, manuscripts, instruments and works of art—in the fall of 1992. The primary goal of the institute is to foster and disseminate outstanding scholarship in the history of science and technology and allied fields and to help pursue new directions in these fields.

The work of the Institute and library are funded by the Dibner Fund of Connecticut, a foundation originally established by the late Bern Dibner, an inventor, bibliophile, engineer and businessman who developed a deep interest in the history of science and technology. His son, David Dibner, has been president of the fund since 1989 and was instrumental in founding the institute.

Professor Buchwald, who shares operation of the institute with Dr. Evelyn Simha, founding executive director, received the BA degree from Princeton University and PhD in the history of science from Harvard University. Before coming to MIT, he was at the University of Toronto's Institute for the History and Philosophy of Science and Technology, serving as direc-

tor in 1991.

Originally intending to be a practicing physicist, Dr. Buchwald had a change of heart while pursuing an undergraduate degree in that field at Princeton. In his fourth year, he was influenced by Dr. Thomas S. Kuhn, Laurance S. Rockefeller Professor of Philosophy and History of Science Emeritus at MIT, who was then teaching history of science courses at Princeton.

"I found it particularly fascinating to take apart and put together antique, long-gone science," Dr. Buchwald told Theresa Pease in an MIT Spectrum interview. "I was especially interested in looking at scientists within the contexts of their times to understand the theoretical, experimental, social and cultural forces that underlay their work." At Harvard, he wrote a dissertation on the development in the 19th century of the electromagnetic field concept.

"I continue to believe strongly that it's extremely important to understand where we came from and how we got to where we are," he told the *Globe*. "Without that we have no idea where we're going. People don't exist in an historical vacuum."

His research interests now concentrate on the history of physics since the 17th century. He has published numerous articles as well as three books—*From Maxwell to Microphysics*, *The Rise of the Wave Theory* and *The Creation of Scientific Effects*, all with the University of Chicago Press.

This has been a particularly busy time at the Dibner Institute, he said, with the launching of a new journal, *Archimedes*, which will come out once a year as a book, and a series entitled the Dibner Institute Studies on the History of Science and Technology, which draws on material from conferences held at the institute.

In addition to his work at the institute, Professor Buchwald next year will be chair of the Committee on Discipline.

Professor Buchwald, 46, is married to Dr. Betsey Barker Price, a senior lecturer in the history of medieval science and economics in the School of Humanities and Social Science. They live in Cambridge with their children, Zachary, 12, and Rachael, 8.

## Eleven new members are elected to MIT Corporation

The Corporation of the Massachusetts Institute of Technology—MIT's board of trustees—elected two life members and nine term members at its quarterly meeting Friday, June 9, held just before the Institute's Commencement Exercises.

The names of those elected, some of whom have served previously, were announced by Dr. Paul E. Gray, chairman of the Corporation.

Elected to life membership were: Samuel W. Bodman, Chairman and Chief Executive Officer, Cabot Corp., Boston.

Dr. Bodman received the SB degree in chemical engineering from Cornell University in 1961 and the ScD degree from MIT in 1964. He was a member of the MIT faculty from 1964 to 1970, serving as assistant and associate professor of chemical engineering. In 1970, he was a founding partner of Fidelity Ventures Limited. In 1980 he became executive vice president and director of the Fidelity Group of Mutual Funds and in 1982 accepted



Bodman

Levitan

the additional position of president and chief operating officer of FMR Corp., the parent holding company of Fidelity Investments. He served in these two positions until 1987, when he became president and chief operating officer of Cabot Corp. He has been chairman and chief executive officer since 1988. He has been a member of the MIT Corporation since 1985.

James A. Levitan, of Counsel, Skadden, Arps, Slate, Meagher & Flom, New York City.

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## Vander Sande is interim dean

Professor John B. Vander Sande, associate dean of the School of Engineering, has agreed to serve as acting dean until a new dean is appointed. The interim appointment, effective June 19, was announced by Provost Joel Moses, the former dean.

"As associate dean, John has overseen most of the School of Engineering's activities in education. In addition, because the Dean's Office has worked as a team, he is intimately familiar with all of the issues facing the School. I am certain he will do an outstanding job in this new capacity," Professor Moses said.

Dr. Vander Sande is the Cecil and Ida Green Distinguished Professor and a faculty member in materials science and engineering. A specialist in the structure of materials, he has taken a particular interest in high-temperature superconducting oxides. He has also been deeply involved with the ongoing evolution of engineering education at MIT.



Vander Sande

# Vest evokes Wiesner's memory in charge to graduates

(Following is President Charles M. Vest's Charge to the Graduates at Commencement Exercises on Friday June 9. He began his remarks in response to presentation of the Class gift by Mehran Islam, president of the Class of 1995.)

Thank you, Mr. Islam. It is a moving experience to receive a gift from the class at a moment like this—after all we've put you through in the last four years. It's very good of you. There are some who ask whether good teaching and research can go hand in hand. Your gift, a UROP scholarship, clearly states the answer: Indeed they do!

I very much hope your vision and generosity will serve as a model to other classes which will follow. Thank you very much. There can be no more useful gift to the institution.

Once again we are gathered in Killian Court—the Great Court of MIT—to celebrate accomplishment,

the proceedings... at any time and in any manner they see fit.

I would like to take a moment to recognize some other special graduates of MIT who are with us today. They are the members of the Class of 1945—the 50-year class—and the Class of 1970, celebrating their 25th reunion. You will recognize them by the red or gray jackets they are wearing—along with a certain look of wonder that time has somehow passed so quickly since they were in your shoes.

Time has passed quickly—and it has brought extraordinary change along with it.

Fifty years ago, we were emerging from the Second World War... a period when MIT was called to national service. Our scientists and engineers helped to develop radar... students moved through here in double time... and many took up arms in defense of freedom and de-

there are truly incredible levels of violence and purposelessness in our own nation. It is a world that is experiencing both scientific progress and economic advancement at the same time that there is growing stratification of wealth and divisions among peoples. It is a world permeated with both hope and despair. How, indeed, does a wish for a life well-lived relate to this world?

In searching for answers, we can do no better than to reflect on the life of a great person who shared this platform with us for many years. He is with us no more. Former MIT president Jerome Wiesner died last fall. You must know about him.

Jerry Wiesner showed us all a life well-lived—one that took form from, and gave form to, the Massachusetts Institute of Technology. His was a life that drew deeply on science and engineering, but also encompassed humanism, educational leadership,

*A good man! Look at him there against the time!  
He saunters along to his place in the world's weather,  
lights his pipe and hitches his pants,  
talks back to accepted opinion.*

*Congressional Committees hear him say:  
"Not what you think: what you haven't thought of."*

*He addresses Presidents. He says:  
"Governments even now still have to govern:  
no one is going to invent a self-governing holocaust."*

*The Pentagon receives his views:  
"Science" he says, "is no substitute for thought.  
Miracle drugs perhaps: not miracle wars."*

*Advisor to Presidents, the papers call him.  
Advisor, I say, to the young.  
It's the young who need competent friends, bold companions,  
honest men who will not run out,  
won't write off mankind, sell up the country,  
quit the venture, jibe the ship.*

How does that life relate to MIT? We—all of us—are MIT. We must

nurture, support, love and build this institution for the future as he did.

How does Jerry's life relate to us and the Class of 1945? We—like they—must turn our talents to the greater good and be prepared to sacrifice in the effort when the times demand it.

How does it relate to us and the Class of 1970? We—like they—must boldly address the profound dilemmas which the world presents to us.

And how does it relate to the world you face, which you as the Class of 1995 will soon shape and lead?

You must keep alive the joy, excitement, beauty, rationality and creativity of science and technology, deeply understood. Yet you must understand

the power and potential of science and technology to enable great good, but also evil. In other words, you must never cease to consider the context in

which its powers are applied and its ability to shape the world for better or worse. You must strive to understand complexity and to contemplate the world from a systems perspective. Strive to integrate the understandings of humanists and artists with those of scientists, engineers, managers, architects, planners and social scientists.

Live your lives well. Ponder the unthinkable. Question the status quo. Live in the world as well as your own nation. Dream of a better future and contribute to the present. Share your talents. Be competent friends and bold companions of the young. Address the really important issues of your times. Be honest and do not run out.

But back to today and our celebration of your commencement. As you prepare to receive your diplomas and a hearty handshake from the president or provost, ponder one more lesson from Jerry Wiesner:

Some years ago, a man came up to Jerry long after he had retired as MIT's president. He said "Dr. Wiesner, do you remember me? You shook my hand at graduation 20 years ago."

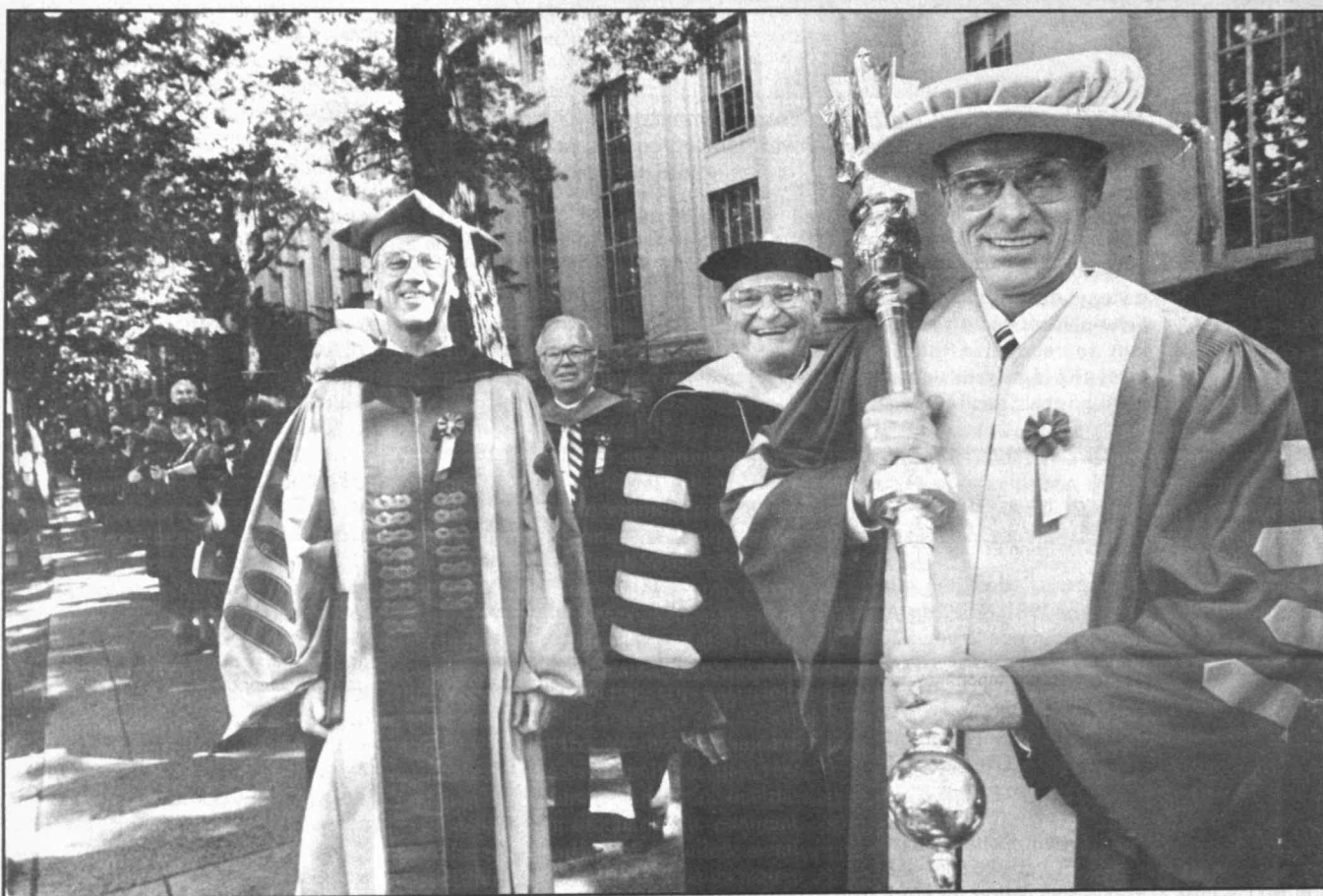
Jerry reluctantly admitted that he wasn't sure that he exactly remembered him.

The man said to him, "But you said something to me as I came through the line to receive my diploma that changed my life. It was the secret of my successful career."

"Well, my goodness," Jerry said, "what did I say?"

"Dr. Wiesner, you said 'Keep on moving; keep on moving!'"

Men and women of MIT, keep on moving. Live your lives well. I wish you godspeed and the best of good fortune.



The leaders of the Commencement procession down Massachusetts Avenue present a jovial front as President Charles Vest, Chairman of the Corporation Paul Gray and chief marshal R. Gary Schweikhardt make their way toward Killian Court.

Photo by Donna Coveney

heritage and passage. It may seem a bit odd that a community so dedicated to the future would come together on this occasion dressed in strange and colorful medieval regalia. But indeed it is fitting, and seemingly fulfilling of some deep human need, that such rituals take place. They remind us of our role in an unbroken, centuries-old chain of discovery, learning and accomplishment—achievements of the mind and of the spirit.

But above all, this ceremony celebrates your accomplishments during your student years. This is not to say that you have accomplished this remarkable feat of graduating from MIT all on your own, however!

We are surrounded today by parents, family, friends, spouses and children who have supported and sustained you throughout the years. You will recognize them today by their smiles, brought about by their great pride in your accomplishments... and, also no doubt, by a sense of great relief to their bank accounts. Let us then express our deep appreciation to all who have come to Cambridge today to celebrate your commencement ceremony. Will you, the graduates, please rise, turn to your audience and give them the applause they so richly deserve. Thank you.

It is also especially wonderful to see the babies and small children who come to see their mothers and fathers graduate. They too are welcome. And as this ceremony stretches onward, I give them special presidential approval to comment upon

mocracy. It was a time of crisis for the country and for the world, and the people of MIT responded.

Twenty-five years ago, we faced difficult times of a different sort. The country—and this campus—were divided over the Vietnam War. It was a time of great strain, but the true gift of our society is that, even in moments of highest crisis, we not only tolerate, we protect the voices of dissent. Some serve by bearing arms, others by forcing a look at the hard questions. In each of these generations, the men and women of MIT answered the call in their own way.

Now, as you look to the future and ponder the world you are entering, my wish for each of you is a *life well-lived*.

And how does this wish for a life well-lived relate to the intense, rigorous, analytically based education that you have received here at MIT?

And how does it relate to the Class of 1945 who join you today, and who 50 years ago brought science, technology and personal valor to bear in the defeat of the undisputed evil of Nazism?

And how does it relate to the Class of 1970, which struggled with the moral, intellectual and political dilemmas of the Vietnam War and its meaning for American society?

And most important, how does this wish for a life well-lived relate to the world we face today? Ours is a world of contrasts. We are coming to understand the common stake in the global environment and the global economy. Yet there is a terrifying resurgence of nationalist and ethnic conflict across the world, and

artistic sensibilities and statecraft.

Jerry Wiesner was of MIT. The Research Laboratory of Electronics, the Department of Electrical Engineering, the School of Science, and the entire Institute were led by him at one time or another. He promoted the growth of the humanities, the arts and the social sciences in our midst. He led us in bringing women and minorities into this academy. He maintained an international perspective and world view in all that he did. He looked to the future, he co-founded the Media Laboratory. He reveled in discourse with everyone at MIT—students, trustees, staff, faculty, alumni and alumnae—all of our community.

Jerry was a citizen of the world. He was Science Advisor to two US Presidents. He convened informal and impassioned dialogue among government officials and student protesters. During the Cold War, he was a guiding light of the Pugwash Conference and movement that sustained discussion across national and political boundaries. He worked tirelessly to awaken the world from the nightmare of nuclear standoff. He played a key role in obtaining the release of Soviet scientist and dissident, Andre Sakarov. He shaped major corporations and foundations through his service on their boards.

Yet throughout this life on the world stage, he lived quietly and simply with his beloved wife Laya in Watertown and on the Vineyard.

And through it all... he spoke his mind. Listen to what—in part—America's great poet Archibald MacLeish said of Jerry Wiesner:

## 1,724 receive their degrees at MIT Commencement

(continued from page 1)

his traditional charge to the graduates, offered a wish for a "life well-lived," but acknowledged that this would be a difficult achievement and require sacrifice in "a world permeated with both hope and despair." (See text, this page.)

Roger G. Kermode, president of the Graduate Student Council, delivered a salute to MIT from the graduate student body. Mehran Islam, president of the Class of 1995, presented the senior class gift, the Class of 1995 UROP Fund, to Dr. Vest. At a time of federal cutbacks in UROP (Undergraduate Research Opportunity Program) funding, 27 percent of the class committed themselves to raising \$54,000 over the next five years to fund first-time UROP students in innovative and creative research. The money includes matching funds from the 50-year Class of 1945.

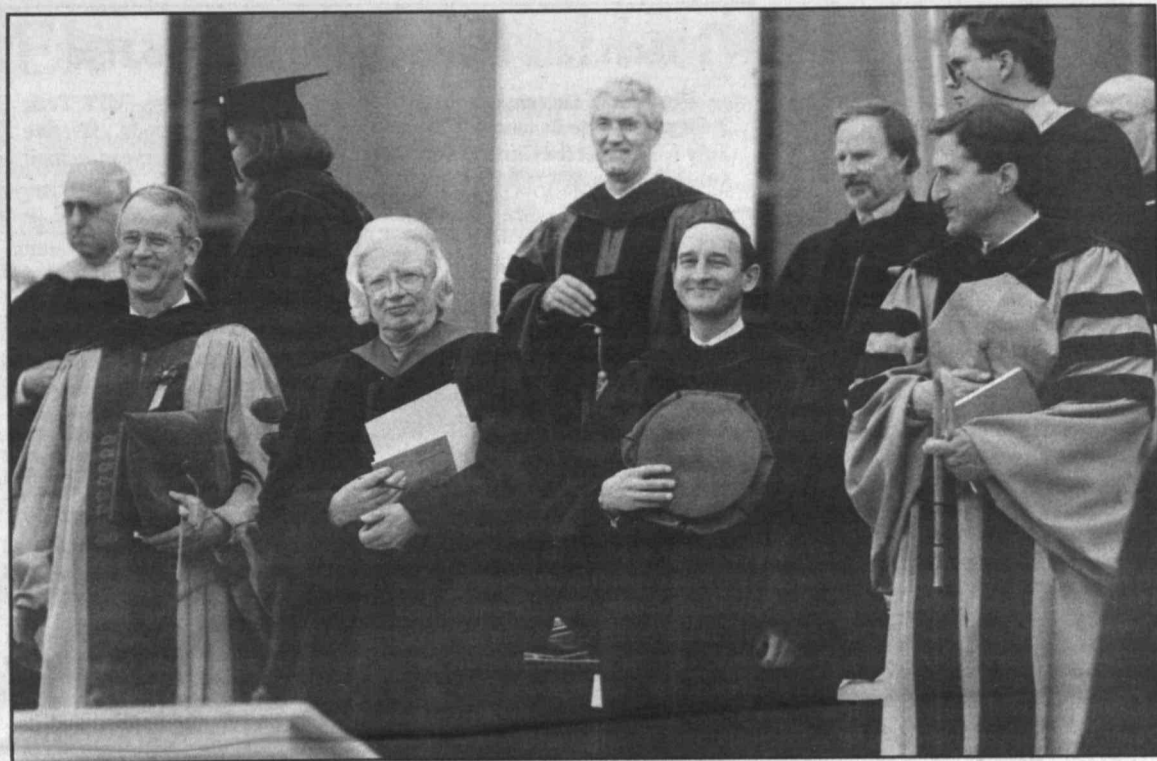
For the awarding of degrees, Dr. Vest presented diplomas to the bachelor of science degree recipients and also those receiving both bachelor of science and master of science degrees, while Provost Mark S. Wrighton gave out advanced degrees. The two lines of students approached the stage simultaneously, and the names were announced

in an alternating pattern as the degrees were handed out.

Those receiving doctoral degrees already had been hooded in a special ceremony on the day before commencement in Rockwell Cage.

At the close of the ceremonies, in a departure from the program, President Gray paid tribute to two departing members of the MIT family, Mary L. Morrissey, director of special events who serves as executive officer for commencements, and Provost Wrighton, who has stepped down to become chancellor of Washington University in St. Louis. Miss Morrissey, who has been the chief coordinator for the myriad details involved in commencements for more than two decades, will retire in September after 45 years at the Institute. She was escorted onto the commencement stage to a standing ovation by Professor Martin Schlecht, who headed the Faculty Commencement Committee.

Following the Commencement program, President Vest held a reception for graduates and their guests—and for alumni both of the 50th reunion Class of 1945 and the 25th reunion Class of 1970—at several locations in or near McDermott Court.



Proudly watching the graduates file in at Commencement are President Charles Vest, Commencement speaker Hanna Gray, departing Provost Mark Wrighton, and faculty chair Robert Jaffe. Photo by Donna Coveney

## Novel pancakes greet seniors

■ By Alice C. Waugh  
News Office

Seniors and other guests attending the Class of '95 pancake breakfast last week really flipped over their flapjacks.

The event marked the public debut of a prototype for an automatic pancake cooker and flipper invented by Ernesto Blanco, adjunct professor of mechanical engineering, and his design partner, Albert Sesona. In addition to being somewhat plumper than the other pancakes cooked on a grill in the usual way, the flapjacks also had an unusual feature—the words “Good Morning” in attractive script baked into the surface.

The Flip-It device used at the pancake breakfast is a smaller manual version of an automatic machine that the inventors hope to market to restaurant chains. It consists of a shallow metal dish into which the cook pours batter. When one side is done, he or she maneuvers another attached dish over the first and inverts the pair, flipping the pancake. The first dish has mirror-image aluminum script in relief to toast in the words. Because of the differing heat distribution, the letters are a darker shade of brown than the surrounding pancake, as well as indented into its surface. Future owners of the machine could purchase several dishes with different words or patterns for customizing their pancakes. “It’s very cheap to do,” Professor Blanco said.

This manual device would be suitable for homes, but Messrs. Blanco and Sesona have also applied for a patent on a commercial model that would dispense the batter from a self-contained tank, cook three pancakes at once and flip them automatically when triggered by a timer. Everything would be controlled and pre-programmed through a digital touchpad similar to that found on microwave ovens, the inventors explained.

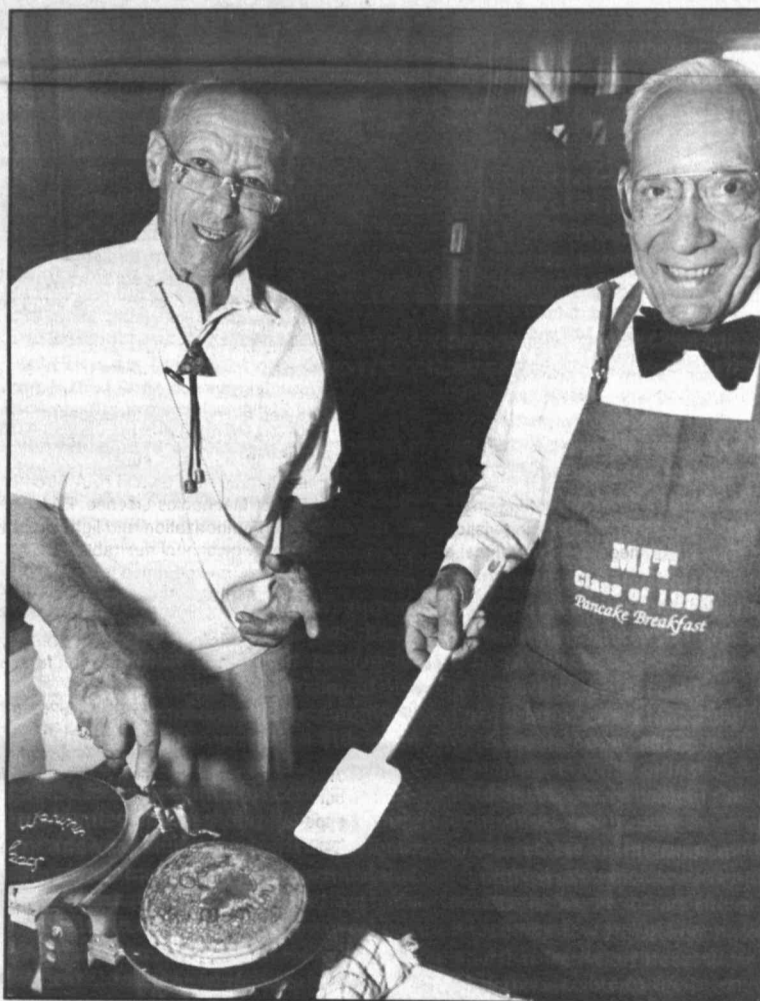
Research and development for the Flip-It has been somewhat lengthy—Messrs. Blanco and Sesona have been working on their idea off and on since 1960. “We don’t believe in rushing

into anything,” Mr. Sesona joked. More recently, students at the Sloan School of Management studied the idea and recommended that the inventors pursue both the manual device for home use and the larger automatic version for commercial applications.

Professor Blanco hopes that a chain like International House of Pancakes or McDonald’s will be attracted to the Flip-It because it can go anywhere and doesn’t take up grill space, and because it can also be used for omelets. The

device could also be coin-operated, which would be useful for cafeterias and other self-service venues—or even Lobdell Food Court in the Student Center. “It’s a pretty neat thing,” said Rob McBurney of Aramark, general manager of MIT food services, who was on hand for the demonstration.

And how did the seniors rate the Flip-It pancakes? “They realized they were a bit thicker and tastier. The comments were very positive,” Professor Blanco said.



Adjunct Professor of Mechanical Engineering Ernesto Blanco (right) displays the pancake flipper that he and co-inventor Albert Sesona (left) tried out at the senior Commencement breakfast.

Photo by Donna Coveney

## The 1995 Commencement invocation

Rev. Betsy Draper, MIT Baptist chaplain, gave the following invocation at the commencement exercises:

“O God, our Help and our Hope,  
“I come in prayer today knowing that you are present here for you are God with us. I ask for your blessing because that is what you like to do, to bless your creation and your people. I offer thanksgiving for the accomplishments and the achievements of each graduate, for the support and love of

family and friends, for spouses and children who have endured lonely hours, for faculty, administration and staff who exist not only unto themselves, but to multiply the pursuit for truth.

“God, our Help and our Hope, I ask you to guide each graduate to clothe their intellect with compassion and concern for good. Help them to prize a personal standard so strong and so dear that when they arrive at the crossroads

of decision, they will know the just and the right thing to do. Help them to love their families, both present and future, with a selfless and committed love, and to love their neighbors as themselves, for this is the springboard of true success. May we savor this moment as a representation of all that has gone on before. And help us to remember this moment as an inspiration of what is to be. In the name of the Father, Son and Holy Spirit I pray. Amen.”

## Be critical, but expect change, Gray advises

(Following is the text of the Commencement Address presented by Hanna Holborn Gray, president emerita of the University of Chicago, at graduation exercises on Friday, June 9.)

There is a famous story—famous at least in the Connecticut River Valley—about a crusty patriotic old Vermonter who lived on an island in the Connecticut River. The border between New Hampshire and Vermont runs along there, and one year a team was sent out to survey it. They discovered quite unexpectedly that the old man actually lived on the New Hampshire side of the line, and they set out with considerable trepidation to give him this news. To their astonishment he replied, “Well, thank the good Lord. I was beginning to think I’d never be able to tolerate another of those goddamned Vermont winters.”

Graduates of 1995: yours is the exact analogue to the old man’s situation. The boundary that separates you from another Boston winter has been drawn. You have been surveyed and found to be bachelors of science, masters of science and PhDs and all those good things, and therefore citizens of some state popularly called the “real” world. Yet tomorrow I suspect that your spiritual terrain will be roughly the same, and so will you—quite dramatically unchanged if perhaps gratified to have survived into your new citizenship.

But in the meantime, unkind fates have decreed that your passage must be marked by the rite of the commencement speech. Let me therefore begin by congratulating all of you on whom degrees are being conferred today, and let me remind you that my own presence here is meant to keep that from happening too quickly. For that, in the etiquette of these occasions, would be considered unseemly. You are meant to be restrained from stampeding this platform in search of your diplomas, and from then rushing out into the great world, by the double defense of your natural good manners and my unnatural verbosity. This, I can reveal to you now, is really the point of the commencement speech. Its function is to prolong the ceremony, and to do so in order to make it appear that something has really happened here today as you move on from the Institute.

You will move on and at the same time you will always retain your citizenship in this university. I hope that you will always think of it not as an escape from the world out there but as a real world, too. Without it, the larger world and its possibilities would be impoverished, the quality of its life, its civilizing values and social purposes impaired. The mission of this university has to do with learning along a broad spectrum of undergraduate, graduate and professional study. It has to do with learning as scholarship, with learning as discovery of knowledge. It is concerned with learning as the enjoyment of knowledge, creativity and their products. It is directed to learning as the initiation into a lifetime of taking seriously the process of trying to come to some understanding and wisdom, of committing to the obligation of thought, of critical judgment, of the willingness to confront complexity, to examine assumptions, to see things in their relationships and contexts and to engage with and benefit from the thinking of others.

These qualities are pertinent to every activity of life, every vocation, every decision, every exercise of citizenship and responsible choice. The university exists for learning in all these senses, and it does so for the long term, not for the pursuit of immediate fad and fashion. Its existence, and its sustenance, represent society’s continually renewed investment in its future. Just as your education will have no effective value unless you continue to make its imperatives your own, so the university cannot thrive and play its special role in serving society unless you care for it and care for enabling its

moral and intellectual purposes.

Robert Frost once said, “Education doesn’t change life much. It just lifts trouble to a higher plane of regard.” That, I suppose, is one of the gifts and one of the challenges bestowed on us as thinking beings. It would often be a lot easier not to think, as it would also be easier not to try to see things whole or take into account new or different or difficult or unsettling ways of reviewing what we may have taken comfortably for granted.

In attaining the status of alumni, you will of course be eligible to receive copious communications of great courtesy and eloquence from your university, rather different in tone from those stern reminders that greeted you in your mailboxes here. You will also find unless you are very, very careful that the university will, perhaps as early as tomorrow, begin to suffer a permanent state of decline. It is the common experience of graduates that their institution is never quite what it was in their own day and in their memories, and that not to be the same, or the place of one’s memory, is inevitably to be less in stature. All commentary on education—a subject on which everyone, but everyone, has very strong and very stubborn opinions—assumes that things are generally getting worse. In fact, if you have been listening at all to current commentaries, you would have to believe that you cannot possibly have been educated at all or educated nearly as well as people used to be educated and you may come in turn to believe that your successors’ fate is even more horrendous.

Why is this? Why do people forget the wise old saying that “the schools ain’t what they used to be and never was?” (You will, being at least more or less educated, recognize this as a rhetorical question. As Sam Goldwyn put it, “When I want your opinion, I’ll give it to you.”) I think the answer has a lot to do with the ways in which education and its institutions as they are thought about get transformed into emblems of other causes and hopes and fears. It is instructive to see how much of the rhetoric having to do with the decline of higher education derives from the language of a larger nostalgia and from romantic visions of a golden age that never quite existed, instructive to see how much has to do with a resistance to major changes that cannot be argued away. Universities, seen as institutions immune to change and even caricatured for their conservatism, are at the same time regarded, not at MIT of course but elsewhere, as institutions that should not change, that ought instead to preserve their own past as they, its loyalists, wish to remember it, a timeless security against the disintegrations and disappointments, the corruptions and uncertain turnings, of a threatening and fragmenting world. To the degree that universities mirror the tensions and shifts within the larger society, they become objects of the disillusionments and fears which those evoke—they appear as once safe places suddenly made dangerous.

I am not for a moment arguing that there is not much to strengthen and improve within higher education. But I am arguing that the symbolic and selective uses of memory and devotion have to be understood for what they are before we can think clearly about the state of higher education and its institutions.

Let me give you just one example. Once upon a time, people say, there was greater harmony on our campuses. Whether true or not, it is certainly true that once upon a time, and not so long ago, there was greater homogeneity on our campuses. And surely to have a broadened diversity now is a positive improvement and an educational good. Our campuses as a result have come to reflect more fully some of the problematic tensions in our society. An academic community in which those can be identified and discussed and understood from different points of view is in fact a better, if not a more comfortable,  
(continued on page 8)



# Eleven are elected to membership on MIT Corporation

(continued from page 3)

Mr. Levitan received the SB degree in chemical engineering from MIT in 1948 but remains affiliated with the Class of 1945 with which he spent five terms prior to his service in the US Navy during World War II. In 1951 he received the LLB degree from Columbia Law School, where he was a Kent Scholar, a Stone Scholar and an editor of the Law Review.

From 1951 to 1965 Mr. Levitan was an associate at Debevoise, Plimpton. From 1965 to 1995 he was the tax partner and then head of the tax department at Skadden, Arps, Slate, Meagher & Flom, where he is now of Counsel. He is also an author and lecturer at the New York University Tax Institute. He has been a Corporation Member since 1990.

Elected to five-year term memberships were:

**Denis A. Bovin**, Vice Chairman, Bear, Stearns & Co. Inc., New York City

Mr. Bovin received the SB degree in management from MIT in 1969 and the MBA degree from Harvard Graduate School of Business in 1971, when he joined the investment banking firm of Salomon Brothers. He was elected a vice president in 1976 and a managing director in 1981.

Mr. Bovin left Salomon Brothers in 1992 to become senior managing director and vice chairman of Bear, Stearns & Co., Inc. He was elected to his first term on the Corporation in 1990.

**John K. Castle**, Chairman and Chief Executive Officer, Castle Harlan, Inc., New York City.

Mr. Castle received the SB degree in economics from MIT in 1962 and

the MBA from Harvard Business School in 1965, where he was a Baker Scholar and a member of the Century Club. He is chairman and chief executive officer of Castle Harlan, Inc. He formerly served as president, chief executive officer and director of Donaldson, Lufkin, and Jenrette, Inc. He served an earlier five-year term as a Corporation member from 1987 to 1992. He has been chairman of the New York Medical College's Board of Trustees for 11 years and is a commissioner of the Joint Commission on Accreditation of Health Care Organizations.

**Arthur Gelb**, President, Four Sigma Corp., Woburn, MA.

Dr. Gelb received the BEE degree at the City College of New York in 1958, the SM degree in applied physics at Harvard University in 1959 and the ScD degree in instrumentation (systems engineering) at MIT in 1961. Dr. Gelb co-founded The Analytic Sciences Corporation (TASC) in 1966,

serving as TASC's president, chief executive officer and chairman from 1966 to 1991, at which time TASC was acquired by Primark Corp. He further served as TASC's president and chief executive officer until 1993, chairman in 1994 and senior chairman in 1995. He is currently president of Four Sigma Corporation. He has served Massachusetts in several capacities.

**Barbara A. Gilchrest**, Professor and Chairman of Dermatology, Boston University School of Medicine, Boston.

Dr. Gilchrest received the SB degree in mathematics from MIT in 1967.

After graduating from Harvard Medical School in 1971, she served an internship, internal medicine residency and dermatology residency in Harvard-affiliated hospitals. In 1976 she returned to MIT for research fellowship training, then joined the Harvard Medical School Department of

Dermatology faculty, where she established a tissue culture laboratory focused on studies of cellular aging. In 1983 she transferred her appointment to Tufts University, where she rose to the rank of professor of dermatology and senior scientist at the USDA Human Nutrition Research Center on Aging. In 1985 Dr. Gilchrest was appointed professor and chairman of the Department of Dermatology at the Boston University School of Medicine and chief of dermatology at its affiliated teaching hospitals.

**John M. Hennessy**, Chairman of the Executive Board and Chief Executive Officer, CS First Boston, New York City.

John (Jack) Hennessy received the BA degree from Harvard University in 1958. From 1968 to 1970 he studied at the MIT Sloan School of Management as a National Science Fellow in the field of international finance. He began his business career with Citibank in 1958 and worked

in corporate banking in New York and Latin America. From 1972 to 1974 Mr. Hennessy served as assistant secretary of the treasury for international affairs. He joined the First Boston Corp. as a managing director in 1974. He has served as vice chairman of the board of First Boston in New York and chairman and chief executive officer of Credit Suisse First Boston, Ltd., in London. Since 1989 he has been chairman of the executive board and chief executive officer of Cs First Boston, a leading international investment bank. He was elected to his first term on the MIT Corporation in 1990.

**Hajime Mitarai**, President and Representative Director, Canon, Inc., Tokyo.

Dr. Mitarai received the SB, SM and EE degrees in electrical engineering from MIT in 1965. He worked at the Corning Glass Works from 1966 until 1972. He received the PhD in electrical engineering from Stanford University in 1973 and started working for Canon, Inc., in 1974. Since 1983,

as a senior managing and representative director, he has worked mainly in the research field, Canon Central Research Center, contributing to Canon's recent diversification efforts. Starting in 1978, he was in charge of company-wide research and development activities as well as the Optical Products Division and the Social and Cultural Planning Division. In 1993, Dr. Mitarai became president and representative director of Canon, Inc. (Alumni/ae Association Nominee)

**Antonia D. Schuman**, Manager, Advanced Systems, TRW Data Technologies Division, Los Angeles.

Ms. Schuman received the SB degree in mechanical engineering from MIT in 1958. At MIT, she was president of the Association of Women Students and won a letter in sailing, the first letter ever awarded to a woman. She started her career as a mechanical engineer at the Boston Naval Shipyard but discovered computers very early and spent 10 years designing, building

and marketing computer systems. For four years she was president of her own consulting firm, which provided systems support to a variety of clients across the country. For the last 24 years, Ms. Schuman has worked in the defense industry, first at Litton Data Systems Division, managing the TACFIRE project, and since 1977, at TRW, where she has alternated between marketing and program management. (Alumni/ae Association Nominee)

**R. Gary Schweikhardt**, President, Washington Biotechnology Funding, Inc. (WBF), Seattle.

Mr. Schweikhardt received the BS and MS degrees in mechanical engineering from The University of Washington in 1965 and 1967, and the SM degree in management from MIT in 1973. He has held a number of positions in industry, among them director of planning and operations for Androcor, Inc., division and business manager for Boeing Computer Services, Inc., vice president of Mathematical Sciences Northwest, Inc. and chief

operating officer for ZymoGenetics, Inc. Mr. Schweikhardt has been an *ex officio* member of the Corporation this past year as president of the MIT Association of Alumni and Alumnae. (Alumni/ae Association Nominee)

The nominee from recent classes, who will serve a five-year term, is

**Mark Lundstrom**, a member of the class of 1991. Mr. Lundstrom holds the SB degree in aeronautics and astronautics (1991) and SM degrees from the Sloan School of Management and aeronautics and astronautics (1993), all from MIT. In addition he holds the MPhil in economics (1995) from Oxford University, where he is a Rhodes Scholar. He is co-founder of Active Control eXperts, Inc. (ACX), president of Skiabe, Inc., a nonprofit organization enabling the physically challenged in Boston to experience skiing, and president of INSPIRE, a nonprofit organization to integrate high school science classes with American industry.

Also serving on the Corporation in 1995-96 as an *ex officio* member will be the incoming president of the Association of Alumni and Alumnae, **Karen W. Arenson**, a correspondent for The New York Times. Ms. Arenson received the SB degree in economics from MIT in 1970 and a master's degree in public policy

from Harvard in 1972. As an undergraduate, Ms. Arenson served as acting president of the Undergraduate Association and as managing editor of The Tech. From 1973 to 1978 she was a correspondent and staff editor for Business Week. She has been with The New York Times since 1978, serving in a variety of reporting and editorial positions. She is currently covering nonprofits and philanthropy. Ms. Arenson previously served on the Corporation from 1989 to 1994.

As of July 1, the Corporation will be comprised of 75 distinguished leaders in education, science, engineering and industry. Of the 75, 22 are currently Life Members. In addition, 22 individuals are Life Members Emeriti, participating in meetings but without a vote.

The officers of the Corporation are: the Chairman, Dr. Gray (MIT, 1954); the President, Charles M. Vest; the Treasurer, Glenn P. Strehle (MIT, 1958); and the Secretary, Kathryn A. Willmore. In addition, other *ex officio* members include Massachusetts Governor William F. Weld; Paul J. Liacos, the Chief Justice of the Massachusetts Supreme Judicial Court; and Robert V. Antonucci, Massachusetts Commissioner of Education.



Gilchrest



Schuman



Lundstrom



Arenson



Bovin



Schweikhardt



Hennessy



Castle



Mitarai



Gelb

## Senior trustee, Thomas D. Cabot, dies at 98

Thomas Dudley Cabot, the longest serving member of the MIT Corporation, died June 8 at his home in Weston at the age of 98.

Mr. Cabot, a Life Member Emeritus of the Corporation who was first appointed as a term member in 1946, regularly attended meetings of the trustees until shortly before his death and marched in the 1994 Commencement procession.

In fact, Mr. Cabot, who was director emeritus of Cabot Corp., manufacturer of petrochemicals, still went to his Boston office at 75 State St. from his home in Weston on a "very regular basis," according to a company spokesperson. "I manage to find something to do," he said in an interview in 1992.

MIT Chairman Paul E. Gray and President Charles M. Vest took note of Mr. Cabot's 95th birthday in 1992 in a letter they sent to him. "We count ourselves fortunate indeed to have your continued participation in the MIT Corporation meetings," it said. "The fact that you... take an interest in the many issues associated with the governance of the Institute is deeply inspiring to your MIT trustee colleagues and to us. Your wisdom and your support are always there when needed."

Although he played an important role in MIT's affairs, and with other family members was an MIT benefactor, Mr. Cabot did not graduate from the Institute. He took courses at MIT when it was called Boston Tech and located on Boylston Street, Boston. The courses—which included thermodynamics, aerodynamics and shop practice—were taught by faculty members with joint appointments at MIT and Harvard. He was enrolled at Harvard and received his bachelor's degree in engineering there, cum laude, in 1919.

His father, Godfrey Lowell Cabot, attended MIT for one year in 1877-78 and graduated from Harvard with a degree in chemistry in 1881. He also served on the MIT Corporation starting in 1930, and became a Life Member.

Still another member of the family is currently a Life Member of the Corporation. He is Thomas Cabot's son, Louis W. Cabot, a Harvard graduate and also a director emeritus of Cabot Corp.

Thomas Cabot was born in Cambridge on May 1, 1897. On graduation from college, he entered his father's business in West Virginia. He expanded

it to other states and eventually into foreign countries while broadening the fields of its interest into a diversity of products. The company now is the leading producer of carbon black—the material that helps produce automobile tires, paint and printing ink—and a supplier of raw materials to a variety of industries, with annual sales of \$1.7 billion.

Mr. Cabot, with 49 unbroken years of service to MIT, was elected a Life Member of the Corporation in 1951 and Life Member Emeritus in 1972. He served on many of the Corporation Standing and Visiting Committees and served a number of terms as chairman of Visiting Committees. He also took on additional tasks as they arose.

In 1960 he established the Thomas Dudley Cabot Scholarship Fund as part of the permanent endowment. There have been other gifts in his and his family's name and, in 1977, members of Mr. Cabot's family endowed the Thomas Dudley Cabot Institute Chair.

He has also served the government in a number of capacities. In 1951 dur-

ing the Korean War President Harry S. Truman appointed him director of International Security Affairs in the Department of State, in charge of rearming Europe.

A man of action since his days as a flying officer in the Army during World War I, he was a trophy-winning sailor whose latest book was *Avelinda: The Legacy of a Yankee Yachtsman*. His love of the outdoors also included canoeing, skiing, hiking and camping. In 1934, he co-authored *Quick Water and Smooth*, the first canoe guide to New England rivers. He had been president of both The Appalachian Mountain Club and the Harvard Travellers Club.

Services were held June 14 in Harvard University's Memorial Church.

He leaves his wife, Virginia (Wellington) of Weston; four sons, Louis W. of Boston, Thomas D. Jr. of Greenwich, CT, Robert M. of England and Edmund B. of Belmont; a daughter, Linda Black of Cambridge; 29 grandchildren and 23 great-grandchildren.

## Graduate student dies in accident

George P. (Gera) Panteleyev, a graduate student in the MIT-Woods Hole Oceanographic Institution Joint Program in Oceanography and Oceanographic Engineering, was lost overboard June 8 during a research cruise aboard a Russian vessel on the Ob River in Siberia and is presumed dead.

Details of the accident were sketchy and unclear, according to an announcement from the Woods Hole Oceanographic Institution (WHOI). According to information from Russia, the accident occurred in the early morning hours, a few days after the start of the cruise. The ship searched for Mr. Panteleyev for about five hours. A preliminary investigation was conducted by local officials in the remote region.

Mr. Panteleyev was serving as chief scientist on the cruise, which was collecting data to assess radioactive contamination in the Ob River system, which empties into the Arctic Ocean.

A similar cruise was conducted by Mr. Panteleyev and Stephen Smith of WHOI's Marine Chemistry and Geochemistry Department, with Russian collaborators, in the summer of 1994.

Mr. Smith and graduate student Wendy Woods of the University of Rhode Island were the only other American scientists aboard the vessel, which continued the cruise, originally scheduled to end in Tobol'sk further up the river on June 24. Russian scientists also were participating in the project, which is funded by the US Office of Naval Research.

Co-principal Investigators for the project are Fred Sayles and Hugh Livingston, both of WHOI, who also were co-advisors on Mr. Panteleyev's master's thesis.

Born in Moscow in 1966, Mr. Panteleyev entered the MIT-WHOI Joint Graduate Program in June 1991. He and his wife, third-year Joint Program student Natalia (Natasha) Beliakova, lived in the Westgate Apartments. She has returned to Russia.

Robert Edson, program manager for the project with the US Office of Naval Research, said that those who had the opportunity to work with Mr. Panteleyev "knew him to be a bright, energetic scientist of the first order, an individual excited about life and the opportunities that lay ahead. He will be missed."

## New doctor in the house



Scott Deering, grinning broadly, is hooded as a brand-new PhD in materials science by Professor Edwin Thomas. Photo by Donna Coveney

## Tech Day speakers review World War II and MIT

(continued from page 1)

Academy of Engineering.

As reported in MIT President Karl Taylor Compton's report in 1945, Professor Seamans said, one-quarter of MIT alumni served in the military and 30 percent of the staff took leaves of absence. President Compton himself traveled extensively during the war in his capacity as the chief of field services for the Office of Scientific Research and Development, which was headed by former MIT Vice President Vannevar Bush.

Professor Seamans showed slides of war-related activities on the MIT campus, including the Hunsaker wind tunnel, Dr. Bush's differential analyzer ("The Great Brass Brain") for solving differential equations, "the plethora of radomes protruding from rooftops," and the temporary housing built for students and their families who came to MIT on the GI Bill after the war. There was also research and development at MIT on camouflage, aircraft propulsion, food processing, surgical sutures, synthetic rubber and vitamins, flash photography for reconnaissance, and weather forecasting, he added. Institute staff did not work on the atomic bomb because "the great commitment to radar obviated the opportunity to participate in the most portentous scientific program in all of history," Professor Seamans said, quoting President Compton's report.

### MIT'S EVOLUTION

"These activities [development of war-related technologies] running under forced draught in an atmosphere of crisis and deep commitment changed MIT fundamentally and irreversibly," Corporation Chairman Paul Gray said in his talk on "MIT's Responses to the World War II Experience." These changes could be seen in the size and composition of the student body ("a preamble to the further democratization of this place that began 20 years later and which is so evident today," he said), in the revamping of the engineering curriculum to emphasize physical and mathematical foundations, and in the marriage of teaching and research with government support that made MIT a paradigm of the post-war research university.

Dr. Bush helped create the government-university partnership that reached its height in the 1960s, a time that some now see "as an exception rather than any kind of rule... an aberration unlikely ever to happen again," Dr. Gray observed. Funding cuts are now resulting from a war on the federal deficit that is "fully as sig-

nificant as the conflict in World War II" for MIT, he said.

### PHILOSOPHY AND VISION

The war and its outcome also served to preserve the capitalist system in the United States and other countries, said Lester Thurow, Lemelson Professor of Management and Economics, speaking on "The Economic Impact on Society." In 1941, the country was radicalized and still mired in 17 percent unemployment; "there was not a single shred of evidence that the US would recover from the Great Depression," he said. During the war, the government instituted wage and price controls and changed the tax structure, resulting in a significant redistribution of wealth. Other post-war economic changes included a sharp rise in foreign aid with the Marshall Plan and the creation of a social welfare system predicated on the belief that when "people are sick, old or unemployed, you do not throw them off the ship of state," Professor Thurow said.

After the war, much of America's foreign and domestic policy including heavy spending on the "space race," was justified on the basis of combating communism, but since the collapse of the Soviet Union, "all of the anchor points are gone," he said. "It's easy to be a manager in a crisis... today's political leadership has a much tougher task than in the '30s and '40s because there is no crisis." The overriding question now facing the country, Professor Thurow said, is "Do we have a vision and the ability to march toward it?"

In his remarks on "MIT and the Future," President Charles M. Vest noted that MIT is still making improvements to keep itself a foremost research university but that erosion in government support is clouding the future. "The spirit of Rad Lab is not dead. It is the thought of opportunities that may be missed that fuels our concern," he said.

Three "disastrous policy errors" pose a threat to MIT and other universities, President Vest said. One is an "inaccurate, unhelpful and somewhat partisan categorization of research as 'basic' on the one hand and 'strategic' or 'applied' on the other," and frequent shifts in preference for one or the other by the government. "It is predicated on the notion that research enterprises can turn on a dime—'today we make better toasters, tomorrow we decode the human genome,'" he said.

The second related error is the separation of education and research in federal funding policy (graduate and undergraduate student research "has become a defining element in MIT's institutional excellence," President Vest

said), while the third is an increasing tendency to define research and development as a cost rather than a financial and human investment, he said. He urged his audience to help demonstrate MIT's value to colleagues, legislators

## Williams is named undergraduate dean

(continued from page 1)

ence said discussions would begin shortly as to who will become the next head of the Program in Writing and Humanistic Studies and that he hopes to announce the name of the person in the next month or two.

Professor Williams, a specialist in the cultural study of technology, received her undergraduate degree from Harvard University in 1966, the MA from the University of California, Berkeley, in 1967 and the PhD in 1978 from the University of Massachusetts at Amherst. In 1980-82, she was a Fellow of the Science, Technology and Society Program at MIT and began her teaching career at MIT in 1983 as a lecturer in the writing program. She became an assistant professor in 1985 and associate professor of writing and technology studies, holding the MIT Class of 1922 Career Development Professorship, in 1990. She was named Robert M. Metcalfe Associate Professor of Writing in 1993 and was promoted to full professor in 1995.

She is the author of numerous publications, including two major books: *Notes on the Underground: An Essay on*

*Technology, Society and the Imagination* (MIT Press, 1990) and *Dream Worlds: Mass Consumption in Late Nineteenth-Century France* (University of California Press, 1982). A work in progress, *Path and Place in Modern Life*, is expected to have an important impact in the field of technology studies.

Her essay, "Does Technology Shape the Future?" was the lead article in *MIT: Shaping the Future*, edited by Professor Kenneth R. Manning and published by the MIT Press as a commemorative volume coinciding with the inauguration of Dr. Vest as MIT President in 1991.

In it, she concluded: "All the technological inventions in the world will not help our situation, or will only make it worse, if they are not complemented by social inventions."

"The degree to which MIT shapes the future depends on what we emphasize in our name. If we stress that this is the Massachusetts Institute of Technology, we may end up with a subordinate role in bringing about truly significant historical changes. But if we emphasize that we are part of the Massachusetts Institute of Technology—a social invention with a proud heritage, a place where people work together to create a society of diversity, equity and justice—then MIT will indeed play a leading role in shaping a better future."

Professor Williams' husband, W. Gary Williams, has two degrees from MIT, the SB in chemical engineering (1965) and the SM in oceanography (1967). He owns a company that builds oceanographic instruments. They live in Newton with their three children, Laurel, 19, Owen, 15, and Peter, 11.

## Learn to accept change, Gray advises

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place for learning than the colleges of old. But education is not meant to be comfortable—we forget that too often. It's not meant to be comfortable, however enriching.

To think about education is to think about a good deal more. The debates over the nature and uses of education go far beyond the questions of curriculum and academic preparation. Ideals of education, what it should be about, what it should be for, how its worth should be assessed, are in the end statements about the future and the ideals one would wish to see realized in that future, statements about human and social purpose and possibility, statements about the nature of human society, its needs and aspirations, statements about the character and direction of civilized existence. They are reflections, too, on the present, on its deficiencies and corruptions and opportunities, and reflections on the past, the lessons it provides to be perpetuated or discarded.

So to think critically about education is to think purposefully about the future and its requirements and to be willing to accept and to help shape the complexities of change. It is to create

standards by which to measure the quality of what institutions represent over time in the light of the fundamental values by which we hope to be guided. It is to be reminded that those institutions, and their enduring goals, require continuing renewal, and that this depends on the educated commitment of all their citizens. It is to develop one's vision of hope and substantive purpose for the generations to come.

Another important diversity in higher education rests in the pluralism of our system of higher education itself. We have many different kinds of universities and colleges, many different kinds of opportunities and points of entry, many ways in which to afford choice, on the basis of their special interests and talents and goals, of the particular institution in which students and faculty decide to become members. We should resist the impulse toward homogeneity toward which we are often urged or driven by the rhetoric and regulation of higher education and so much else in our world.

The Massachusetts Institute of Technology is an institution of great distinction, one in whose uncompromising dedication to the quality of its own mission you can always take great

pride in part because it has had the courage and continuing foresight to be clear about its own best purposes and to adhere steadfastly to a defined institutional personality that lends shape and weight to its programs of research and education. So you will of course see changes over time, but if they are the changes required to sustain rather than to swerve from the Institute's essential ethos, that will be a sign of health and strength not of decline. Of course, if you begin to see the place offering gut courses or Division I football or an easy life, we will all have to think again.

And now, as you depart for the great world, I will leave you with one admonition, drawn from the philosopher Pete Seeger: "Do you know," he asked, "the difference between education and experience? Education is when you read the fine print. Experience is what happens when you don't."

I hope for all of you that the fine print on your diplomas will speak to a satisfying and productive experience throughout your lives, one that will carry with it good memories and continuing care for what matters about your university. Congratulations, and good luck.

## Reunion class gifts exceed \$14.6 million

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university located in Cambridge." He added, "Today's program is a powerful demonstration of the difference that the faculty and graduates of MIT have made and continue to make throughout the world.

"MIT is without question the best university of its kind," President Vest said, "but the world is changing around us. And we must continue to grow, if not in size, in our ability to shape an educational and research mission that is suitable for the coming century.

"This has been an intense year as we worked to meet head-on the challenges of a changing public and federal climate, and to redesign our management organization and style. And to begin rethinking what we do, and

how to do it more effectively...

"MIT's excellence has been well recognized," Dr. Vest said, citing four Nobel prizes in four years; its high rankings this year by US News and World Report in its annual survey of American universities; a "stunning" increase in student applications—nearly 8,000—and equally stunning quality, with 86 percent ranked in the top five percent of their high school classes; and an "incredible new faculty," a reference to more than 110 new faculty members hired during the last five years.

"We must continue to lead in education and research," he said. "We must work hard to keep an MIT education both affordable and excellent. We must regain the confidence of the public—not just in MIT, but in the value of

knowledge and education at advanced levels to the society and to the world."

At the conclusion of the program, Mr. Schweikhardt handed the symbolic gavel of office as alumni/ae president to Karen W. Arenson. Ms. Arenson, a correspondent for The New York Times, received the SB in economics from MIT in 1970 and a master's degree in public policy from Harvard in 1972. She is the 101st Association president in 1995-96 and the third woman to serve as president.

Finally, Mr. Schweikhardt introduced the Technology Day chairman, James Stark Draper '62, and paid tribute to the members of the alumni/ae committee and others, including faculty and Alumni/ae Association staff, who had helped arrange the program.