Massachusetts Institute of Technology

TECH TALK

June 9 1976
Volume 20
Number 43

Scrimshaw Appointed Institute Professor

Dr. Nevin S. Scrimshaw, head of the MIT Department of Nutrition and Food Science and a noted authority on world and regional health problems, has been appointed to the distinguished rank of Institute Professor at MIT.

Institute Professor is an appointment that MIT reserves for scholars of special distinction to recognize accomplishments and leadership of high intellectual quality. This position is bestowed upon the recommendation of a faculty committee. The appointment was announced by MIT President Jerome B. Wiesner.

Dr. Scrimshaw, who has been head of the department since 1961, previously served 12 years as director of the Institute of Nutrition of Central America and Panama (INCAP).

He returns periodically to Guatemala to serve as consultant to INCAP and to teach an MIT field course in clinical and public health nutrition. He also travels frequently to Asia to advise on nutrition and health programs there. In 1971, he accompanied Senator Edward M. Kennedy on a visit to the camps of the Bangladesh refugees in India; in March 1973, he led an Indochina Study Mission to North Vietnam and Laos on behalf of the Senate Subcommittee to Investigate Problems Connected with Refugees and Escapees; and in 1975, he led a

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Dr. Scrimshaw

Summer Schedule For Tech Talk

***Tech Talk* will be published every other Wednesday during the summer months beginning with the issue of June 16.**

***Tech Talk* publication dates will be June 16, June 30, July 14, July 28, August 11, August 25, and September 8. Weekly publication will resume with the issue of September 8. *Tech Talk* will not be published June 23, July 7, July 21, Aug. 4, Aug. 18, and Sept. 1.**

Remember to plan ahead when submitting news, calendar items, and ads for publication.

Dr. Wolff Named RLE Head

Professor Peter A. Wolff has been named director of MIT's Research Laboratory of Electronics.

The appointment, which takes effect July 1, was announced by Dr. Thomas F. Jones, MIT vice president for research. Dr. Jones has headed a committee that sought a successor to Professor Henry J. Zimmermann, who announced in January that he was resigning from the RLE directorship to return to teaching and research.

RLE, the Institute's first interdepartmental laboratory, was established 30 years ago. It is now a large and diverse organization where faculty members, research staff, and students from about 10 academic departments conduct research in three

(Continued on page 4)

Dr. Wolff

GIANT sterling silver class ring—eight inches in diameter and weighing almost 6½ pounds—was presented to MIT President Jerome B. Wiesner (center) by representatives of the silver snniversary reunion class of 1951. Class representatives are Howard L. Livingston (left) of Lexington, Mass., and Breene M. Kerr of Oklahoma City, Okla., co-chairmen of the class reunion gift committee. Mr. Levingston is also president of the class.

ANIMATED 1926 CONVERSATION—Three prominent members of the Class of 1926 which held its 50th anniversary reunion at MIT during Technology Days are Dr. Charles Stark Draper (left), Institute Professor Emeritus and Professor of Aeronautics and Astronautics Emeritus; David A. Shepard of Greenwich, Conn., class president; and Dr. James Rhyne Killian, Jr., Honorary Chairman of the MIT Corporation and former president of MIT. They were together with classmates at a reception at the President's House Commencement evening.

—Photos by Calvin Campbell

White House Names Benedict Medal Recipient

Professor Manson Benedict, internationally respected for his work on the gaseous diffusion process for separation of fissionable uranium isotopes, has been selected to receive the Medal of Science, the nation's highest award for scientific achievement.

President Ford will present the medals to Dr. Benedict, Institute Professor Emeritus, and to 14 others selected for the honor, at White House ceremonies later this year.

Other recipients of the Medal this year are John W. Backus, IBM San Jose, Calif., Research Laboratory; Hans A. Bethe, Cornell University; Shiing-Shen Chern, University of California, Berkeley; George B. Dantzig, Stanford University; Hallowell Davis, Washington University, St. Louis; Paul Gyorgy, University of Pennsylvania, awarded posthumously; Sterling Brown Hendricks, U.S. Dept.of Agriculture, Beltsville, Md.; Joseph O. Hirschfelder, University of Wisconsin;

(Continued on page 2)

1951 Class Gift Sets All Time Record

MIT's Class of 1951 has given the Institute $1,445,700—believed to be the largest reunion gift ever made to a university by a 25th reunion class.

Frederick G. Lehmann, director of the Institute's Alumni Fund, said his research indicated that the previous high for a 25th reunion class was $1,376,000 given by the Yale Class of 1950 last year.

The 25th reunion gift was part of $4,828,700 in class reunion gifts and pledges presented to MIT President Jerome B. Wiesner by three reunion classes at the Institute's annual alumni day program, Technology Day '76, on Friday, June 4.

The silver anniversary class also had a special gift for the Institute on the occasion of its record donation—an eight-inch diameter sterling silver MIT ring that is said to be the largest precious metal ring ever cast. The finished weight ot the ring, which was made by the Balfour Co. of Attleboro, was 94 troy ounces, or the equivalent of 6.4 pounds. Craftsmen worked on the ring for about eight weeks and it took one of them six days to chase and sculpt the final detail into the silver.

The Class of 1951 reunion gift—which represented contributions from 614 classmates collected over the past five years—was presented by the class reunion gift co-chairmen, Breene M. Kerr of Oklahoma City, Okla., and Howard L. Levingston of Lexington, Mass. Levingston is also president of the class.

Levingston, in his presentation, said that the generous contribution of the class was in the spirit of what its members had learned at MIT—"that without being able to foster our own imagination, without being able to proceed with research and daring and forethought, without being innovative in our methods, we and the private colleges and universities and institutions of higher learning could not continue to exist."

The Class of 1926, celebrating its 50th reunion, gave a total of $902,800, which was collected from 337 members over the past five years and announced an additional $2,000,000 in planned estate gifts.

The 40th reunion class of 1936 con-

(Continued on page 8)

New Radar System Probes Jupiter's Moons

Europa, Ganymede Covered With Ice and Rock

By WILLIAM T. STRUBLE
Staff Writer

Using a powerful new radar system, astronomers at the National Astronomy and Ionosphere Center (NAIC) and MIT have confirmed that the surfaces of two of Jupiter's moons—Europa and Ganymede—are covered with ice or a mixture of ice and rocks many meters thick.

Many astronomers believe that the crystals are probably a mixture of ices of water, methane, and ammonia, three of the primary constitutents of Jupiter's atmosphere, but the radar measurements cannot distinguish this possibility.

The study was made with the huge radar-radio telescope near Arecibo, Puerto Rico, and was carried out by Donald B. Campbell, NAIC staff member; Dr. Gordon H. Pettengill, professor of planetary physics at MIT; Dr. Irwin I. Shapiro, MIT professor of geophysics, who calculated the orbits of the Jovian satellites; and John F. Chandler, a graduate student in the MIT Department of Earth and Planetary Sciences.

The new Arecibo radar has an S-band transmitter at a frequency of 2380 Megahertz (MHz) (corresponding to a wavelength of 12.6 centimeters). It is 100 times more sensitive than the previous system in use there and makes Arecibo the most sensitive radar in the world. The new transmitter uses power equivalent to the output of two jet airliner engines.

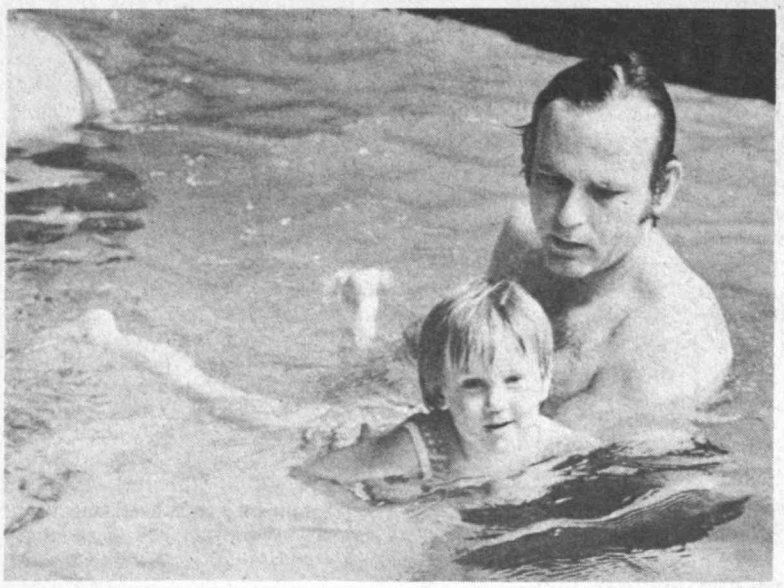
Jupiter interests astronomers because of its size and dominant position in the solar system. Not only is it the largest planet, but it has almost two and one half times the mass of all the other planets lumped together.

The planet itself cannot be studied by radar because its thick atmosphere does not reflect radar beams, but information about Jupiter can be inferred from radar studies of some of its moons, Dr. Pettengill said. Europa and Ganymede are two of the so-called Galilean satellites that were observed by Galileo Galilei in 1610. (The other two are Io and Callisto.) Europa is about the size of the Earth's moon and Ganymede is approximately the size of the planet Mercury.

The continuing radar studies are aimed at obtaining more precise information on the orbits of both Jupiter and its moons, on the size, composition and shape of the satellites, and eventually at determining whether the moons have been or are subject to tectonic activity, Dr. Pettengill said.

Another objective, he said, is to study Jupiter's magnetosphere and its electron plasma by directing radio waves through the magnetic field to one of the moons and then observing changes in the polarization of the radar echoes.

Installation of the S-band transmitter at Arecibo was part of a recent upgrading of NAIC, a national research center operated for the National Science Foundation (NSF) by Cornell University. Funds for the upgrading came from the NSF and the National Aeronautics and Space Administration (NASA).



FIRST SWIMMING LESSON—Under the watchful eye of her father John, Rachel Zachritz, 4, has her first swimming lesson in Alumni Pool. Rachel is the daughter of MIT Family Day Care developer Helenmarie Zachritz. Father and daughter are participating in The Family Day Care Toddler Swimming Program. *—Photo by Calvin Campbell*

INSTITUTE NOTICES

Announcements

Day Care—Immediate openings exist in Tech Children's Center Day Care Program for children 3-5 years old. Year round or summer only. For information, Child Care Office, x3-1592, Rm 4-144.

MIT Student Furniture Exchange—Open to buy and sell furniture all year, Tues & Thurs, 10am-2pm, 25 Windsor St, x3-4293.

Transcripts—Transcripts without June grades may be ordered up to June 11.

Freshman Advisors—Faculty and graduate students are needed to serve as freshman advisors for 1976-77. Please contact the FAC Office, Rm 7-103, x3-6771, for details.

New UROP Listings

For more detailed information on UROP opportunities listed, MIT undergraduates should call or visit the Undergraduate Research Opportunities Program Office, Room 20B-141, Ext. 3-5049 or 3-4849 unless otherwise specified in the listing. Undergraduates are also urged to check with the UROP bulletin board in the main corridor of the Institute.

Mass. General Hospital Boston, Ma.

A laboratory at Mass. General would like a student with biochemistry background to join them in a study of microbial genetics: plasmids (R-factors) which mediate transferable resistance to metal ions, such as Hg++ and Ag+, have been found in a variety of enteric bacteria isolated from patients and from the environment. The biologic properties of these plasmids are being studied. The possible role of other plasmids in silver resistant bacteria found in nature will be examined. Many of these bacteria are resistant to a variety of other metal ions in addition to silver, and are also resistant to antibiotics.

Boston University Medical Center Boston, Ma.

A bio-engineering facility at BUMC is conducting infant physiological monitoring for research into the causes of sudden infant death and the development of the central nervous system in the newborn. They are developing safe, non-invasive instrumentation for reliably monitoring physiological parameters such as heart rate, breathing, and sleep state as well as computer techniques for the reduction of instrumentation tape and strip chart (scanned) recordings on a variety of general and special purpose computer systems, PDP-15, PDP-8, Univac 1020, etc.

Student engineers with skills in instrumentation, mechanics, digital hardware and programming are invited.

Club Notes

MIT/DL Bridge Club**—ACBL Duplicate Bridge. Tues, 6pm, West Lge.

Hobby Shop**—Mon-Fri, 10am-6pm, Rm W31-031. Fees: $10/term for students, $15/term for community. Info, x3-4343.

MIT Space Habitat Study Group*—Meetings Thurs, 7pm, Rm 37-252. Interdisciplinary studies on space colonization. Everyone interested is invited. Office: Rm 24-415. Info: B. Bugos, x3-6625.

Religious Activities

The Chapel is open for private meditation 7am-11pm daily.

Jesus Christ's Full Gospel Meeting*—Singing, praise, prayer, testimonies and other preaching. Sun, 2:30pm, Stu Ctr Rm 355. Info: 494-8888.

Tech Catholic Community*—Sunday Mass: Thru June 20: 10am, Chapel. Beginning June 27: 10am, Kresge Little Theatre.

Tots Learning To Swim at Day Care Program

A dozen MIT toddlers, each with parent in tow, are making splashes in the Alumni Pool this week and next.

The children and parents are participants in MIT's Family Day Care Program, sponsored by the MIT Child Care Office. Included in the day care program this year, as it was last year, is a two week introductory course in swimming for children ranging in age from six months to five years.

The swimming class meets each weekday morning for one hour and is again led this year by Mary Brau, a registered Red Cross Water Safety Instructor (WSI) and wife of James Brau, a graduate student in physics. Their own children, Benjamin, 4, and Daniel, 2, participated in the program a year ago.

The classes emphasize a progressive game-method sequence for instruction—a method derived from *Teaching an Infant to Swim* by Virginia Hunt Newman. The method relies on practice, repetition, and praise, and is based on the fact that children under five have little fear of water. The games include ring-around-the-rosey with "voluntary" head immersion, blowing bubbles, and picking up poker chips from the water's surface. The games are eventually linked to rhythmic flutter kicks and arm strokes.

The Child Care Office hopes infant swimming can be made available year round to all MIT community youngsters. A preliminary survey indicates enthusiasm is high, and Emily Branz, also a Red Cross WSI, is eager to organize and lead the sessions. Ms. Branz and her husband Stephen, a graduate student in organic chemistry, taught infant swimming at Brandeis University from 1971-73.

TV Meeting Today

There will be an open meeting today (Wednesday) from 1pm to 5pm in Room 9-450 for all participants in the first (1975-76) Sloan Foundation Grant for Telecommunications and Education. All members of the MIT community are invited to attend.

According to Niti Salloway of the staff at the Center for Advanced Engineering Studies, the meeting will provide grant participants with the opportunity to share experiences. Brief descriptions of the programs will be given and film or video tapes produced under the grant will be shown.

Career Secretaries Form TOPS Group

MIT professional secretaries and those who aspire to secretarial careers are invited to attend the first meeting of an organization designed to serve their needs—the Tech Organization for Professional Secretaries (TOPS).

The meeting will be Thursday, June 10, from noon to 1pm in the Emma Rogers Room (Rm. 10-340). Wine and cheese will be served; guests are welcome to bring lunch. Discussion will center on suggestions for TOPS activities and programs.

The group evolved in part from a recent Women's Forum panel on careers as a professional secretary. Panel members Marg Lech, Marge Meyer, Alice Moriarty, and Polly Wilbert, form the nucleus of the new group. They hope TOPS will provide an opportunity for MIT secretaries to meet informally at lunch and exchange ideas.

Summer meetings will be held at least twice a month. Programs will be informative and of interest to secretaries.

Benedict

(Continued from page 1)

William H. Pickering, California Institute of Technology; Lewis H. Sarett, Merck, Sharp & Dohme, Rahway, N.J.; Frederick E. Terman, Stanford University; Orville Alvin Vogel, Washington State University, Pullman, Washington; E. Bright Wilson Jr., Harvard; and Chien-Shiung Wu., Columbia.

Dr. Benedict was the first head of the MIT Department of Nuclear Engineering, which was established under his leadership in 1958, seven years after he came to the Institute to organize a program of research and instruction in nuclear engineering.

A former member (1958-59) and past chairman (1962-64) of the General Advisory Committee of the Atomic Energy Commission, and a former member of the Advisory Committee on Reactor Safeguards, Dr. Benedict has played a prominent role in the government's nuclear energy program.

He was scientific adviser to the U.S. delegation to three International Conferences on the Peaceful Uses of Atomic Energy, sponsored by the United States in Geneva in 1955, 1958 and 1964. Born in Lake Linden, Mich., in 1907, Dr. Benedict received the BChem from Cornell in 1928 and the PhD in chemistry from MIT in 1935. From 1935 to 1951, first at MIT and later at Harvard, the M.W. Kellogg Co. and Hydrocarbon Research, Inc., Dr. Benedict conducted extensive research in physical chemistry. His work at MIT concerned the absolute temperature scale; at Harvard he concentrated on the properties of gases at high pressures and the properties of aqueous solutions at high pressures; at Kellogg he developed a widely used equation of state for hydrocarbons.

During World War II, Dr. Benedict was head of the process development division of Kellex Corp. and was in charge of the process design of the gaseous diffusion plant for the concentration of Uranium-235 for the Manhattan Project at Oak Ridge.

The holder of many professional awards, Dr. Benedict is a member of the National Academy of Science and the National Academy of Engineering.

Dr. Benedict and his wife, the former Marjorie Oliver Allen, met while both were working for their PhD's in physical chemistry at MIT. Married in 1935, they have two daughters. They live in Weston, Mass.

Dr. Benedict is the seventh MIT scientist to receive the National Medal of Science, first awarded in 1962.

Other MIT faculty recipients have been Vannevar Bush and Norbert Wiener, both in 1963; Charles S. Draper in 1964, Warren K. Lewis in 1965; Claude E. Shannon in 1966 and Harold E. Edgerton in 1973.

OPENING OF 10TH MILES International Symposium, being held this year at MIT, brings together, from the left, MIT Provost Walter A. Rosenblith; Dr. Walter Ames Compton, president of Miles Laboratories, Inc., of Elkhart, Ind.; Dr. Frank E. Young of the University of Rochester, program committee chairman, and Dr. Roland F. Beers Jr., Vice President-Research Affairs of Miles Laboratories, the symposium chairman. *—Photo by Calvin Campbell*

400 Here for Symposium On Recombinant DNA

The 10th Miles International Symposium, on "The Impact of Recombinant Molecules on Science and Society," opened Tuesday in MIT's Kresge Auditorium, with some 400 attendees from throughout the US and several foreign countries. The meeting will continue through Thursday.

Speakers from leading universities and research laboratories in this country and abroad are discussing techniques used to create recombinant DNA molecules—hybrid DNA containing genetic material from two species.

Other topics include ways to minimize possible hazards of such research, and potential uses of recombinant molecules in medicine, industry and agriculture.

The symposium is sponsored by the Miles Laboratories, Inc., in Elkhart, Ind., with the assistance of the MIT Industrial Liaison Program. Symposium Chairman is Roland F. Beers, Jr., MD, PhD, Vice President Research Affairs of Miles Laboratories. Program committee chairman is Frank E. Young, MD, PhD, of the University of Rochester. Symposium coordinator is Edward G. Bassett, PhD, of Miles Laboratories.

The symposium is divided into six sessions. Tuesday's sessions were on "Technological Advances" and "Development of Plasmid Vectors."

The Wednesday morning session is on "Societal Impact: Issues and Policies." The afternoon session is on "Practical and Potential Applications in Plant Genetics." The Thursday morning session is on "Virus Vectors," the afternoon session on "Cloning of Eukaryotic DNA."

Registration costs $10, plus an additional $15 for a printed copy of the proceedings upon publication.

Endicott Available

Endicott House, a conference center in Dedham, Mass., owned and operated by MIT and used for strictly educational purposes, is available for resident conference use from July 10-24 and August 1-20.

Conference groups should have at least 15 participants. For further information call Mimi Pierson, director, or Ruth Norton at 326-5151.

Echoes

50 Years Ago

Commencement exercises with a ceremonial cap and gown parade were held in the Great Court.

Among the awards presented at graduation was the Traveling Fellowship in Mathematics and Theoretical Physics for study abroad, granted to Julius A. Stratton '23.

40 Years Ago

Millionaire E.H.R. Green, owner of Round Hill where many MIT experiments in meteorology, radio, aeronautics, and electricity were carried out, died at the age of 86.

Newton D. Baker, Secretary of War in Wilson's Cabinet, delivered the commencement address on "Science and Politics" to the graduating class.

25 Years Ago

More than 1,000 seniors and graduate students received degrees at the Institute's graduation exercises.

The old Riverside Apartment Hotel on Memorial Drive, recently acquired by the Institute and remodeled, was dedicated and renamed the Burton House, in honor of Alfred E. Burton, former Professor of Topographical Engineering and 1st Dean of the Institute.

Dance Conference Will Feature New Works

Highlight of the American Dance Guild's annual national conference to be held at MIT June 10-12 will be a dance concert of new works Friday (June 11) at 8:30pm in Kresge Auditorium.

"American Dance: Four Choreographers" will feature premieres of dances by three contemporary choreographers—Anna Nassif, Rudy Perez, and Gus Solomons, Jr., MIT '61—as well as a performance of a popular work, "Black Breakfast," choreographed by Toby Armour, director of the local dance company, New England Dinosaur.

The Anna Nassif Dance Company of Madison, Wis., will perform "Seven Intermedia Pieces from American Suite," created by Anna Nassif for the Bicentennial. The dancers will interact with slide and film passages and be accompanied by music composed by Yehuda Yanney, professor of music at Marquette University, who will participate in the conference.

Rudy Perez of New York City will perform to his own sound collage in a new solo, "System," inspired by the frustration and pressures of dealing with bureaucracy.

Gus Solomons, Jr., who began dancing while an architecture student at MIT, will be joined by five dancers from his company in the premiere performance of "Statements of Nameless Root."

A limited number of concert tickets are available free to members of the MIT community from the conference sponsor, the Council for the Arts at MIT. For free tickets call the Council, x3-4003, or stop by their office, Room 20D-220. Tickets, at $5 and $3 for students, will go on sale to the public at 7:30pm Friday, June 11, in Kresge Auditorium lobby.

TECH TALK
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1,100 Attend Technology Days Busy For Alums

In a two-hour period, from 6 to 8 o'clock last Friday night (June 4), 21 different alumni functions took place on the MIT campus. And that, it seemed, pretty much summed up the kind of alumni week it was.

A record 14 reunions on campus... An overflow 1,100 alumni and their families put up in dormitories, the gymnasium and a nearby hotel... A record 25th class reunion gift of $1,445,700... A sold-out MIT Night at the Pops, with more than 500 turned away... Special awards, honors and remembrances...

All these were part of the 1976 alumni week at MIT, which was culminated with a Technology Day '76 program on Friday, featuring talks and panel discussions on revolutionary changes taking place in energy technology and medicine and a luncheon program in the Rockwell Cage.

Altogether, between 1,400 and 1,500 alumni and their families took part in the various activities. These were some of the highlights:

—Members of the Class of 1931, at a gathering in McCormick Hall, unveiled a portrait of Margaret Hutchinson Compton, their guest of honor. Mrs. Compton is the widow of Karl Taylor Compton, ninth MIT president, and has been an honorary member of the class—the first to be graduated under Dr. Compton's tenure—since 1931.

The portrait was the joint project of President and Mrs. Jerome B. Wiesner, Howard Johnson, chairman of the Corporation, and Mrs. Johnson, and former President Julius A. Stratton and Mrs. Stratton. It was executed by Yousuf Karsh, famous Canadian photographer, and will hang alongside a Karsh portrait of Dr. Compton in the office of the Alumni Association's executive vice-president.

—Dr. Irwin W. Sizer, professor of biochemistry, emeritus, dean emeritus of the Graduate School and presently consultant for resource development, was made an honorary member of the Class of 1924.

—Dr. Walter A. Rosenblith, MIT Provost, Institute Professor and professor of communications biophysics, was made an honorary member of the MIT Alumni Association. The Class of 1951 then invited him to be affiliated as an honorary member.

—Dean William L. Porter of the School of Architecture and Planning announced the establishment of the Lawrence B. Anderson Fund, in honor of the dean emeritus of the school, and said it had reached $49,200. The fund will be used to enhance the educational experience of students in the school through the support of projects that draw not only on the students' academic achievements but on their non-academic achievements as well. Dean Anderson received a three-dimensional plaque surfaced with brass and containing his initials and other information about the dedication. The plaque was made by Maurice K. Smith, professor of architecture.

—Gordon Y. Billard Awards of $500 each, for special service of outstanding merit performed for the Institute, went to Walter L. Milne, assistant to the Chairman of the Corporation and special assistant to the President for urban affairs, and to Dr. Bernard S. Gould, professor of biochemistry and undergraduate registration officer in the Department of Biology.

President Wiesner said of Milne: "Your long record of service is a shining example of superb staff support combined with complete selfless and wholehearted dedication to the well-being of the Institute and sets the highest standard for MIT performance."

He said of Professor Gould: "Your extraordinary service of a number of years as academic adviser to many generations of MIT students sets the highest standard of MIT performance."

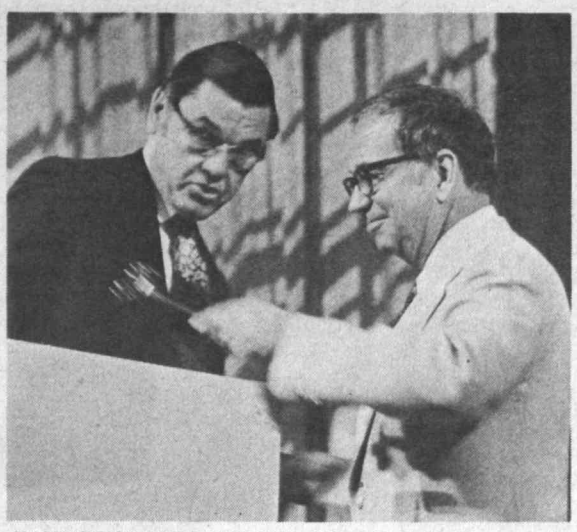
The Billard Fund was established by Gordon Y. Billard, Class of 1924, in memory of his mother.

—Some 500 alumni visited the MIT Historical Collections in groups, and others dropped by individually. Special programs—lunches, dinners and tours—were arranged for groups from the class of 1931, 1941, 1946, 1956, 1966 and 1971. Altogether, almost one-half of the returning alumni found time for a visit to Historical Collections.

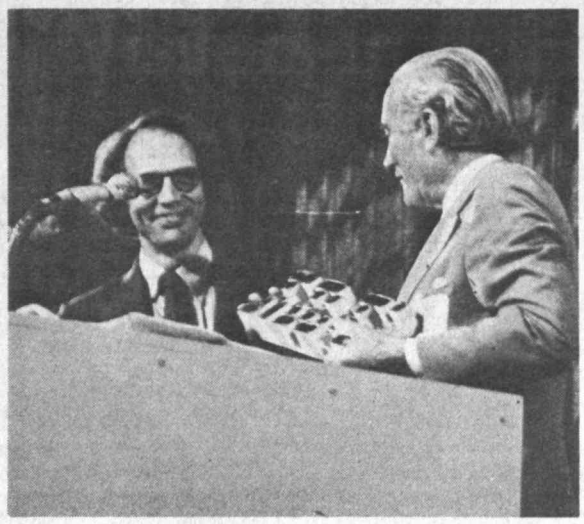
—About 300 alumni and guests attended "A Special Look at MIT in the 1920's." The program featured Dr. James R. Killian Jr., former MIT president and now Honorary Chairman of the Corporation; Dr. Charles Stark Draper, Institute Professor and professor of aeronautics and astronautics, emeritus, and Warren A. Seamans, director of the MIT Historical Collections.

—Eight members of the 25th reunion Class of 1951 relived their days as members of the MIT crew by taking a shell out onto the Charles River. In the boat were Allen B. Fonda, Forest C. Monkman Jr., Paul G. Smith, Breene M. Kerr, George C. Underwood, Roy M. Sachs, Arthur H. Schein and John P. Dowds. They were joined by William P. Reynolds, Class of 1949.

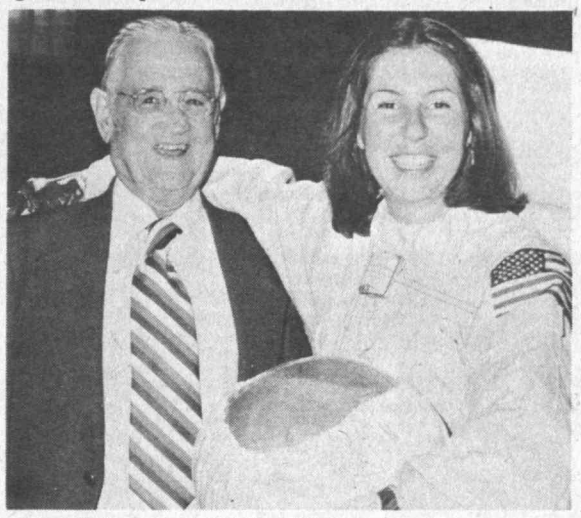
Edward C. Ehrlich Jr. of Natick, Class of 1955, was chairman for the Technology Day '76 program. G. Edwin Hadley of Boxford, Class of 1938, has been named chairman for next year's program.



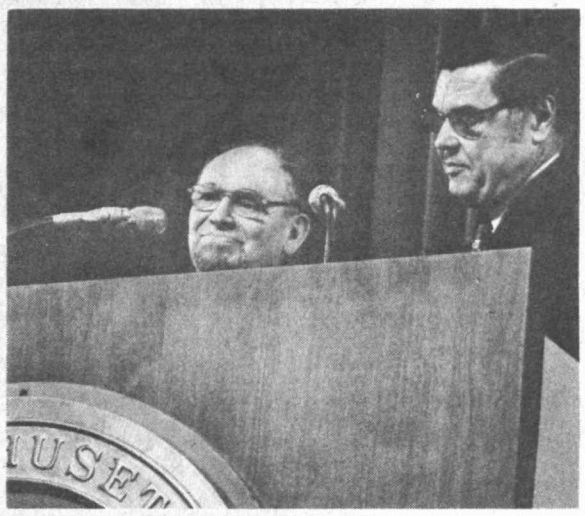
HOWARD W. RICHARDSON of New Britain, Conn., outgoing president of the Alumni Association, left, hands gavel to new president, Edward O. Vetter of Dallas, Tex.



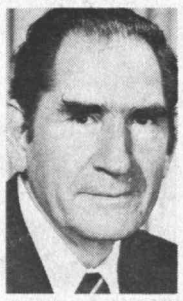
DEAN WILLIAM L. PORTER of the School of Architecture and Planning, left, presents plaque to Dean Emeritus Lawrence B. Anderson.



DR. CHARLES STARK DRAPER, in whose honor a $200,000 scholarship fund was established by his class, the Class of 1926, is congratulated by his secretary, Peggy Mooney, who dressed as an astronaut.



PROVOST WALTER A. ROSENBLITH, left, is made an honorary member of the MIT Alumni Association by Howard W. Richardson, outgoing Alumni Association president.



Professor Gould

Walter Milne

OLDEST GRADUATE at reunion luncheon in Rockwell Cage was John J. Nolan of Somerville, right, Class of 1903. Next to him is John H. Scoville of West Hartford, Conn., Class of 1911. —Photos by Calvin Campbell

USSR Elects 2 from MIT

Dr. Victor F. Weisskopf, Institute Professor Emeritus and Professor of Physics Emeritus at MIT, and Dr. Henry M. Stommel, Professor of Oceanography in the MIT Department of Meteorology, were among five American scientists elected foreign members of the Soviet Academy of Sciences by the academy's General Assembly June 1.

Professor Weisskopf is noted for his theoretical work in quantum electrodynamics and nuclear and particle physics. From 1960 to 1965 he served as director-general of CERN (the European Center for Nuclear Research) in Geneva, Switzerland, which operated what was then the world's most powerful "atom smasher." On returning from CERN, he became head of the Department of Physics at MIT, serving in that position until 1973. Since his formal retirement in 1974, Professor Weisskopf has remained active at MIT as Senior Lecturer in the Department of Physics.

Professor Stommel is co-chairman of POLYMODE, a joint US/USSR ship-buoy program in the Western North Atlantic. The project is intended to study the geographical distribution of the highly energetic mesoscale eddies studied in the preceding project, MODE-I, of which Professor Stommel was also co-chairman. Professor Stommel is also active in studies of how the Indian Ocean circulation responds to the monsoon.

Other Americans honored by the Academy June 1 were Elkan R. Blout, Edward S. Harkness Professor of Biological Chemistry at the Harvard Medical School; Professor John Rodgers, a geologist at Yale University; and Nobel laureate Robert B. Woodward, Donner Professor of Science at Harvard University.

The Soviet Academy elects foreign members once every five years. Nobel laureate Har Gobind Khorana, Alfred P. Sloan Professor of Biology and Chemistry at MIT, was elected in 1971.

CLASS OF 1951 oarsmen pay a return visit to the Charles. —Photo by Marjorie Lyon

Burner, Steinberg Promoted At IPS

Two promotions to senior positions in the MIT Information Processing Services (IPS)—the organization responsible for centralized scientific computing and all administrative data processing at the Institute—have been announced by Chancellor Paul E. Gray.

Mr. Weston J. Burner, who has been assistant director of IPS, director of the Information Processing Center (IPC) since 1969, and director of the Office of Administrative Information Systems (OAIS) since September, 1975, has been promoted to the position of director of Information Processing Services, effective immediately. As director of IPS, Mr. Burner fills the vacancy created by the resignation last month of Mr. Robert H. Scott.

Mr. Joseph R. Steinberg, who has been assistant director of the Information Processing Center, now becomes associate director of IPS.

Chancellor Gray noted that Mr. Burner and Mr. Steinberg bring to their new roles a wealth of professional background, and between them have more than 35 years of service at the Institute. "Their orientation toward the provision of high-quality computing services will continue to provide competent service to the users of both scientific and administrative computing," he said.

The promotions reflect certain organizational changes as well, Chancellor Gray said. Under the new structure, Mr. Burner, as director of IPS, will focus his attention on the administrative computing requirements of the Institute and on the long-range planning for information processing services. Mr. Steinberg will have responsibility for the academic and research computing requirements of the Institute.

Mr. Burner has held various positions in data processing and computation for the last 26 years. A 1950 graduate of the University of Pennsylvania with an AB degree in mathematics, he spent five years with the Royal Globe Insurance Group as statistician and methods analyst. In 1957 he joined the General Electric Co., where he worked for 12 years in Schenectady, N.Y., and Lynn, Mass., successively in computer programming, operations scheduling, quality control, systems analysis, and business systems programming. Mr. Burner, his wife and three children live in Hamilton, Mass.

Mr. Steinberg, who has worked in data processing for 26 years, holds a Certificate in Business Statistics and Research from the Boston University Evening Division, and came to MIT in 1949. He served as programmer in the former Computation Center, of which he became assistant director in 1962. From 1967 to 1971 he was manager of User Services of IPC and in 1971 was named assistant director of IPC. Mr. Steinberg is a director of SHARE Inc., an international organization of managers of large-scale IBM computer installations. He, his wife and two children reside in Rockland, Mass.

Burner

Steinberg

The new director and associate director of IPS will be assisted in the consideration and evaluation of long-term alternatives for computing at MIT by a Policy Advisory Committee for the Office of Information Processing Services. Members of the committee will be selected during the summer from the academic and research community at the Institute.

THE INSTITUTE CALENDAR

June 9 through June 20

Events of Special Interest

American Dance Guild National Conference* — Conference Thurs, June 10-Sat, June 12, sponsored by Council for the Arts. Theme: American Dance into the Future: Trends, Resources, Environments. Concert Fri, June 11, 8:30pm, Kresge, including new works by Gus Solomons, Jr ('61), Toby Armour, Anna Nassif and Rudy Perez. Tickets: $5, $3 students, some free tickets available to people w/MIT ID; write or call Council for the Arts, Rm 20D-220, x3-4003. Info on rest of conference and workshops: *Tech Talk* article (5/26) or the Council.

Seminars and Lectures

Thursday, June 10

Auditory Display Encoding for a Wide-Bandwidth Echolation System* — **Derek Rowell**, lecturer in mechanical engineering. Systems-and-design-division seminar in Department of Mechanical Engineering. 12n, Rm 3-465.

Community Meetings

The Wives' Discussion Group** — Led by Myra Rodrigues, social worker; Charlotte Schwartz, sociologist, & Carol Hulsizer, faculty family in residence, Ashdown. Wed, 2:15pm, Stu Ctr West Lge. Babysitting Stu Ctr Rm 473.

New Organization for MIT Secretaries** — Initial meeting of Tech Organization for Professional Secretaries (TOPS) will be Thurs, June 10, 12n-1pm, Emma Rodger Room, Rm 10-340. MIT professional secretaries and those who aspire to be such are invited to bring their lunch. Wine and cheese provided. Suggestions for TOPS activities and programs encouraged at this first meeting.

MIT Women's Forum** — Meetings Mon, 12n, Rm 10-105 (Tues in case of holiday.)

Summer Art Program** — Registration for Student Art Association evening classes, running from June 14 to Aug 20, is now in progress. Register by Mon, June 14, 1-5pm, Stu Ctr Rm 429. Info: x3-7019.

Sloan Grant for Telecommunications and Education — Open meeting of participants in first Sloan Grant for Telecommunications and Education Wed, June 9, 1-5pm, Rm 9-450. Participants will discuss their individual projects; screening of films and video tapes made under the grant.

Movies

Land in Anguish (Rocha)* — Film Society. Fri, June 11, 7:30 & 9:35pm, Rm 6-120. Admission $1.

Adam's Rib** — LSC. Fri, June 11, 8pm, Rm 26-100. Admission 75¢, MIT or Wellesley ID required.

Adventures of Sherlock Holmes** — LSC. Sat, June 12, 8pm, Rm 26-100. Admission 75¢, MIT or Wellesley ID required.

La Terra Trema (Visconti)* — Film Society. Fri, June 18, 8pm, Rm 6-120. Admission $1.

Theatre of Blood** — LSC. Fri, June 18, 8pm, Rm 26-100. Admission 75¢, MIT or Wellesley ID required.

It Happened One Night** — LSC. Sat, June 19, 8pm, Rm 26-100. Admission 75¢, MIT or Wellesley ID required.

Dance

MIT Folk Dance Club — International: Sun, 7:30-11pm, Sala. **Balkan:** Tues, 7:30-11pm, Stu Cntr Rm 491. **Informal:** Fri, 12n-2pm, Kresge Oval (in good weather). **Israeli:** Thurs, 7:30-11pm, Sala.

Exhibitions

Works on Paper from the MIT Permanent Collection* — On display thru Wed, June 30 in Hayden Corridor Gallery. Open daily.

Recent Acquisitions of MIT Permanent Collection* — On exhibit in Hayden Gallery Fri, May 21-Fri, July 2. Sponsored by Committee on the Visual Arts. Major paintings and drawings by American artists including Susan Shatter, Lowell Nesbitt, Katherine Porter, Friedrich St. Florian, Natalie Alper and many others.

Strobe Alley* — High speed photographs by Harold E. Edgerton, Insitute Professor and Professor of Electrical Measurement, Emeritus. Bldg 4, 4th fl.

Music of the Celestial Dieties* — Music Library exhibit of manuscript facsimiles & pictures. Daily, Bldg 14E.

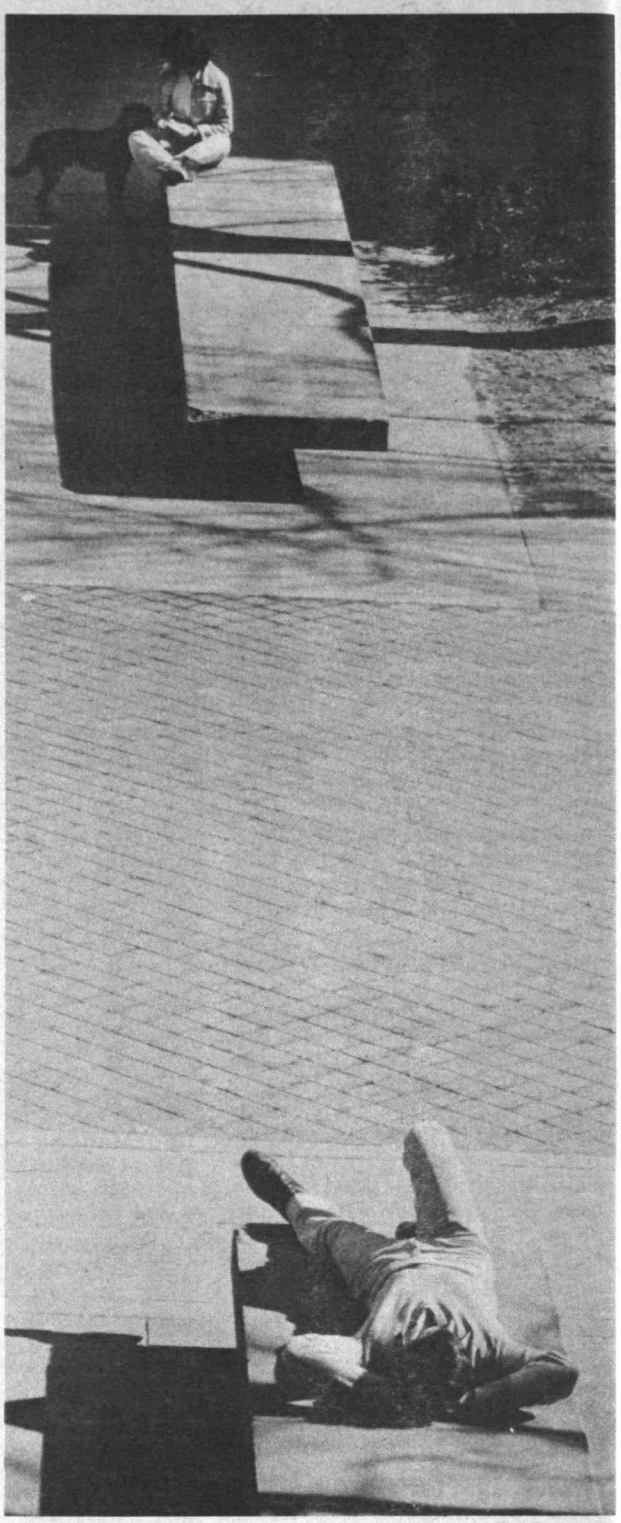
Hart Nautical Museum* — Permanent exhibit of rigged merchant and naval ship models of yachts and engine models. Bicentennial exhibit: "1776-1976" — a frigate, 2 schooners, a gondola, and the Durham boat of the American Revolution. Open daily in Bldg 5, 1st floor.

MIT Historical Collections* — Permanent exhibition mon-Fri, 9am-5pm, Bldg N52, 2nd floor. **Bicentennial Exhibits:** Katharine Dexter McCormick, '04; Vannevar Bush, '16; Karl Taylor Compton, and Norbert Wiener, Bldg 4 corridor. **The New Technology Exhibit:** 2nd floor balcony.

Freshmen are encouraged to attend departmental lectures and seminars. Even when these are highly technical they provide students one means to learn more about professional work in a department and field.

***Open to the public**
****Open to the MIT community only**
*****Open to members only**

Send notices for June 16 through July 4 to the Calendar Editor, Room 5-111, Ext. 3-3279, before noon Friday, June 11.



BENCHES AT THE EDGE of McDermott Court provide a moment of repose for two people—one snoozes in the spring sun while the second visits with a dog. *—Photo by Calvin Campbell*

33 Employees Are Among Lowell Grads

Lowell Institute School recently awarded graduation certificates to 320 students, including 33 MIT employees and nine MIT students, in ceremonies held at the MIT Faculty Club.

John Lowell, Lowell Institute trustee, and Dr. Bruce D. Wedlock, LIS director, presented certificates. MIT Chancellor Paul E. Gray was the graduation speaker.

During 1975-76, LIS offered evening courses in metal joining, technical writing, digital electronics, introductory electronics, op-am applications, machine tool fundamentals, photography, drafting, videography, glassblowing, dimensions and tolerances, and television technology. Enrollment totalled 542, 150 more than 1974-75, with 73 percent of students completing certificate requirements.

MIT campus employees receiving certificates were:

Joseph Adario, Metallurgy & Materials Science; Manuel Alleyne, Sr., Electrical Engineering & Computer Science; Tamas Bakucz, National Magnet Laboratory; Margaret Bloomer, Research Laboratory of Electronics; Pamela Cameron, Office of Minority Education; Francis Canali, Programming Development Office; Robert Cavanaugh, Planning Office; Joan Chartres, Research Laboratory of Electronics; William Connelly, Ocean Engineering; John Connolly, Research Laboratory of Electronics; Annie Cooper, Operations Research Center; Herbert Ewin, Laboratory for Nuclear Science; William Frey, Center for Space Research.

Donald Goloskie, Laboratory for Nuclear Science; Phyllis Handel, Research Laboratory of Electronics; Maxwell Jacobs, Laboratory for Nuclear Science; Ellen MacElree, Research Laboratory of Electronics; Pellegrino Maruzzi, National Magnet Laboratory; Kenneth Morrison, Physical Plant; David Otten, Electrical Engineering & Computer Science; Nathan Presser, Chemistry; Franklin Smith, Programming Development Office; Roger Strong, Laboratory for Nuclear Science; Leonard Sudenfield, Center for Materials Science & Engineering; Andrew Wang, Biology; and Thomas White, Physics.

MIT Lincoln Laboratory employees receiving certificates were:

Robert Burchsted, James Dobrovic, Michael Goon, Susan Hourihan, Henry Ouellet, Albert Richard, and Charles Summers.

The nine MIT students who completed LIS courses this year were:

Neil Kaden, Ka Siu Lai, Zemen Lebne-Dengel, Michael McIlrath, Emilio Mendez, Lucile Shanes, Ming-Kai Tse, Ross Wilcox, and Geary Yee.

Wolff

(Continued from page 1)

broad areas—quantum physics; astrophysics and plasma dynamics; communications and engineering sciences.

Dr. Wolff joined the MIT Physics Department in 1970. He has headed the department's Solid State and Atomic Physics Division and also has been an assistant director of the MIT Center for Materials Science and Engineering since March, 1974. He is relinquishing both those posts.

Dr. Jones said MIT was "extremely fortunate to have a person of Professor Wolff's qualifications and ability to take on the directorship of the laboratory. He has a broad scientific background and has held several administrative positions, including the leadership of large research groups."

Dr. Jones said Professor Wolff plans to appoint associate directors to represent major research areas in the laboratory.

Professor Wolff, a Cambridge resident, spent the early part of his life in the San Francisco Bay area. He received an AB in 1945 and PhD in 1951, both from the University of California at Berkeley. After a postdoctoral year at Lawrence Radiation Laboratory, he joined Bell Laboratories in 1952. His work at Bell was concerned with a variety of theoretical solid state physics problems in areas such as magnetism, many-body theory, semiconductors, light scattering and nonlinear optics. He also held administrative posts there, notably as director of the Electronics Research Laboratory, a large optics-oriented research group.

His most important research is in light scattering and nonlinear optics. This work was the impetus for many later studies of the nonlinear optical properties of mobile electrons in crystals and also led, in an indirect way, to the development of the spin-flip laser.

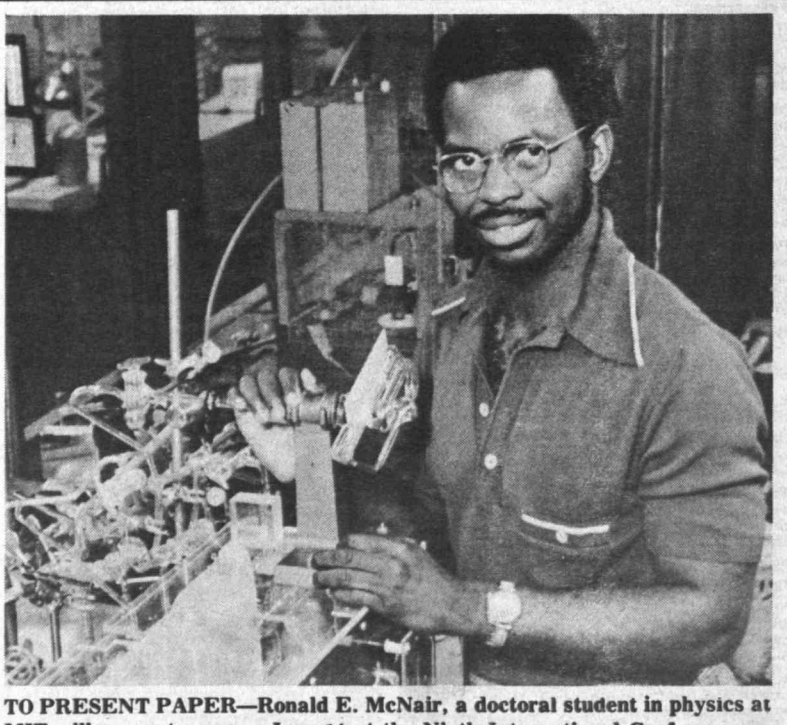
As Director of the Solid State and Atomic Physics Division of the Department of Physics at MIT, Dr. Wolff has greatly strengthened the solid-state physics group at the Institute. He has been instrumental in bringing several solid-state faculty members into the Department of Physics, in helping them initiate research programs, and in finding research support.

Professor Wolff will be the fifth person to direct the Research Laboratory of Electronics since its establishment at the end of World War II.

The first director, from 1946 to 1949, was Dr. Julius A. Stratton, later president of MIT from 1959 to 1966. The second director, from 1949 to 1952, was Dr. Albert G. Hill, who became MIT vice president for research. Dr. Jerome B. Wiesner, now president of MIT, headed RLE from 1952 to 1961, when Professor Zimmermann became director.

In the field of quantum physics, the laboratory's microwave heritage from the MIT Radiation Laboratory has been extended to include millimeter wave and optical techniques. These tools have found application in such diverse areas as radioastronomy, atomic and molecular physics, and the study of condensed matter.

Research in plasma physics has been aimed at a better understanding of the high temperature, high density plasmas needed for controlled fusion. The very successful Alcator experiment, now being carried out at the MIT Francis Bitter National Magnet Laboratory in collaboration with RLE staff members, is an example of such work.



TO PRESENT PAPER—Ronald E. McNair, a doctoral student in physics at MIT will present a paper June 14 at the Ninth International Conference on Quantum Electronics which will be held in Amsterdam, the Netherlands. Mr. McNair, who received the BS degree in physics in 1971 from North Carolina A&T in Greensboro, N.C., is the principal author of the paper, entitled "Energy Absorption and Vibrational Heating in Molecules Following Intense Laser Excitation." His thesis adviser, Dr. Michael S. Feld, associate professor of physics, said he is "delighted that Ron's paper was selected to be presented at the conference." Mr. McNair is the son of Mr. and Mrs. Carl C. McNair of Lake City, S.C. *—Photo by Calvin Campbell*

RLE has long been a center for research in communications and its applications, both in electronic communications which emerged from the MIT World War II Radiation Laboratory (out of which RLE was formed) and in human communication. Work in the latter area drew its impetus from the stimulation the late MIT mathematician, Norbert Wiener, provided. His seminal book, "Cybernetics," bore the subtitle of "Control and Communication in the Animal and the Machine." It was in this context that research in sensory communication (mainly hearing and vision), neurophysiology, speech communication and linguistics flourished. Besides contributions to theory and fundamental science, the work has led to many practical applications such as computer-based reading machines for the blind, automated microscopes, picture processing systems, etc.

Summer Basketball

Members of the MIT community—male and female—interested in playing basketball this summer should submit team rosters to Bob Keith in the Intramural office at duPont (W32-123) by Friday, June 11.

Rosters should include the names, addresses and MIT affiliation of players, and the telephone number of team captains.

CLASSIFIED ADS

Ads are limited to one per person per issue and may not be repeated in successive issues. All ads must be accompanied by full name and Insitute extension. Only Institute extensions may be listed. Members of the community who have no extensions may submit ads by coming in person to the *Tech Talk* office, Room 5-111. Please submit all ads before noon, Friday, June 11. They will be printed on a first come, first served basis as space permits.

For Sale, Etc.

AR trntbl w/Shure M91ED crtrdg, lk nw, $95 or best; hvy duty tow bar, $65 or best. Call. 646-3073 aft 6pm.

Bike, 10 sp, hardly used, Suntour de Raillers, reflctr tires, $125. Melanie, x3-3389.

Power lawn mower, complt renovated, self propelled w/grass catcher, v gd cond; Admiral elec stove w/lg oven & broiler, 30", best. Chris, x3-6750.

Car stereo, 8 track tape deck w/spkrs & tapes, exc cond, $35. Bill, x366 Linc.

Bike rack for rear bumper, holds 2 bikes, used 1 season, new $15, ask $8; VW Beetle ski rack, holds 2 prs, $10. Marcy, x3-2746.

Collins KWM1 ,12 VDC, 110 VAC, extras, $200; Eldico 1000F linear, complete pkg, $400. Tom, x5393 Linc.

Sears frost fr refrig, lg, $200; port dishwasher, exc shape, $150 firm. Yard sale June 13. Call 494-9107.

Studio couch, blk & wh, $25; blk & wh patterned mirror w/chrome frame, $25; lamp, $5. Bob, x8-3387 Draper.

Pr brand new smaller Advent spkrs in open boxes, $140; Pioneer QX646 stereo/quad recvr, perf cond, $200 or best. 661-7631 evgs.

Scandinavian teak furniture; baby's rm furn & accessories; TV b&w 22"; Panasonic phono-radio. Mrs. Amran, 628-1059.

Sofa & 2 chs, K set; bkcase, tbl & ch; baby carriage & high ch; snos 185-14. X8-1193 Draper.

Upright piano, free if you move it. Ralph, x3-6683.

Hot plate, 2 brnr, 550 wt & 1100 wt, adjustable ht, $20. Steve, x5-6156 Dorm.

'69 pass side dr for red VW bus, v gd cond w/glass, best; oldish but wkng Westinghse AC, 110 v ac, $25. x3-6235.

Stereo, gd wk cond, spkrs, compact trntbl, FM recvr, $80 or best. 494-9082 evgs.

Wedding gown by Alfred Angelo, sz 11, wh empire bodice A-line, long sleeves, attached train that can be bustled under, match head piece w/shoulder length veil, best. Jerry, x3-2380.

Scott FM stereo tuner, LT-112B, solid state, perf. Dave, x3-1637.

Honda civic tires, 6:00-12, orig equip, unused, $15/ea. Bill, x3-7573.

Dbl bed — matt, box sp, & frame, extra firm, $90. Susan, x3-5673.

Blk naugahyde reclining ultra-comf lounge ch w/hassock, $95. Jon, x3-7974.

Lvng cntry: humidifier, $5; children's sled, almost new, $7; SMC TW, old but clean & wks fine, $15; authentic Spanish guitar w/self case, v gd cond, $100. Armando, x3-4168.

Hoover cannister vacuum w/attachments, yr old, $25. 267-2421 aft 6pm.

Moving, must sell grand sofa, 2 arm chs, coffee tbl, 2 side tbls, $100; twin bed complete, $25. 739-1997.

Magnavox color TV, 13", $130; stereo, Sansui tuner amp 210 w/player & spkrs, $100; GE 20" port fan, $8; Sears toaster, $3; Steam, dry iron, $3; 2 folding chs, $8. x3-1967.

Lateral file cab, 2 dr, Metal Stand, new $180, askng $100, no delivery, x3-6683.

Schwinn 10 sp m bike, $65. x3-5117.

Port b&w TV w/UHF, VHF, $30; sofabed, $15; reclining desk ch, $10; studio-bed, $25; rugs, lamps, tbls, chs, shelves, dishes, all cheap; skis, 195 cm, Kastle w/ess Nevada bindings & poles, $70. Hans, x3-1866.

Hvy duty Westinghse gas dryer, 3 yrs old, new drive motor, $50. 944-7609.

Girl's bike, 18", gd cond, $15. x3-7138.

Port typewriter, exc cond, $30; wd desk, 3-dr, $30; GE 16" b&w TV, $40; office ch, $5. 494-8241.

US stamps, 60 full sheets & 59 plate blocks, face value $308, catalog value $600, wl sell for $400. Len, x3-4215.

Twin bed w/matt, box sp & Harv frame, $35; K tbl, walnut formica top w/4 ch, $25; gold rug, 9x12, $15; chest of drawers, $12; Hibachi, $5; sm desk & ch, $25; blue rug, 11x12, $40. Sue, x3-5794.

Polaroid SX-70 deluxe, almost new, best. 494-8882, kp trying.

Nine 6-jar spice racks plus over 60 spices, best over $10 takes them all; 6 sturdy sm wood chs, $1 ea. Sandy, x3-4791 days.

F 3 sp bike, 26", $55; rollaway bed & matt, $40; walnut carved desk, $75; formica top desk, $35; easy ch, $50; bed frame w/3 drawers built in, $110; boy's bike, $15; dbl bed matt, $35; fan, $15; lamps. x3-2481.

GE conv dish, yr old, $165; lg Sears refrig/freezer, $165; Zenith 16" b&w TV (ss), exc cond, $85; dbl bed, complete w/hd & ft boards, $35; misc sm tbls, $5 & $10. 547-1217 evgs.

Wlnt stained pine bookshelf etageres, 2, $100/ea or 2 for $150. ZB, x3-6973.

Lg, comf solid oak desk, 9 dr, dk stained; sm solid maple vanity desk, nds refnshng, best. Lois, 628-0348.

Bath tub, 50 yr old, v gd cond, 1 tiny chip, w/legs and fixtures. $30, $35 w/delivery. Don, x8-1425 Draper.

Marantz 2270 stereo recvr, new, $350 or best; dbl bed, box spring & matt, gd cond, $50 or best; assrtd new skis approx 200 cent long. Ralph, x7267 Linc.

Sunbeam elec lawnmower, 18", 1 yr old, grass catcher & cord inc, ask $75. Si, x8-3453 Draper.

Swiss style, horse drawn sleigh w/shafts, gd cond, $200. Beth, x3-5115.

Uniroyal G78-14 belted regular tire, 1/8" tread left, exc spare, $3. Dave, x7689 Linc.

Zenith 21" b&w TV, gd cond, $50. Sears steam iron, 6 mos old, $8. Rob, x3-2130.

HP 35 calculator & access, $60 or best. Walter, x5-8359 Dorm nights.

Pr lamps, $15; K cab, $5; side tbl, $10; side tbl w/gls cover, $25. Call 731-5347 evgs.

Formica K tbl, curtains, carpet, etc. Call 868-2676 evgs.

Sgl box spring & matt, gd cond, $35; 4 ft fridge/freezer w/stove, 2 brnrs, $20; easy ch, $15. Call 661-0661 anytime.

Wdn swivel desk ch, $15; desk made from door, $10; K tbl w/asst chrs, $25; pr used Utah 3 way spkrs, one w/defective tweeter, $40. Ben. x3-3188.

Exc b&w TV w/stand, $80; 2 twin beds, $20/ea; DR tbl & chrs, $20; sofa bed, $10; drapes 104" wide, $10; elec broom, $10; coffee tbl, $5; lamps, $5; bk shlvs, $5; iron & board, $5; sm desk & chr, $10; door mirror, $2; and more. Call 492-6691.

Sears ac 11,000 BTU, $90; gold rug 12x15, $45; Oriental pattern rug 7x10, $30; olive drapes 150Wx72L, $25, 100Wx63L, $7. x3-2942.

Vehicles

'66 VW runs wl, reblt eng, new exhaust & front shocks, nds minor body wk, $450. Dave, x3-5788.

'67 Volvo 122S wgn, auto, exc eng, int, $450 or best. Mike, x3-7779.

'67 VW camper, cl & maintained, $1050. 494-8149.

'68 Olds Toronado, 68K, nds muffler wk, $130. x3-4368.

'69 Jaguar XKE, exc cond, yellow w/blk leather int, AM-FM, new radials, top & brks. Dick, x3-3594.

'70 Mercury Marquis, wh, exc cond, 49K, no rust, some dents, one owner, $1100 or best. 267-4319.

'70 Plymouth Fury, body nds wk, engine in exc cond, 4 dr, tires, p st & br, $400. x8-3657 Draper.

'70 Porsche 911T Targa 5 sp, 41K, silver S-instr, wheels, etc. $5500. John, x3-6217.

'71 AMC Hornet, blue, 2 dr sedan, stnd shift, 40K. x3-2220.

'73 Ambassador, 2 dr, hrd top, gr, ac, pwr st & br, gd cond, $2000 or best. Carlos Pation, 494-9081 aft 4pm.

'73 Cadillac Eldorado, all usual Caddy opts, new tires, 50K, priced well below retail. x3-2772.

'74 Fiat 124 TC spec, 26K, exc cond, radial tires & snos, AM-FM stereo, rear window defogger, fully reclnd seats, lv for south, must sell, $2400. Som, nr Port Sq 1 BR, LR, K, B mod apt, ac, ww, dish, disp, free pkng, $235/mo inc ht, avail 7/1. Stavros, x3-7107.

'74 Plymouth Sebring Satellite, 17K, lk new, exc cond, $2,900. Linda, x3-7023.

'74 Plymouth Valiant, beige w/blk vinyl top, 6 cyl, auto, pwr st, ac, rust proofing, new tires & shocks, ask $3,100. Eric, x3-6673.

'75 Chevy Monza town coupe, 13K, AM-FM, exc cond, $2,500 or best. Susan, x3-4784.

Housing

Arl 3 BR colonial nr bus stop to MIT, move-in cond, mid 30s. x8-3336 Draper.

Bedford, 6 rm Cape, quiet area, 3 BR, DR, LR w/frpl & ww, dwnstrs BR w/ww, 2 car gar, 12x14 porch w/comb windows, alum sdng, paved 70 ft driveway, on 14,000 sq ft lot, 10 min to Burl Mall, $45,900. 275-6907.

Bos, 5 min by bus to MIT, sunny 1 BR apt, summer sub w/fall opt, $173.50/mo. Kathy, x3-3623.

Bos nr Copley Sq, mod, furn 4 BR apt avail July & Aug, LR, study, DR, sun deck, 3 B, washer/drier, $400/mo for caring tenants, inc pkng & util. L. Williams, x3-5954.

Brightn, nr BC, lg mod studio apt w/dressing rm, ac, dispsl, htd, $195. Avail July 1. Larnie, x8-3045 Draper.

Brookline area apt nr T & shopping cntr, BR, LR, DR-K, gas & elec inc, avail now. 277-6105 bef 2pm.

Tang sub 6/1 w/Sept opt, June rent pd, $98/mo. Betsy, x3-1795.

Eastgate summer sublet, 1 BR corner apt, furn, avail 6/15-8/31, $244/mo inc util. x3-3371 or write Diamond, Rm E53-480.

Camb prof's hse, Avon Hill district, 3 BR, ac, grand piano, dish, etc, avail July 24-Feb 1, $550/mo + util, off-st pkng, closed back yd. x3-1906.

Camb nr Harv Law Sch, 1 BR apt, mod K & B, lndry, safe, clean, sub June & July $215, normally more, opt in Aug. Jim, x5347 Linc.

Camb, rm close to H Sq w/B, qt, fam home, Call 491-4258, evgs.

Camb. 1 BR apt, 6 min walk to Harv Sq, K and lg LR 3rd fl, avail 7/1, $210 inc ht. Martial, x3-4759.

Camb, Fresh Pond, Sancta Maria Hosp area, BR, LR, K, pkg, walk to 2 bus lines, avail 6/1, all util. Bob, 864-8802, evgs.

Camb-Som Line at Inman Sq, 1 BR mod apt, yr lease, free off st pkng, $175 + util. 354-3706, kp trying.

Medford, 12 min to MIT, Colonial hse on quiet st nr Middlesex Fels reservation, gumwood int, oak fls, 6 lg rms plus study, 1½ B, landscaped, $41,000. x3-6812.

Natick, lg 8 rm Cape situated bet lake & golf course, panld rms, 2 frpls, all extras, free commute to MIT, $59,900. Ken, x3-4426.

Jam Pl lg 6 rm apt avail 8/1, nr Arboreturm & Forrest Hills T station, $135/mo. 521-1189.

Some MIT internat hsng, sub 6/10 or 7/1 w/opt in Sept, 2 BR, ac, dish, lndry, storage area in bsmt, nr T & shops, free pkng off st, $285/mo. x3-5216.

Harwich, Cape Cod, new furn hse for summer, walk to lake, 4 min to ocean, immaculate. 471-8827.

Conway chalet on priv lake, boating, tennis, swim, slps 10, $150/wk, $260/two wks. LaVerne, x3-6824.

Maine, sunny lake front cabin, 3½ hrs from Bos, sandy beach, 3 BR, $100/week, $40/wk end. Rae x3-7728.

Rangeley Lake, Me, 13 rm estate, 750' lake frontage, 6 BR, 3 B, piano, boat, float, $650 for 2 wks, avail through July & Sept. Rachel, x3-5612.

Animals

Blk m miniature poodle, 5 mo, AKC, registered, champ breedng, shown or pet home, x3-4831.

Gerbils, free, house broken & friendly. Keith, x3-3242, lv msg.

Kittens free, orange, 1 m & 1 f. Rae, x3-7728.

Lost and Found

Lost: gr leather wallet w/license, photos, etc, reward, no questions asked, sentimental value. Wendy Gottesman, x3-7402.

Wanted

Student flute for beg. 332-7152 aft 6pm.

Violinist, violist and cellist to start string quartet to play Haydn quartets Op. 9 etc. Heidi, x3-5304.

Books: *Spectral Analysis* by Jenkins & Watts, *Probability, Random Variables & Stochastic Processes* by Papoulis, *Electromechanical Dynamics* by Woodson & Melcher, 3 vols, *The Electromagnetodynamics of Fluids* by Hughes & Young. Ralph, x7267 Linc.

IBM elec or Selectric typewriter, x3-7130.

Respon prof cpl seeks 2 BR apt or hse to rent beg 7/1 or 8/1, pref Camb, Som area, refs provided. Nancy, 354-5122 evgs.

Student wants to buy nonworking color TV. John, 734-2168 bet 7-9pm.

Canoe, gd cond, fibreglas or aluminum; port dish, gd operating cond; inexpensive used dressers or chests of drawers. 327-1109, evgs.

Garage to rent for storage. Marilyn, x3-2053.

Wl give rm & brd in exchange for 25 hr/wk of child supervision for summer in Belmont. Alan, x3-3982.

Bike, 10 sp in gd cond, should have cost $200 or more new. Call x5-6483 Dorm after 12n.

Roommates

Rmmate for lg sunny Arl apr, share w/3 women, nr Cntr & T, pkng avail, $85 + util. Call 646-2350.

F rmmate for sunny 2 BR apt overlkng lovely courtyd on Harvard St., Camb, $130/mo inc ht, for summer or longer. 547-2085.

Rmmates for Allston beaut renov 5 BR hse, summer sub, 2 B, LR, mod K, dish & disp, ww, nr park & T to Cent Sq, free pkng, $100/mo + util. Stu or Pete, x3-1691.

Share v comf apt till Sept, own rm, share study, m rmmate, easy to live with, 7 min walk to MIT. 661-0298.

F rmmate wanted to share Camb apt w/2 m, 1 f, pleasant area nr Radcliffe, 4 BR, LR, K, yard & basement. Linda, 661-9581.

Rmmates, 2, share Beacn Hl apt, clean, mod K, avail now, $105/mo. 227-3547 evgs.

Rmmate for Tang apt, July & Aug w/fall opt, furn LR, biggest BR in Tang. Shidan, 494-8866 evgs.

M or f rmmate for lg 3 BR apt 5 min from MIT on Harvard St, summer w/Sept opt, ac, dish & disp, $100/mo. Peter or Giorgio, 354-5917.

F 24+ working to share renovated Som hse, own BR, piano, yard, pkng, nr bus; share meals & amenities; no pets, $97.50/mo & util. 666-8790.

Carpools

Nashua, NH to Linc Lab, 8:30am-5pm. x7016 Linc.

Miscellaneous

Typing, theses, reports, manuscripts, IBM selectric. x3-2511.

Austrian girl wd like to stay w/American fam during July to learn language & culture; can help w/hsewk or children; exchange also possible. x3-6595.

Mature business & prof woman wl reconcile personal checking accounts. Mrs. Wheeler, x3-1493.

Exp hsepainter, v reas rates, guaranteed to please. x8-4419, Draper.

Marblehead mooring for rent, off Village St., 150 lb mushroom anchor, wl take 20 ft boat. Don, x3-3550.

Papers & thesis typing, IBM corr selectric. x3-7453.

POSITIONS AVAILABLE

This list includes all non-academic jobs currently available on the MIT campus. Duplicate lists are posted on the women's kiosk in Building 7, outside the offices of Special Assistants for Women and Work (10-215), and Minority Affairs (10-211), and in the Personnel Office (E19-239). Personnel interviewers will refer any qualified applicants on all biweekly jobs Grades II-IV as soon as possible after their receipt in Personnel. Persons who are not MIT employees should call the Personnel Office on extension 3-4251.

Employees at the Institute should continue to contact their Personnel Officers to apply for positions for which they feel they qualify.

Dick Higham	*3-4278*
Pat Williams	*3-1594*
Carolyn Scheer	*3-1595*
(secretary — Sally Erickson)	
Virginia Bishop	*3-1591*
Mike Parr	*3-4266*
Ken Hewitt	*3-4267*
(secretary — Joy Dukowitz)	
Sally Hansen	*3-4275*
Lewis Redding	*3-2928*
Richard Cerrato	*3-4269*
(secretary — Susan Bracht)	

Sponsored Research Staff, Administrator in the National Magnet Laboratory to be responsible for business and administrative aspects of research contracts with the Energy Research and Development Administration. Position involves interaction with Institute project personnel and administrators as well as officers of contracting agency. Ten years experience in progressively responsible administrative positions in research laboratories required, as is knowledge of Energy Research and Development Administration procedures. D76-92 (6/9).

Sponsored Research Staff, in Nutrition and Food Science will perform biochemical, physiological and radiommuno assays on the brain. Masters degree in Biochemistry or related field required. Experience in measuring neurotransmitters and melitones preferred. D76-91 (6/9).

Sponsored Research Staff, Research Engineer in Mechanical Engineering to work with student, faculty and other research staff (from Institute and Mass. Gen'l Hosp.) on studies of human hip joint. Will also participate in supervision of thesis and other research projects. Activities will be oriented toward instrumentation conception, design, implementation, and interfacing with computer for data acquisition and manipulation. Mechanical or electrical engineering education and experience (preferably a combination of electronic-mechanical, computer experience) required. Demonstrated capacity for innovation, design experience and ability to co-prosecute long-term and specific short term inquiries also necessary. D76-96 (6/9).

Admin. Staff, Area Systems Coordinator, in the Office of Administrative Information Systems to analyze and resolve problems of an assigned area of operating business systems; develop modification specifications for present systems; schedule and control tasks to meet deadlines; direct and coordinate work of systems analysts, programmers, as required; oversee program tests; act as client liaison and applications programmer as required. Applicants should have business and administrative experience, analytical ability and knowledge of programming. A76-14 (6/9).

Sponsored Research Staff, Staff Petrographer in Earth and Planetary Sciences to examine and describe thin sections and crack sections of terrestial rocks with standard and scanning electron microscopy; do compositional analyses of rocks using electron microprobe and x-ray diffraction equipment; prepare technical and petrographic reports. Formal education in petrology at the Masters level, experience in using and interpreting data from electron microscope and x-ray diffraction equipment necessary. D76-89 (6/2).

Sponsored Research Staff, Energy Economist, in the Energy Lab's New England Energy Management Information System. Will design and execute projects to answer specific energy queries: data collection; use of computer and statistical techniques; econometric model development. Will assist students and other NEEMIS project participants. Write user guides for models and package programs. Write reports. Assist in interpretation of analytical results. PhD in Economics with emphasis on quantitative analysis and modeling, working experience as an economist required. Familiarity with N.E. energy situation and related government operation also necessary. D76-61 (4/28).

Exempt, Admin. Asst. in Nuclear Engineering to assist Administrative Officer and Nuclear Reactor Director in varied administrative and financial matters: supervise and prepare various payroll reports; monitor research contracts; prepare budgets; supervise reactor use billings. Familiarity with MIT payroll/accounting systems as well as purchasing and accounting procedures required. Candidates should also have communications skills. Supervisory experience helpful. E76-16 (6/9).

Admin. Asst. V to Director, Fossil Fuels Program, Energy Lab, will handle administrative and secretarial duties; type, edit, verify accuracy of technical materials; independently compose correspondence; supervise technical typist; arrange meetings, travel, maintain complex files, oversee student payroll procedures. College degree preferred; a minimum of 5 years responsible secretarial experience required. 37½ hr/wk B76-224 (6/9).

Secretary V in the Counseling section of the Dean for Student Affairs Office to coordinate work among 2 other secretaries and self. Perform varied secretarial duties relating to student counseling functions, special student programs, seminars; handle accounts; assist students in counseling and procedures matters. Opportunities exist for statistical and other research projects, and for writing. Excellent typing and machine transcription skills, familiarity with office procedures required. Candidates should be able to set priorities, to instruct and guide others, and to deal sensitively with people and confidential information. B76-206 (6/2).

Senior Secretary V to the Director of the MIT Alumni Fund to arrange committee and other meetings; assemble relevant materials; prepare travel itinerary and expense reports; type correspondence and other materials. Excellent typing, shorthand and machine transcription skills, ability to edit from draft material and to exercise judgement and sensitivity required. Candidates must also have the poise necessary to deal effectively with a variety of people at the Institute and outside. B76-213 (6/2).

Secretary V to Department Head, Materials Science and Engineering will handle varied duties related to department administration and academic program: arrange meetings and complex travel schedules; organize agenda; answer student inquiries; type technical material and general correspondence; independently respond to routine correspondence. May coordinate work of other secretaries. Excellent secretarial skills and a minimum of 5 years secretarial experience required. B76-215 (6/2).

Secretary IV to a group of Mechanical Engineering faculty members': handle correspondence; arrange appointments and travel, coffee seminars. High school graduate or equivalent, knowledge of basic bookkeeping, shorthand, technical typing skills required. One position begins immediately (B76-216); one position begins mid-Sept., 1976. (B76-218). B76-216, 218. (6/9).

Secretary IV to work with Biology Department research group and faculty member: type manuscripts, coordinate projects with other research groups; prepare course materials, minutes of meetings. Perform other general secretarial duties. Candidates should be able to work effectively with a group and to organize work independently. Excellent typing and machine transcription skills necessary. Shorthand helpful. B76-226 (6/9).

Edit. Asst. IV in the MIT Press Editorial Dept. to write routine letters; send and receive proof; handle copyright registration: assist editors with manuscripts as necessary. Ability to handle detailed work as part of a team as well as independently required. Good typing also necessary. College training, book publishing experience desirable. B76-223 (6/9).

Secretary IV in the Counseling section of the Dean for Student Affairs Office to share secretarial duties with 2 other secretaries for a 4-person professional staff. Duties include general secretarial responsibilities assisting students; arranging appointments and meetings. Opportunity exists for participation in various research projects and writing assignments. Work will be coordinated by senior secretary. Good typing, machine dictation skills, ability to deal sensitively with a wide variety of people required. B76-207 (6/2).

Secretary IV to three faculty members in the Chemistry Department to answer phones; type correspondence and manuscripts; arrange travel; maintain files. Two to three years secretarial experience, ability to exercise initiative and judgement required. B76-208 (6/2).

Secretary III-IV in the Office of Sponsored Programs to two Contract Administrators to perform general secretarial duties including telephone coverage; maintaining files; arranging meetings; typing correspondence and forms. High school training or equivalent plus 3 years secretarial experience, or secretarial school training and 1 year experience required. B76-220 (6/9).

Secretary III-IV to two Nuclear Engineering faculty members to type proposals, reports, class notes, including some technical material; arrange appointments and travel; file. Will also handle admissions and correspondence files and statistics. Experience with machine dictation equipment, familiarity with general office procedures, organization skill required. Technical typing skill helpful. B76-201 (6/2).

Secretary III-IV in Nuclear Engineering to share secretarial duties for faculty and research group with other secretary: type technical reports, class notes and general correspondence; answer phones, arrange travel; maintain files and statistical data. Good typing, familiarity with office procedures, ability to work with minimal supervision required. Experience with technical typing and dictation equipment helpful. B76-202 (6/2).

Secretary III-IV, Legal Secretary, in Office of Sponsored Programs to transcribe and type technical patent applications and correspondence from shorthand dictation; coordinate related patent activities; maintain files; arrange appointments and travel. Good shorthand and typing skill required. Legal experience desirable. B76-210 (6/2).

Lib. Gen. Asst. III in Libraries Collections Development Department. Will check in current journals and serials; record and process materials on visible files; claim outstanding files; process invoices; circulate sample issues; answer telephone inquiries on receipt of materials. College training, accuracy with detail, some typing skill required. Library experience, knowledge of foreign languages helpful. B76-221 (6/9).

Technical Illustrator IV in the Research Laboratory of Electronics to produce camera-ready illustrations from rough sketches for use in journal articles, slides, etc. Experience with Leroy and other drafting equipment, some typing skill necessary. Candidates must be able to work with faculty, students and staff. B76-205 (6/2).

Sr. Clerk IV in Laboratory for Computer Science headquarters office to perform clerical duties to support 3 accountants: compute billings; prepare budget and expenditure reports, travel forms; disburse petty cash. Will also perform some secretarial duties: type; maintain files; answer phones. Accurate typing, ability to work with figures required. Position begins 7/1/76. B76-200 (6/2).

Technical Typist III-IV in Research Laboratory of Electronics Publications Office will handle typing and layout of photo-offset pages and some proofreading. Good typing, spelling, memory skills, ability to work from written and oral instructions and with detail required. Experience with IBM PSM typewriters and mathematics typing helpful. B76-204 (6/2).

Telephone Operator III in the Telecommunications Office. Will process and expedite incoming and outgoing calls; process conference calls; page individuals as required; handle related clerical duties. Training and experience as switchboard operator, preferably on Centrex system required. Ability to exercise judgement, and follow instructions also necessary. Position includes some holiday and weekend work. B76-225 (6/9).

Histologist III, part-time in Nutrition and Food Science to make microscope slides and assist in animal pathology. (Research involves studies of nutritional pathology, carcenogenesis and vitamin B12.) Will trim and process tissue specimens; use microtome for paraffin sectioning; mix solutions for preservation of tissues. High school graduate, or equivalent with biology and other science course work required. Non-professional histology background preferred. 20 hrs./wk. B76-217 (6/9).

Microfilmer-Messenger II, part-time in Libraries Microreproduction Laboratory to assist in all phases of microfiche production, primarily as camera operator. Will also pick up and deliver materials at campus locations. High School training, ability to work with speed and accuracy required. Knowledge of photographic principles helpful. Position begins 8/1/76. B76-222 (6/9).

Clerk II in Medical Dept. Record Room to pull and file medical records from telephone and written requests; check records for required forms; file material into individual records; maintain patient index file; perform other duties to maintain system. Candidates should have previous office experience which demonstrates capability for accuracy with detailed work, and must be physically able to work on their feet all day. 40 hr. work week (7am-4pm or 7:30am-4:30pm. B76-209 (6/2).

The following positions were still available at *Tech Talk* deadline. The date following each position is the date of the most recent *Tech Talk* issue in which the position was described.

ADMINISTRATIVE STAFF:

A76-12, Systems Manager, Alumni Association (5/12)

A76-13, Asst. to Wage & Sal. Admin., Office of Personnel Rel. (5/26)

BIWEEKLY:

B76-90, Sec. IV, MIT Devel. Foundation (3/17)
B76-110, Sec. III-IV, MIT Assoc. (3/31)
B76-120, Sec. III-IV, Treasurer's Office (6/2)
B76-151, Sec. III, Medical Dept. (4/28)
B76-159, Sr. Clerk III, Resource Planning (5/19)
B76-161, Sec. IV, Center for Space Res. (5/5)
B76-162, Sec. IV, Meteorology (5/5)
B76-163, Sec. IV, MIT Press (5/5)
B76-164, Sec. IV-V, Medical Dept. (5/5)
B76-166, Sec. IV, Sloan School (5/12)
B76-173, Sec. IV, Nutrition & Food Sci. (5/19)
B76-174, Sec. IV, Nutrition & Food Sci. (5/12)
B76-178, Sec. V, Resource Devel. (5/19)
B76-179, Tech. Asst. IV, Energy Lab. (5/19)
B76-183, Sr. Clerk III, Medical Dept. (5/19)
B76-187, Sr. Clerk III, Comptrollers Accounting Office (5/26)
B76-189, Clerk II, MIT Information Center (6/2)
B76-194, Sec. IV, Lab. of Architecture & Planning (6/2)
B76-195, Sec. IV, MIT Information Center (6/2)

ACADEMIC STAFF:

C76-4, Tech. Asst., Biology (4/28)
C76-6, Microbiologist, Medical Dept. (4/21)
C76-7, Tech. Asst., Biology (5/19)

SPONS. RES. STAFF:

D75-48, Economist, Energy Lab. (6/25)
D75-161, Economist/Policy Analyst, Energy Lab. (9/10)
D75-229, Research Engineer, Energy Lab. (11/19)
D75-243, postdoc. res., Computer Science, Artificial Intell. Lab. (1/7)
D75-244, postdoc. res., Computer Science, Artificial Intell. Lab. (1/7)
D75-250, postdoc. res., Physics, Lab. for Nuclear Sci. (1/4)
D76-12, postdoc. res., Physics, National Magnet Lab. (2/18)
D76-14, Tech. Asst., Arteriosclerosis Center (2/18)
D76-17, Biochemist, Res. Lab. of Elec. (2/25)
D76-18, postdoc. res., Physics, Lab. for Nuclear Sci. (3/3)
D76-19, postdoc. res., Physics. Lab. for Nuclear Sci. (3/3)
D76-24, Programmer, Artificial Intell. Lab. (3/10)
D76-30, Staff Scientist, Neuroscience Res. Program (3/24)
D76-31, Staff Scientist, Neuroscience Res. Program (3/24)
D76-32, Staff Scientist, Neuroscience Res. Program (3/24)
D76-40, Tech. Asst., Architecture (3/31)
D76-44, postdoc. res., Physics, Lab. for Nuclear Sci. (4/14)
D76-45, Plasma Physicist, National Magnet Lab. (4/14)
D76-45, Plasma Physicist, National Magnet Lab. (4/14)
D76-46, Plasma Physicist, National Magnet Lab. (4/14)
D76-47, Plasma Physicist, National Magnet Lab. (4/14)
D76-48, Plasma Physicist, National Magnet Lab. (4/14)
D76-49, Plasma Physicist, National Magnet Lab. (4/14)
D76-50, Theoretical Solid State Physicist, National Magnet Lab. (4/14)
D76-53, Curricula Development, Center for Advanced Eng. Studies (4/14)
D76-57, Stress Structures Design, National Magnet Lab. (4/28)
D76-67, Biologist/Biomedical Engineering, Mech. Eng. (5/5)
D76-70, postdoc. res., Physics, Lab. for Nuclear Sci. (5/5)
D76-71, postdoc. res., Physics, Lab. for Nuclear Sci. (5/5)
D76-74, Jr. Engineer, National Magnet Lab. (5/19)
D76-80, Electrical Engineer, National Magnet Lab. (5/26)
D76-81, Biochemist, Center for Cancer Research (5/26)
D76-82, Biochemist, Center for Cancer Research (5/26)
D76-83, Program Administrator, Undergraduate Res. Opportunities Prog. (6/2)
D76-84, postdoc. res., Res. Lab. of Elec. (6/2)
D76-86, immunology & leukemogenesis research, Center for Cancer Res. (6/2)
D76-87, energy conversion system research, Energy Lab. (6/2)
D76-88, Speech Communication, Res. Lab. of Elec. (6/2)

EXEMPT:

E76-7, Nurse Practitioner or Physician Asst., Medical Dept. (3/24)
E76-12, Asst. Chief Oper., Physical Plant (4/28)
E76-15, Eng. Asst., Material Science & Eng. (6/2)
H76-45, Mechanic B, Physical Plant (5/26)
H76-46, Mechanic B, Physical Plant (5/26)
H76-47, Mechanic B, Physical Plant (5/26)
H76-61, Tech. A, National Magnet Lab. (6/2)
H76-62, Sr. Tech., National Magnet Lab. (6/2)

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MIT Center in New York Welcomes Visitors from Home

By PATRICIA M. MARONI
Staff Writer

The MIT Alumni Center of New York is bullish on making people feel welcome these days.

As a result of an ongoing campaign to involve a greater number of MIT faculty and staff members in alumni affairs, the Center recently concluded its 81st year with one of the strongest records of participation. A new agenda of activities, ranging from consulting clinics to evenings at the Metropolitan Opera, is the main reason for the increase in Cambridge visitors, according to Stephen P. Denker '59, regional director for the Greater New York area.

The New York Center is the official gathering place for the world's second largest body of MIT alumni. Its recent effort to attract the awareness of faculty members who might be in need of a conference room or a telephone when they're in New York on Institute business represents a new emphasis on Cambridge affairs.

Located in the mahogany-panelled Chemists' Club at 50 East 41st St., the Center serves some 9,000 MIT graduates living in New York City, Westchester, Long Island, southern New York State, New Jersey, Fairfield County, Conn., and eastern Pennsylvania, including Philadelphia. As an alumni district, it is surpassed only by the Boston-Cambridge area, which claims 12,000 MIT graduates.

Recent examples of the Center's new hospitality effort include a press conference announcing the release of *Technology Review's* Loch Ness monster photographs, a luncheon honoring Nobel Prize winner David C. Baltimore, on sabbatical this year at Rockefeller University, and a "Venture Clinic" for alumni interested in starting new businesses or solving the problems of firms already established.

Many members of the Center praised last winter's "Career Clinic" as a sophisticated way of extending a philanthropic hand to younger alumni. Advice on job-seeking skills was offered to about 150 alumni and friends by representatives of Halbrecht Associates, Cabot and Ballentine, James W. Davidson and Co. (President, James W. Davidson '52), and Arthur Young and Company (Managing Partner, Michael Brenner '57). David S. Woronoff '59, a private consultant who participated in the clinic, summed up the day and one rationale for the Center when he said, "Keep track of friends and cultivate acquaintances."

The statement has recently found proof in a series of monthly business luncheons at the Center. Alumni speakers from RCA Satellite Communications, City Bank of New York, Lehman Brothers, Inc., and a host of law firms and securities investment companies usually offer informal remarks on topics of general interest the third Thursday of each month. The luncheon audiences continue to grow, Denker says, as the practice of exchanging information over coffee and dessert becomes more popular.

"Talking shop during lunch appeals to New Yorkers because little time is lost," Denker said. "One of our most successful discussions in this series was on tax shelters by attorney Edwin H. Baker ('56), a graduate of Course VI-A."

Denker and Ms. Viki Spencer, executive secretary to the Center, answer literally hundreds of telephone inquiries a week.

"The requests can be as simple as information on admission procedures or as complex as 'Where do I find an MIT professor or alumnus to help me in the development of my product?' This entire practice of MIT's contributing to the New York community seems a highly enlightened approach to the free enterprise system," said Denker, who received his SB, SM and PhD degrees in electrical engineering from MIT.

Since Denker is often on the road, sometimes dividing one working day among MIT Clubs of Princeton, Long Island, and Fairfield County, a large part of the responsibility for helping New York visitors get their bearings rests with Viki Spencer. In addition to writing and producing a newsletter on major activities of the Center, she also helps in the scheduling of special conferences.

One faculty member who is now exploring ways of using the New York facilities to greater advantage is Professor Dolores Hayden, who, in conjunction with MIT architect Doris Cole, is writing a text for the upcoming Brooklyn Museum exhibit, "Women in Architecture." The exhibit, featuring the work of several MIT alumnae, is being considered for a showing at MIT's Hayden Gallery later next year.

In other New York-related projects with faculty as a primary resource, Professor Paul Penfield, Jr., associate head of the Department of Electrical Engineering and Computer Science, is designing a "seeding operation" that would join the expertise of faculty members and management-level alumni from organizations like Bell Laboratories, IBM, and Exxon—each of which employs more than 400 MIT graduates in their New York and subsidiary offices.

Seeking out alumni advice, however, is only one half of the Center's present objective, which is to raise between $125 and $150 million towards MIT's $225 million Leadership Campaign. James N. Phinney, who preceded Denker as New York representative for the AlumniAssociation for 13 years has been named District Director in charge of the Campaign. Retired Exxon Chairman J. Kenneth Jamieson '31, is acting as chairman, and John S. Reed '65, executive vice president of City Bank, is deputy chairman.

Phinney, who has built a reputation on never forgetting a New York alumnus' name is like many of the Center's early incorporators in his insistence on "superior service and an interesting schedule of events." Like many of his modern Manhattan colleagues, he is confident that his area ultimately will be a model to the rest of the country in Leadership Campaign support.

The fourth member of the New York Alumni Center's staff is Ms. Patricia Kaiser, who provides secretarial support to Phinney for the New York Area Leadership Campaign while also administering to the general planning of luncheons, staff meetings, and cultural events sponsored by the Center. Her detailed knowledge of visitors' informal associations with the Center adds to the atmosphere of hospitality that faculty members are being asked to sample.

James D. Bruce, associate dean of the School of Engineering, said he hoped MIT faculty and staff members would become more aware of the Center as a branch office of the Institute administered by the Alumni Association.

50 East 41st St., New York City

"It is an information center, a meeting place, an essential conduit between Cambridge and New York for advising and requesting advice, a logistical support for all academic and administrative activities based in New York, and it's also a place to have dinner or hang your hat for a night," he said.

The Center's present address, which includes overnight accommodations and luncheon and dinner privileges for MIT staff, is the eighth in a long and colorful history of residences, including the United Engineering Center, the Biltmore and Chatham Hotels, and the private home of James W. Girard in Grammercy Park. Original headquarters for the organization, which began as the Technology Club, were at 36 East 28th St. Alexander Rice McKim '85, who presided over the group for the first 15 years, donated this location with the provision that the upper two floors be available for rental to Club members.

During the early 1900s a tradition of annual dinners prevailed. The Golden Jubilee Banquet of 1916 celebrated MIT's move from Cambridge to Boston with a nationwide exchange of telephoned greetings. Even more remarkable were the "Radio Dinners" of 1924 and 1926 at the Waldorf-Astoria, where David Sarnoff and General James G. Harbord of RCA demonstrated new developments in radio broadcasting. The first event marked history's first synchronous radio broadcast to listeners around the world.

As the late Eric Hodgins '22, former managing editor of *Technology Review*, wrote:

"Ordinarily, if you yearn for preferred front-page space in every New York morning newspaper, you must sign an oil lease, make a triple play unassisted, or murder your wife with more than an ordinary display of virtuosity.

"In other words, you must do something 'Pretty Special.' It would scarcely occur to you that you might win your column inches by so drab an activity as holding a dinner."

For a full appreciation of the New York Center's current expanded publicity effort, Denker suggests that faculty and staff appraise the services at 50 East 41 St. in person.

"The past successes of the Center, as recorded by men like Eric Hodgins, should serve as a prologue to the future," he said. For in terms of the future investment of technology, MIT can no longer expect to hold the national attention from Cambridge alone. A broader view is required, and New York will inevitably play an important role in contributing to that view."

Proposals Sought for Lilly Teaching Research Awards

The MIT Division for Study and Research in Education is inviting proposals from faculty members who wish to participate in a proposed Lilly Teaching Award program in the coming academic year.

DSRE said it expects final word from the Lilly Endowment, Inc., on funding of the program some time this month and wants to alert the faculty at this time.

The aim of the program is to explore how faculty members can use their research activities and interests to enrich their teaching, and how this process can be facilitated by changes within the educational institution.

Meaningful interaction between research and teaching, DSRE said, involves not simply the teacher but the institution in which the teacher functions. Research in this area coincides with one of the DSRE concerns, which is the general issue of how institutions learn and the various strategies of intervention that can facilitate such learning.

A group of six to 10 junior and senior faculty members from a variety of departments will be chosen for the program on the basis of proposals submitted to an interdepartmental selection committee composed of faculty members. The program is open to all full-time instructoral staff members with doctorates, but the grant requires that at least five of the recipients be instructors or faculty members who next year will be in their first, second or third year of full-time teaching.

Proposals must be submitted by July 15. Applicants will be informed of a decision by early August. Additional information can be obtained from Elaine Medverd, DSRE Administrative Officer, at x3-7362.

Ms. Medverd said applicants should define their projects and submit their proposals directly to the DSRE (20C-126A) with a modest budget they feel will enable them to carry out their work.

DSRE said applicants should be "highly motivated to explore issues relating to the impact of educational institutions on individuals, students or faculty."

The projects are expected to be of several kinds:

Projects centered on course development, involving innovative teaching strategies and materials, particularly in courses and subject areas that have tended to use traditional models.

Projects that focus on some level of institutional change at MIT and which have as their focus the impact of these changes on individuals in their teaching, learning and researching roles.

Projects which examine processes of change in institutions other than MIT but which seem to contain significant components that can be used to illuminate processes of change within higher education.

In addition to the specific projects of individual grant recipients, the 1976-77 program will include an orientation period at MIT's Endicott House and a series of bi-weekly meetings of three hours each, during which the participants will report to each other on projects and have seminars with consultants on issues pertaining to the projects.

Once every two months the Lilly Fellows will be asked to report to the ongoing DSRE seminar on institutional learning. They will also attend Lilly Endowment sponsored weekends in the fall and spring, to meet and exchange ideas with their colleagues from other universities participating in similar Lilly programs.

The program will be significantly different in nature from the past two Lilly programs run by DSRE. The DSRE said this reflects "a learning and growth experience on our part" and an effort to find "more meaningful forms of working on teaching effectiveness and career development."

The Lilly Endowment, Inc., of Indianapolis, was chartered by Eli Lilly as a non-profit non-sectarian foundation in 1937 to support voluntary self-help efforts to deal with social problems.

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The following positions have been *FILLED* since the last issue of *TECH TALK*:

E76-13	Exempt	
B76-174	Sec. IV	
A76-9	I.L. Officer	
B76-196	Sec. IV	
B76-186	Sec. III	
D76-56	DSR Staff	
D76-22	DSR Staff	

The following positions are on *HOLD* pending final decisions:

B76-128	Tech. Asst. IV	
H76-42	2nd. Cl. Fireman	
H76-58	Campus Patrol Officer	
H76-59	Campus Patrol Officer	
B76-197	Sr. Cl. III	
H76-57	Electrician	
B76-198	Sec. III	
B76-192	Sec. III	
S76-55	Summer	Clerk

Optical Meeting Concludes Today

A two-day conference on optical communications, sponsored by the National Science Foundation, ends today (Wednesday) at MIT.

The semi-annual meeting is the eighth in a series of conferences held to foster cooperation and an exchange of information among researchers and users in the optical communications field. Participants are from NSF-sponsored academic research groups and industrial and government groups.

Conference sessions are in Kresge Little Auditorium. At a dinner Tuesday night at the New England Aquarium, Dr. Ithiel de Sola Pool, Arthur and Ruth Sloan Professor of Political Science, spoke on "Policy Choices for the Information Age."

Tech Talk Rate to Rise

Effective July 1, the price of subscriptions to Tech Talk will increase to $8 per year.

The increase in price was made necessary by rising postage rates and continued increases in the cost of production.

110 Retirees Honored At Banquet

By KATHARINE JONES
Staff Writer

One-hundred and ten MIT employees who retire during 1975-76 after collectively serving MIT for nearly 2,000 years were guests of honor at the Institute's annual retirement dinner Tuesday (June 1) in Walker Memorial.

MIT President Jerome B. Wiesner was master of ceremonies at the festive occasion sponsored by the MIT Quarter Century Club. Retirees, their families and associates, and members of the Quarter Century Club attended.

Dr. Wiesner, after telling some quips that are part of retirement folklore, spoke of the great progress society has made since the Great Depression and World War II when many of those retiring first began work at MIT.

"MIT has played a not insignificant role in that progress," he said, "and you have been an important part of MIT . . . So much of what MIT is today has come from your labors, your skills, your devotion."

Dr. Wiesner introduced Philip A. Stoddard, vice president of operations, who read the roll and paid tribute to the collective wisdom of the retirees. Mr. Stoddard described the certificate given to retirees in appreciation of their years of faithful service to the Institute.

Chancellor Paul E. Gray, the evening's featured speaker, expressed his gratitude to those who have served MIT with distinction and a quiet sense of purpose. He spoke of the interdependence of MIT, how the hallmarks of education are due to the work of many people in many areas of the Institute.

Dr. Gray paid special tribute to the late Nick Carter who worked at MIT for over 50 years before his retirement in 1968 and who epitomized the service characteristic of MIT employees. Mr. Carter, who died in May, could include among his accomplishments the founding of the Quarter Century Club.

Members of this year's retirement group are:

MAIN CAMPUS

John P. Ahearn of Everett, Physical Plant, 20 years.

Rita M. Albee of Boston, Department of Electrical Engineering and Computer Science, 31 years.

George W. Alleyne of Cambridge, Housing and Food Services, 30 years.

William B. Ashley of Malden, Physical Plant, 13 years.

Harold Atlas of Brighton, Department of Electrical Engineering and Computer Science, 23 years.

Allan H. Banner of Framingham, Physical Plant, 14 years.

Margaret Bergmann of Brookline, Department of Civil Engineering, 14 years.

Franklin A. Bidwell of Lexington, Department 30E at Draper Laboratory, 34 years.

William H. Brown of Auburndale, professor in Department of Architecture, 36 years.

Pasquale G. Capodilupo of Boston, Physical Plant, 20 years.

Charles Carter of Dedham, Research Laboratory of Electronics, 29 years.

Pauline Chicariello of Cambridge, Housing and Food Services, 10 years.

Augustine Ciulla of Everett, Physical Plant, seven years.

Helen M. Clifford of Brookline, Alumni Association, 12 years.

Ralph Corkum of Winthrop, Housing and Food Services, 24 years.

Charles Correira of North Randolph, Physical Plant, nine years.

Miles P. Cowen of Brookline, Physical Plant, 33 years.

Milton W. Davis of Billerica, Bitter National Magnet Laboratory, 14 years.

William L. Davis of North Billerica, Department of Physics, 25 years.

William A. DiPietro of Medford, Physical Plant, 13 years.

Ruth E. DuBois of Belmont, Department of Humanities, 21 years.

Dorothy Eastman of Saugus, Department of Mechanical Engineering, 12 years.

Virginia Ely of Halifax, Comptroller's Accounting Office, 14 years.

Mary T. Epstein of Medford, Office of Sponsored Programs, 10 years.

Walter G. Fisher of Dorchester, Bitter National Magnet Laboratory, 15 years.

Ruth S. Goodwin of Cambridge, Registrar's Office, 37 years.

Stanley J. Gorski of Dorchester, Physical Plant, 15 years.

William B. Gove of North Scituate, Office of Sponsored Programs, 13 years.

Mason Haire of Lafayette, Calif., Alfred P. Sloan Professor in the Sloan School of Management, nine years.

John E. Hale of Greenwood, Bitter National Magnet Laboratory, 15 years.

Alexander Harding of Wollaston, Comptroller's Accounting Office, eight years.

Frances Haslett of Cambridge, Libraries, 13 years.

William Henry of Holbrook, Department of Chemistry, 21 years.

Catherine F. Henshon of Brighton, Comptroller's Accounting Office, eight years.

Gertrude C. Herald of Watertown, Comptroller's Accounting Office, 25 years.

Brainerd F. Hughes of Arlington, Libraries, 11 years.

Viola Imbriano of East Boston, Housing and Food Services, 10 years.

Harold R. Isaacs of Newton, professor in the Department of Political Science, 23 years.

Francis Jack of Cambridge, Physical Plant, six years.

Hyman Karasik of Belmont, Laboratory for Nuclear Science, 29 years.

Myer Kessler of Belmont, Information Processing Services, 24 years.

Charles P. Kindleberger of Lincoln, Ford Professor of Economics in the Department of Economics, 28 years.

Vincent Korkozas of Cambridge, Physical Plant, 12 years.

Catherine M. Landry of Wellesley, Bitter National Magnet Laboratory, 16 years.

Dorothea Lane of Belmont, Center for Space Research, 10 years.

Alice F. Lawler of Arlington, Physical Plant, 10 years.

Richard C. Lord of Milton, professor in the Department of Chemistry, 30 years.

Kenneth L. MacKenzie of Winchester, Laboratory for Nuclear Science, 14 years.

Humphrey J. Mahoney of Arlington, Physical Plant, five years.

James J. Mahoney of Belmont, Physical Plant, 18 years.

William T. Martin of Cambridge, professor in the Department of Mathematics, 40 years.

Daniel L. McCall of East Boston, Physical Plant, eight years.

Thomas J. McKenney of Jamaica Plain, Housing and Food Services, 11 years.

Roy G. Milley of Arlington Heights, Department of Civil Engineering, 33 years.

Charles G. Norton of Dorchester, Libraries, eight years.

Horace Ohm of Marblehead, Research Laboratory of Electronics, 25 years.

Angelina A. Petralia of Somerville, Physical Plant, 14 years.

Glenville A. Phillips of Somerville, Housing and Food Services, 30 years.

Leyland A. Phillips of Middleton, Laboratory for Nuclear Science, six years.

Vincent L. Power of Holliston, Campus Patrol, 16 years.

Herbert C. Preble of Arlington, Physical Plant, seven years.

Mary V. Prescott of Cambridge, Department of Chemistry, 21 years.

Gerald M. Reed, Jr., of Squantum, Department of Athletics, 40 years.

Brandon G. Rightmire of Belmont, professor in the Department of Mechanical Engineering, 41 years.

Cecil G. Saunders of Roxbury, Housing and Food Services, 12 years.

Robert F. Scofield of Melrose, Physical Plant, 15 years.

Jane T. Shapira of Cambridge, Department of Chemistry, 20 years.

Ida G. Shapiro of Waban, Medical Department, 13 years.

C. Warren Smalzel of Cohasset, Resource Development, 12 years.

William Speer of Cambridge, Office of the Dean for Student Affairs, 22 years.

Michael Spergiuro of Medford, Physical Plant, nine years.

Annette Stone of Medford, Department of Biology, 11 years.

William V. Tennis of Cambridge, Physical Plant, nine years.

Daniel F. Tobin of Cambridge, Physical Plant, four years.

Fred Toon of Weymouth, Physical Plant, 25 years.

Silvio N. Vitale of Saugus, Department of Athletics, 27 years.

Earl Walters of Peabody, Physical Plant, 19 years.

Evelyn P. Wiggin of Somerville, Comptroller's Accounting Office, 14 years.

Carroll L. Wilson of Seekonk, Mitsui Professor in Problems of Contemporary Technology in the Sloan School of Management, 15 years.

Walter Wrigley of Wollaston, professor of instrumentation and astronautics in the Department of Aeronautics and Astronautics, 30 years.

Ethel Wyatt of Malden, Summer Session Office, eight years.

William J.A. Zakur of Waltham, Laboratory for Nuclear Science, 24 years.

LINCOLN LABORATORY

Albert H. Berube of Boston, Group 11, 24 years.

Margaret E. Brennan of Concord, Group 18, 22 years.

Lewis G. Coonrod, Jr., of Lynnfield, Group 72, 29 years.

Edward Corbett of Brewster, Group 11, 22 years.

Fausto G. DeSantis of Westwood, Group 72, 24 years.

Edward T. Gallagher of Maynard, Group 11, 23 years.

Arthur Goodfellow of Ipswich, Group 11, 24 years.

Russell Haglund of Arlington, Group 96, eight years.

Edward J. Hamilton of Chelmsford, Group 11, 12 years.

Alice R. Haydon of Sandwich, Group 16, 13 years.

Gordon E. Holland of Needham, Group 18, 22 years.

John Keenan of Swanton, Vt., Group 72, 23 years.

Timothy F. Lynch of Lexington, Group 16, 10 years.

Carolyn A. Mawdsley of Woburn, Group 55, 23 years.

Joseph Mindel of Gwithersburg, Md., Director's Office, 13 years.

Florence Morrison of Sudbury, Group 11, 15 years.

Grady J. Padgett of Atlanta, Ga., Group 15, 12 years.

Harland C. Raddin of East Wolfeboro, N.H., Group 17, 18 years.

Albert Russell of Lexington, Group 11, seven years.

James Russell of Georgetown, Group 11, 19 years.

Alice J. Ryer of Winchester, Group 73, eight years.

Albert Sankus of Woburn, Group 11, 18 years.

June E. Slader of Arlington, Division 7, 24 years.

William L. Spiers of Lexington, Group 11, 25 years.

Frank Strovink, Jr., of Methuen, Group 12, 24 years.

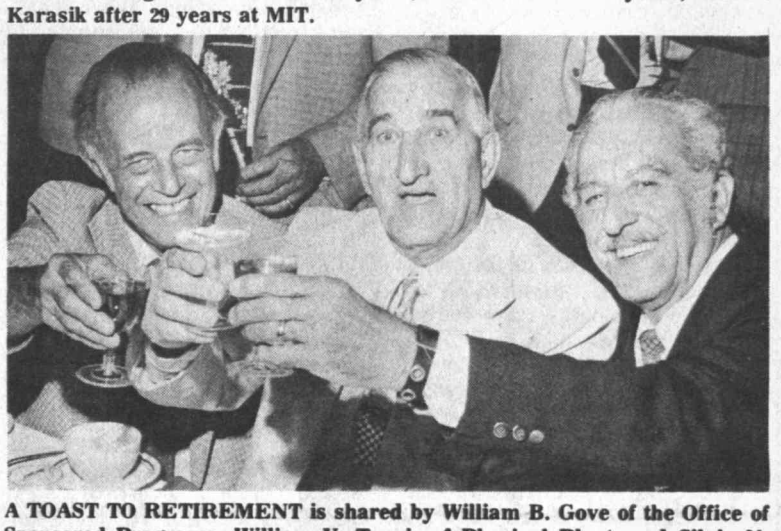
Arlene H. Wall of Arlington, Group 13, 24 years.

Charles F. Wills of Bedford, Group 11, 23 years.

Harland F. Wing of Burlington, Group 12, 15 years.

CHAMPAGNE IS SERVED to Catherine M. Landry of the National Magnet Laboratory and Carolyn A. Mawdsley of Group 55 at Lincoln Laboratory by Quarter Century Club president Jeri Whitman of Draper Laboratory. Mrs. Landry is retiring after working at MIT for 16 years, Mrs. Mawdsley, after 23 years.

SHARING A LIGHT MOMENT are Francis Jack, Daniel F. Tobin, both of Physical Plant, and Hyman Karasik of the Laboratory for Nuclear Science. All are retiring—Mr. Jack after six years, Mr. Tobin after four years, and Mr. Karasik after 29 years at MIT.



A TOAST TO RETIREMENT is shared by William B. Gove of the Office of Sponsored Programs, William V. Tennis of Physical Plant, and Silvio N. Vitale of the Department of Athletics. All are retiring—Mr. Gove after 13 years, Mr. Tennis after nine years, and Mr. Vitale after 27 years at MIT.

GARDENIA CORSAGE is pinned to wife Ruby's dress by Glenville A. Phillips who is retiring after working at Housing and Food Services for 30 years, most recently in McCormick Hall.

AUTOGRAPHS ARE SIGNED (left) by John Kelleher of Student Center Library, Frank Strovink, Jr., of Group 12 at Lincoln Laboratory, and Arthur Goodfellow of Group 11 at Lincoln Laboratory, for book owner Charles G. Norton, of Student Center Library. Both Mr. Strovink and Mr. Goodfellow are retiring after working 24 years at Lincoln Lab; Mr. Norton, after working eight years in the Libraries.

ENGAGED IN ANIMATED CONVERSATION (above) are Alice R. Haydon of Group 16 at Lincoln Laboratory and Frances Haslett, Student Center Librarian. Both are retiring after 13 years service to MIT.

—Photos by Calvin Campbell

Promising Solar Energy Converter Developed Here

By WILLIAM T. STRUBLE
Staff Writer

A solar energy converter with potential for providing supplemental electricity and hot water for homes and institutions on a cost-competitive basis was announced last week by scientists and engineers at MIT.

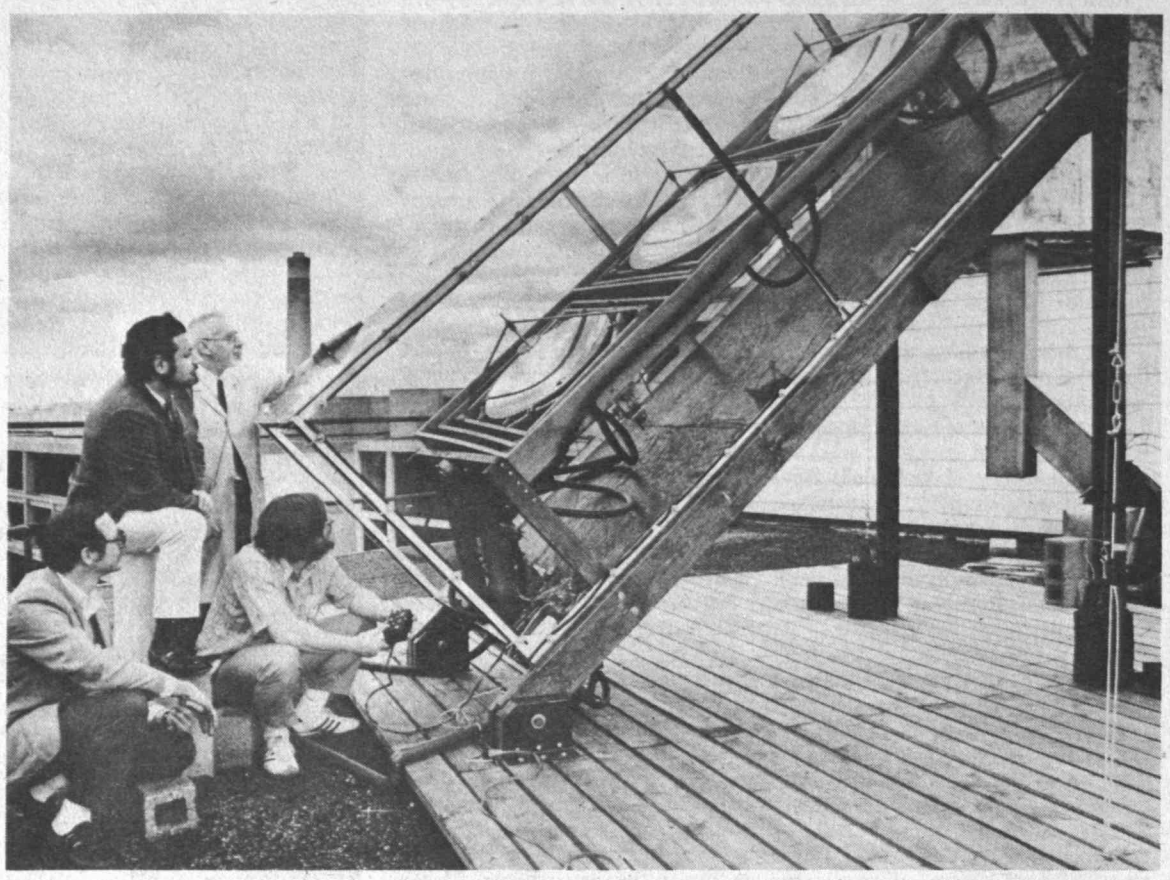
Reporting during MIT's Technology Day, Robert I. Frank and Professor Roy Kaplow described a model of a collector system that uses mirrors to concentrate sunlight—by a factor of approximately 500 to 1000—onto a solar cell (or photovoltaic cell) to produce electricity. The concentration of light reduces the area of cells required and hence the cost of the cells by the same factor.

The electrical output of a single cell would increase approximately in proportion to the light intensity, were it not for losses in cell efficiency due to increased operating temperature. These losses can be reduced by cooling the cell with water and the water heated in this process can be used either directly or for space conditioning.

Thus the system is designed to produce both electrical and thermal energy and to yield cost benefits from the combination.

The on-going research is sponsored by the National Patent Development Corp., an international firm that carries out research, development, and manufacture of a variety of high-technology products for medicine and industry. Patent applications have been filed on various aspects of the system under an arrangement whereby MIT would hold the patents and NPDC would have first option as exclusive licensee.

The near-term goal of the project is to develop a system which will supplement energy from conventional sources and be able to compete in energy cost with an all-electric house in an area where there are about 2000 hours of full sunshine per year (which includes a major portion of the United States). The 4-by-12-foot operational model has been constructed to obtain performance data under working conditions, to facilitate optimization of the system design details and components, and to provide other data relevant to accurate economic calculations, including manufacturing costs.



SOLAR ENERGY CONVERTER developed at MIT has design features which allow adequate accuracy in tracking the sun without requiring precise mechanical components, strict dimensional stability of the structural parts, or critical on-site alignments. Modular system permits units of different capacity to be assembled out of standardized components. With model on roof on MIT's Bldg. 24 are (foreground) Robert I. Frank, research associate, and Jerry L. Crutcher, MIT senior. Standing are Professor Roy Kaplow, principal investigator, and Richard Ploss, research staff member. *—Photo by Calvin Campbell*

The solar photovoltaic conversion system, although not yet ready as a product, is "an interesting and fruitful direction" for harnessing solar energy and lends itself to inexpensive manufacturing techniques, according to Dr. Kaplow, Professor of Materials Science in the MIT Department of Materials Science and Engineering.

"Of particular importance are design features which allow adequate accuracy in tracking the sun without requiring precise mechanical components, strict dimensional stability of the structural parts, or critical on-site alignments. The modular design of the system is also advantageous, since it allows different capacity units to be assembled out of standardized components, depending on the requirements," Professor Kaplow said.

Working on the project with Professor Kapolw are Mr. Frank, Research Associate in Materials Science and Engineering; Dr. Chenming Hu, Assistant Professor of Electrical Engineering; Mr. Richard Ploss, Research Staff, Department of Materials Science and Engineering; James K. Carney, of Lake Forest, Ill., a graduate student in Electrical Engineering and Computer Science; John M. Parsey, Jr., of Terre Haute, Ind., a graduate student in Materials Science and Engineering; Jerry L. Crutcher, of Somerville, a senior in Architecture, and Kwing F. Lee of Hong Kong, a senior in Physics. Dr. John Troll of NPDC is providing liaison with the sponsors.

The MIT experimental model, mounted on the roof of MIT's Bldg. 24, consists of the 4-by-12-foot rack containing three concave mirrors. Each primary mirror focuses sunlight onto a small convex mirror which in turn focuses the light back through a hole in the primary mirror. This highly concentrated beam then impinges on the photovoltaic cell.

The mirrors are individually supported on a double gimbal arrangement so that they can be rotated about two perpendicular axes for tracking. Each rack is rotated daily about an axis in its plane so that it tracks the sun in its daily motion. The three-mirror rack modules can be combined to form multi-rack assemblies for greater output.

In the present system, a heat transfer fluid is passed through conductive blocks on which the photovoltaic cells are mounted. This serves both to maintain a temperature which is suitable for efficient cell operation, and to raise the temperature of the heat transfer medium. Thus, the thermal energy in the transfer fluid can be used for heating water or for space conditioning.

"It is not our present purpose to collect and convert as much sunlight as possible," Professor Kaplow said, "but to test and optimize the individual components and system integration." For the time being, electrical energy from the MIT model will be stored in batteries and thermal energy will be stored in a well-insulated water tank.

An initial installation of such a system, however, might well be in a hospital or industrial plant, which would consume all energy as produced without need for storage, Professor Kaplow suggested.

Photovoltaic solar cells have been in use for many years as the predominant source of power for satellites throughout the U.S. space program.

As a method of terrestrial utilization of solar energy, they offer the advantages of simplicity of a one-step process, the potential reliability of a solid state system, few operating costs other than routine maintenance, and minimum environmental contamination or safety hazards.

But the main obstacle to the immediate practical utilization of photovoltaic solar energy conversion is the extremely high cost of producing solar cells. The cost of deployed silicon cells is about $10 per peak watt of electric power, which is equivalent to about $1.50 per kilowatt-hour of electricity when averaged over the estimated life of these devices. In comparison, cost of electricity from oil-fired hydroelectric or nuclear power plants is about $.02 to $.04 per kilowatt-hour.

The MIT solar converter system, which concentrates sunlight on comparatively few solar cells and is otherwise designed to achieve minimum costs, is an attempt to break this economic barrier.

The report on the solar converter system was made during one of the Technology Day seminars in which new changes taking place in energy technology and medicine were described for some 2,000 MIT alumni and their families.

Scrimshaw

(Continued from page 1)

committee and the Subcommittee on Health to assess the food and nutritional status of Egypt, India, Pakistan, Bangladesh, and the Philippines.

He is now leading a World Health Organization (WHO) Study Team to determine the feasibility of establishing additional centers for research and training in tropical medicine in Southeast Asia. Later this month, he will attend the Council Meeting of the new United Nations University in Tokyo as Senior Advisor to its Program on World Hunger.

Professor Scrimshaw has studied a wide range of problems, including the physiology of development, nutritional factors in pregnancy, protein-calorie malnutrition, endemic goiter, protein and amino acid metabolism and requirements, nutrition and infection, and other aspects of clinical and public health nutrition.

Some of his recent publications include a reevaluation of the minimum safe protein requirements of human beings; studies of special diets designed to protect seriously ill patients from debilitating protein losses; and evaluations of supplemental milk programs for nonwhite children, many of whom had been thought to be unable to utilize milk sugar. He has also investigated the use of unconventional foods as supplements to traditional agricultural sources.

As the first Director of INCAP, he was responsible for the development by INCAP of Incaparina, a low-cost vegetable mixture for infant and child feeding, and Bal Ahar, a similar mixture that has been widely used for relief and child feeding programs in India. Dr. Scrimshaw also has participated in attempts to develop single-cell proteins from agricultural wastes or petroleum hydrocarbons into food supplements for animals and people.

In 1972, he received MIT's first James R. Killian, Jr., Faculty Achievement Award, which recognizes "extraordinary professional accomplishments" by members of the MIT faculty. He was cited as "not only a researcher of extraordinary accomplishment, but also a distinguished administrator and teacher, a scientist whose career exemplifies the ideal of science as a search for human answers to the most basic of human needs."

Professor Scrimshaw was born in Milwaukee, Wis., in 1918. He received his Bachelor of Arts Degree in 1938, from Ohio Wesleyan University, where he received highest honors in zoology and was elected to Phi Beta Kappa. He earned his Master of Arts Degree in biology in 1939 and his doctoral degree in physiology in 1941, both at Harvard University, and his M.D. degree with honors in 1945 at the University of Rochester School of Medicine and Dentistry. He earned his Master's Degree in Public Health from Harvard University, magna cum laude, in 1959, while on leave from INCAP. He has served as Adjunct Professor of Public Health Nutrition at Columbia University and is Visiting Lecturer on Tropical Public Health at the Harvard School of Public Health.

Dr. Scrimshaw serves on many advisory committees to the National Academy of Sciences, governmental departments, the United Nations and its specialized agencies, as well as several foundations. He is currently Chairman of the WHO Advisory Committee on Medical Research and was Chairman of the Protein-Calorie Advisory Group of the United Nations System from 1970 until 1973. He also served as Chairman of the Malnutrition Panel of the United States-Japan Cooperative Medical Science Program from 1966 until 1974 and is currently a member of the US Delegation to this program. For five years he was Chairman of the International Centers Committee for Medical Research and Training of the National Institutes of Health, and is Chairman of the International Nutrition Programs Committee of the Food and Nutrition Board of the US National Research Council.

His honors include: the Meade-Johnson Prize (Rochester Academy of Medicine, 1947), the Osborn-Mendel Award (American Institute of Nutrition, 1960), the International Award (Institute of Food Technologists, 1969), the Joseph Goldberger Award in Clinical Nutrition (American Medical Association, 1969), the 1969 University Citation to Alumni (University of Rochester), the Award for Excellence in Promoting and Protecting the Health of People (American Public Health Association, 1974), the McCollum Award (American Society of Clinical Nutrition, 1975), and the Conrad A. Elvehjem Award (American Institute of Nutrition, 1976). Dr. Scrimshaw is a memeber of the Order of Rodolfe Robles (Government of Guatemala, 1961). He was awarded the honorary degrees of Doctor of Public Service by Ohio Wesleyan University in 1961, and Doctor of Science by the University of Rochester in 1974.

Dr. Scrimshaw is a member of numerous associations, including: the American Association for the Advancement of Science, American Board of Nutrition, American Chemical Society, American College of Preventive Medicine, American Epidemiological Society, American Institute of Nutrition, American Physiological Socety, American Society for Clinical Nutrition, American Society for Tropical Medicine and Hygiene, Institute of Food Technologists, International Epidemiological Association, and the National Academy of Sciences and the NAS Institute of Medicine.

He is First Vice President of the International Union of Nutrition Sciences and a fellow of the American Academy of Arts and Sciences. He is also an honorary member of several professional associations in Central America.

Dr. Scrimshaw is the author of more than 400 scientific articles on various aspects of human and animal nutrition, agricultural and food chemistry, and public health, and is the author or editor of five books.

Class of '51

(Continued from page 1)

tributed $480,200 collected from 262 members over the past five years.

The Class of 1936 gift was presented by Edward L. Dashefsky of Newton Centre, Mass., the reunion gift chairman. The president of the class is Anton E. Hittl of Pleasantville, N.Y.

The Class of 1926 gift was presented by Thornton W. Owen of Washington, D.C., the reunion gift chairman. The class president is David A. Shepard of Greenwich, Conn.

Owen announced that $200,000 of the Class of 1926 gift was being used to establish a scholarship fund in honor of Dr. C. Stark Draper, a member of the class "whose efforts made possible exploration of outer space." Dr. Draper is Institute Professor and professor of aeronautics and astronautics, emeritus. His secretary, Peggy Mooney, donned an astronaut's suit to deliver a commemorative check to President Wiesner.

A portion of the gifts from the classes of 1926 and 1951—nearly $100,000—will go toward the reconstruction and expansion of the MIT Sailing Pavilion on the Charles River. Other gifts, including $30,000 from the Class of 1917, have provided $130,000 to complete the funding for the $285,000 project.

In addition, a fourth reunion class, the Class of 1916, announced at its 60th reunion a 10-year gift total of $1,603,000.

Howard L. Richardson of New Britain, Conn., of the Class of 1931, outgoing president of the Alumni Association, said that the Alumni Fund for 1976—made up of gifts from all alumni—is 22 percent ahead of last year and at an all-time one-year high of more than $2,980,000.

All the gifts will go towards the $225,000,000 goal of MIT's five-year Leadership Campaign launched in April, 1975. The fund-raising campaign has brought in $77.5 million thus far, or more than a third of the total.

MIT in Olympics

Two MIT rowers have won berths on the US Olympic team.

John G. Everett, a senior in civil engineering from South Easton, Mass., will race in the eight-man shell. Gary G. Piantedosi, a member of the Class of 1976, from Burlington, Mass., won a place in the four-man crew without coxswain.

Their first races at the Olympics in Montreal will be July 18, according to Jack H. Frailey, MIT director of student financial aid and the manager of the US men's rowing team.