

Alumni to Hear Discussion On Technological Future

An estimated 3,000 MIT alumni and their families will be on campus Friday (June 9) for the annual Technology Day program.

In a program at Kresge Auditorium entitled "Learning," MIT researchers will describe work they are doing as they seek ways of using technology to improve society. MIT Provost and Institute Professor Walter A. Rosenblith will be the moderator for both the morning and afternoon sessions, which are open to the MIT community.

Some of the subjects to be discussed are urban technology, the impact of computers on people, the ocean floor, speech processing and the synchronization of computers and television.

The Technology Day program is the highlight of MIT's annual

alumni week activities, which include class and departmental reunions both on and off campus and the traditional Tech Night at the Boston Pops on Thursday (June 8).

The Friday events begin with a continental breakfast for alumni and their families in the Sala de Puerto Rico at the Student Center from 8 to 9am. There will be a memorial service in the MIT chapel from 11:55am to 12:25pm, with Father Robert Moran, C.S.P., Catholic chaplain, officiating.

The reunion classes—the 50th reunion class of 1928, the 40th of 1938 and the 25th of 1953—will present their class gifts at a luncheon in the Rockwell Cage beginning at 12:30pm.

The day will conclude with a reception from 5 to 6pm in the Alumni Center (Building 10).

Oil Industry Consultant To Head Alumni Association

Joe F. Moore, president of Bonner & Moore Associates, Inc., Houston, Tex., international consulting firm to the petroleum and petrochemical industries and a 1952 graduate of MIT in chemical engineering, has been named president of the 65,000-member MIT Alumni Association for the 1978-79 year beginning July 1.

Mr. Moore, long active in MIT alumni affairs in the Houston area and nationally, becomes the first Houstonian and the third Texan to head the MIT Alumni Association since its founding 103 years ago. Edward O. Vetter of Dallas, Tex., Class of 1942, former executive vice president of



Mr. Moore

Texas Instruments, Inc., and Undersecretary of Commerce under President Gerald Ford, was association president in 1976-77 and Cecil H. Green, also of Dallas, Class of 1923, co-founder of Geophysical Services, Inc., predecessor company to Texas Instruments and now an honorary director of TI, was president in 1968-69. Another alumnus from the southwest, Breene M. Kerr of Oklahoma City, Okla., Class of 1951, was president in 1972-73.

Mr. Moore will be formally installed as the 84th president of the

association at MIT's 1978 Technology Day, Friday, June 9, following MIT's 112th Commencement Exercises Monday, June 5. On Technology Day, MIT's homecoming, more than 2,000 alumni and their families will converge on campus for reunions and a program of scholarly presentations by faculty members on recent scientific and technological advances in areas as diverse as ocean engineering and computer-based speech processing. Mr. Moore will be formally installed by the outgoing president, Norman B. Leventhal of Newton, Mass., Class of 1938, president of the Beacon Companies of Boston.

Mr. Moore heads a list of seven distinguished alumni who have

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MIT, Harvard Public Health To Join UNU Food Program

A collaborative agreement to expand research and scholarship efforts in priority areas of world food and nutrition policy has been signed by MIT, the Harvard School of Public Health (HSPH), and the United Nations University (UNU).

Representatives of the institutions signing the agreement were Dr. Walter A. Rosenblith, MIT provost; Dr. Howard H. Hiatt, dean of the Harvard School of Public Health; and Dr. James M. Hester, rector of UNU.

The United Nations University, formed in 1975-76 and with headquarters in Tokyo, Japan, is an autonomous organ of the General Assembly of the United Nations and consists of an independent, non-political international community of scholars concerned with global problems of human survival, development and welfare.

The multi-university effort will extend the work of the World Hunger Program of UNU.

No Tech Talk

Tech Talk will not be published on Wednesday, June 21. The Institute Calendar in next week's paper (June 14) will cover the period from June 14 through July 2. Deadline for entries to the Calendar, Institute Notices and Classified Ads is noon Friday, June 9.



LOOKING OUT at a sea of happy faces—both graduates and their families—makes for a pleasurable occasion for faculty members at Commencement. See other pictures on page 8.

Changing Times Require Caring, Wiesner Tells '78 Graduates

The president of MIT said Monday morning that the estrangement many people feel in these rapidly changing times—from their fellow human beings and from their social institutions—is dangerous and urged graduates at MIT's 112th Commencement Exercises to counteract the trend by making a special effort at caring and understanding.

President Jerome B. Wiesner challenged the graduates to begin by making their own places in the world more humane by trying to "replace suspicion with understanding and self-centeredness with friendship."

"Institutions are people," he said, "and caring people make supportive, comfortable institutions."

President Wiesner was the principal speaker at exercises where 781 graduating seniors received bachelor degrees and another 672 graduate students received advanced degrees, including 172 who

received doctor of science and doctor of philosophy degrees. By tradition, the president of the Institute delivers the Commencement address.

President Wiesner devoted his address to "caring—caring for people, caring for social groups, caring for institutions."

"We live in a time of extraordinary turmoil, in which there is much fear and suspicion and real danger, and in which confrontation

The full text of Dr. Wiesner's Commencement address is printed on page 5.



LEADING OFF the academic procession was Norman B. Leventhal of Newton, carrying the MIT mace, outgoing president of the 65,000-member MIT Alumni Association.

has become too much the normal style of dialogue," he said. "Issues move swiftly to the courts, bypassing traditional discussion and compromise, common understanding, and trust. Differences are accentuated and common goals and common humanity are difficult to keep in sight, making many people feel estranged from both their colleagues and their institutions."

"To counteract this dangerous trend, each of us needs to make a special effort at caring and understanding."

Major contradictions exist,

(Continued on page 4)

MIT-WHOI Joint Program Marks Tenth Anniversary

Ten men and women who received PhDs at MIT's 112th Commencement Exercises were invested with distinctive red, white and blue-striped hoods that mark them as graduates of a joint program administered by MIT and the Woods Hole Oceanographic Institution on Cape Cod.

This year is the 10th anniversary of the graduate program, which has awarded a total of 79 degrees—11 of them professional engineer's degrees in oceanographic engineering and the rest doctorates (PhDs and ScDs) in oceanography and biological oceanography.

The program, combining the intellectual and physical resources

of two major teaching and research institutions, offers graduate study for students with special interests in biological oceanography, chemical oceanography, marine geology, marine geophysics, oceanographic engineering and physical oceanography.

The graduate programs are administered by committees drawn from the faculty and staff of both institutions, and involve several departments at MIT—Biology, Earth and Planetary Sciences, Meteorology, Chemical Engineering, Civil Engineering, Electrical Engineering and Computer Science, Materials Science and Engineering, Mechanical Engineering, and Ocean Engineering.

Graduates receive a joint degree from MIT and WHOI. It is one of the few joint degree programs anywhere, and perhaps the only one, where graduates receive a single diploma from two institutions.

This year's graduates, all of whom received PhDs, are: Roger D. Flood, Wilford D. Gardner, Gwen J. Krivi, Edward P. Laine, Steven J. Leverette, Charles G. Paris, Mary I. Scranton, Kenneth B. Theriault, John S. Tochko and Kevin M. Ulmer.

HSSP Seeks Summer Teachers

The High School Studies Program, part of MIT's Educational Studies Program, is again looking for volunteer teachers for its summer term.

Now in its twenty-second year, the program this term will give students and teachers the opportunity for a variety of schedules by operating on Tuesday, Wednesday and Thursday evenings, for four or

six weeks of classes, meeting for one, two or three times each week. Both students and staff members from the MIT community are invited to join the Educational Studies Program faculty by teaching a course in almost any subject. Further information and teaching applications may be obtained by calling x3-4882 or visiting the Educational Studies Program, Rm. W20-467.

23 Commissioned at Tri-Service Rite

For seven of the 23 MIT students who received military commissions Friday, June 2, it was a family affair. The officers who administered the oaths were their fathers.

For Curtis H. Fennell of Miami it was a first. He was commissioned a Marine Corps second lieutenant, the first MIT student to enter the Marines through the ROTC program.

For Capt. Kevin J. O'Toole, head of the Navy ROTC program at MIT, it was his last commissioning ceremony. He is retiring from the Navy later this year.

The commissioning parents and their children were: Army Col. Albert B. Luster and Sheila L. Luster of Philadelphia; Army Col. Thomas R. Ostrom and Barbara K. Ostrom of Belair, Md.; Army Col. Frederick V. Banse-Fay (ret.) and Ralph Peer Banse-Fay of Jamestown, N.Y.; Army Lt. Col. Beecher L. Licklider (ret.) and Robert A. Licklider of Davenport, Iowa; Navy Capt. Marvin L. Duke and Lawrence I. Duke of Toyko; Air Force Maj. J.A. Carretto and Joseph Carretto, Jr., of Dayton, Ohio; and Navy Cmdr. Donald M. Harlan (ret.) and Donald M. Harlan, Jr., of Woodbridge, Conn.

Luster, Ostrom, Banse-Fay, Licklider, Carretto and Fennell were commissioned second lieutenants. Duke and Harlan were commissioned ensigns.

MIT is one of only a few schools offering programs involving all major branches of military service.

Col. John S. Kark, professor of military science at MIT, administered the oath of office to Army cadets; Capt. O'Toole to the Navy midshipmen; Col. William R. Trott, professor of aerospace studies at MIT, to the Air Force cadets; and Capt. D.C. Inghram, of the Marine Corps Boston Recruiting District, to the midshipman



FIRST MIT MARINE to be commissioned through the ROTC program was commissioned Friday, June 2. He is Curtis H. Fennell (right) of Miami, shown here with Capt. D.C. Inghram, who administered the commissioning oath.

—Photo by Calvin Campbell

who entered the Corps.

Commissions were presented by Lt. Gen. Raymond B. Furlong, commander of the Air University at Maxwell Air Force Base, Alabama.

The invocation was given by the Rev. Robert Moran, Catholic religious counselor at MIT, and the benediction by Air Force Chaplain John R. Blair.

MIT Provost Walter A. Rosenblith and MIT Chancellor Paul E. Gray took part in the ceremony. Professor Rosenblith introduced the guests and Chancellor Gray introduced the speaker, Gen. Furlong.

Other students who received commissions were: Army—John D. Anderson, Washington, Pa.; Bernard C. Kempinski, Sayville, N.Y.; Kathy L. Kilmeyer, Owatonna, Minn.; Robert W. Milne, Littleton, Colo.

Navy—Gene E. Allen, Girard, Pa.; George M. Drakeley III, Sufield, Conn.; Daniel L. Fischbach, South Attleboro, Mass.; Cheryl C. Hasimoto, Kaneohe, Hawaii; John E. Jaynes, Stillwater, Okla.; Robert M. Meléndez, Wilmington, Calif.; Mark J. Munkacsy, Cherry Hill, N.J.

Air Force—Craig W. Hendrix, Silver Spring, Md.; Richard K. Jennings, Wilbraham, Mass.; Karen M. Knoll, Cranbury, N.J.; Robert S. Wolf, Woburn, Mass.

Oil Industry Consultant to Head Alumni Association

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been named to new Alumni Association offices and three others who have been nominated by the association to be members of MIT's Corporation, the Institute's governing board.

Harl F. Aldrich, Class of 1947, senior principal and president of Haley and Aldrich, Inc., Cambridge, Mass., and Charles K. Holmes, Jr., Class of 1949, vice president of Coca Cola U.S.A., Atlanta, Ga., have been named to two-year terms as association vice presidents and George M. Keller, Class of 1948, vice president of Standard Oil Co. of California, San Francisco, has been named to fill a one-year vacancy as vice president left by Mr. Moore's elevation to president.

Four other alumni have been named to two-year terms as association directors. They are Marvin C. Grossman, Class of 1951, president of Electronics Marketing, Inc., Auburndale, Mass., representing the association's District 1; Emily V. Wade, Class of 1945, chairman of the State-Industry Sea Grant Council, Boston, District 2; S. James Goldstein, Class of 1946, managing partner of James Goldstein and Partners, Milburn, N.J., District 4; and Robert F. Calman, Class of 1967, chairman and director of General Waterworks Corp., Philadelphia, District 5.

Those nominated for five-year terms on the MIT Corporation include Paul Hotte, Class of 1942, vice president (investor relations) of P.R. Mallory and Co., Inc., Indianapolis, Ind.; Stanley M. Proctor, Class of 1943, founder and president of Stanley M. Proctor Co., Cleveland, O.; and Dr. Emily L. Wick, dean of the faculty and professor of chemistry at Mount Holyoke College, South Hadley, Mass.

As president, Mr. Moore will serve as a member of the Corporation and be chief executive for more than 100 MIT clubs through-

out the world. He will direct an association staff of more than 50 persons in Cambridge and at the MIT Alumni Center in New York City and a force of some 4,500 volunteer alumni workers throughout the world. He will be responsible for planning and conducting two major alumni meetings a year—Technology Day in June and the annual Alumni Officers Conference in the fall; supervise publication of *Technology Review*, the national journal of science and technology published at MIT; and oversee operations of the MIT Alumni Fund. Another of his duties will be to serve as chief marshal and bearer of the golden MIT mace in the academic procession at MIT's 1979 Commencement Exercises.

A native of Duncan, Okla., Mr. Moore was a co-founder of Bonner & Moore and since 1956 has directed the organization's consulting activities in refining and petrochemical processing and economics for major petroleum and petrochemical companies in the US, Japan, the Middle East, South America and Indonesia. The organization includes a management science software group and a computing service group.

Mr. Moore has been an MIT Alumni Association vice president since 1977, a director 1975-77, on the Alumni Advisory Council 1975-77, and on the Club Advisory Board 1970-73. As a member of the Regional Conferences Committee 1974-75, he was awarded the Alumni Association's 1975 Presidential Citation for leadership in an MIT regional conference in Houston on US energy policy. In addition, he is a member of the MIT Corporation Development Committee and is Houston area chairman for the MIT Leadership Campaign, a five-year program to marshal \$225 million in new private support for the Institute.

Mr. Moore has been a director of the MIT Club of South Texas since 1972, was its president 1970-72, vice president 1968, secretary 1966-68 and treasurer 1964-66.

Collamore-Rogers Two Women Win '78 Fellowships

Two women graduate students at MIT, Patricia Foley, a candidate for the master's degree in technology and policy, and Susan West, candidate for the MS in nuclear engineering, have been awarded Collamore-Rogers Fellowships for further graduate study at MIT. The fellowship pays full tuition plus an annual stipend of \$2925.

Ms. Foley received the SB in civil engineering from MIT in 1976. As a doctoral candidate, she plans to continue the research she is doing presently—measuring and analyzing the effects of US government actions on the domestic copper industry.

Ms. Foley's interests include politics and journalism—she was assistant business manager of *The Tech* as an undergraduate—and sports, with participation in intramural softball, crew, water polo, soccer and ice hockey.

Ms. West, who received the AB in physics from Sweetbriar College in 1975, began work in February, 1978, toward her doctorate—an evaluation of an irradiation method which, while using currently available fission reactors, will attempt to simulate the radiation conditions expected in fusion reactors.

She is involved in the Tech Catholic Community folk group and liturgy planning group and is a member of the student chapter of the American Nuclear Society. Her interests also include folk guitar, hiking, camping and travel.

The Collamore-Rogers Fellowship was established in 1973 as part of a continuing program to attract more women to graduate school at MIT. In past years, one fellowship has been awarded annually. That two fellowships were granted this year results from the success of the program, as the number of highly qualified candidates for the fellowship has increased.

John Fitch to Direct Media Continuing Education Project

John T. Fitch, director of technology-based educational development and marketing at the MIT Center for Advanced Engineering Study (CAES), has been appointed executive director of the Association for Media-based Continuing Education for Engineers (AMCEE).

Mr. Fitch will take a year's leave of absence from MIT, beginning July 10, to accept the appointment.

Dr. Myron Tribus, professor of engineering and director of CAES, said Richard Noyes, a marketing consultant to the CAES self-study program for the last two years, will take Mr. Fitch's place during his leave of absence.

AMCEE, a two-year-old consortium of 17 engineering universities—including MIT—was founded to "increase the national effectiveness in the continuing education of engineers." Its headquarters is in Atlanta on the Georgia Tech campus. Mr. Fitch has been the MIT representative to AMCEE and has served on its board for the last two years.

The Alfred P. Sloan Foundation provided initial support for AMCEE.

"Among our most pressing goals," Mr. Fitch said, "is the

development of a national Industrial Advisory Board which can work with the AMCEE board in the co-management of continuing education for engineers. We are also looking forward to our first catalog of courses, listing offerings from all 17 institutions. Many of the member institutions have never offered subjects via videotape, and almost none of them has offered subjects outside its own areas."

MIT subjects to be listed in the AMCEE catalog include several now offered in the Tutored Video Instruction (TVI) program at CAES. This program is under the direction of Dr. Jack Lynch, who will temporarily replace Mr. Fitch as MIT's AMCEE representative.

Dr. Lionel V. Baldwin, dean of engineering of Colorado State University and AMCEE chairman, announced Mr. Fitch's appointment. He said that Mr. Fitch's "willingness to fill this key position in the coming year is sincerely appreciated by all who are working to make the AMCEE dream a reality. Please convey our most sincere thanks to Dr. Myron Tribus and the other MIT administrators whose cooperation has been so essential to this arrangement."

Mount Holyoke Cites Kistiakowsky

Dr. Vera Kistiakowsky, professor of physics, was recognized last week by her alma mater, Mount Holyoke College, with the award of an honorary ScD degree at Commencement exercises.

Professor Kistiakowsky was cited for her work in the advance-

ment of women in scientific careers. In 1972 she was the organizer and first chairman of the American Physical Society Committee on Women in Physics and in 1973 she headed the National Research Council's Conference on Women in Science and Technology.

INSTITUTE NOTICES

Announcements

Transcripts with June grades included will be available from the Registrar's office the week of June 19.

Administration on Aging Dissertation Program**—The Administration on Aging offers doctoral dissertation research grants to students in a social science discipline doing graduate work directed toward the study of aging persons. Applicants must have completed, or be near completion of, all doctoral requirements other than the dissertation. Application deadline, June 16. For information contact the Graduate School Office, Rm 3-136.

Summer Orchestra at MIT**—String Players Needed. Rehearsals start June 15. Info: Sandy Ayres, x3-5717.

Tech Children's Center Nursery School Westgate**—Openings available June 12 thru July 21 and for fall session beginning Sept 11. For children 2 yrs 9 mos to 5 yrs. Info: Louise Flavin, x3-5907.

Pre-School Swim Program**—June 12-23. Classes held at 9am and 10am. Open to children ages 2 to 5 years. Contact Karen Goodall, Child Care Office, 4-144, x3-1592.

Conversation Exchange**—The MIT Wives' Group has compiled a list of international women interested in exchanging foreign language conversation for English conversation. Contact: Karen Devine, x3-2916.

Cable TV—There will be no Cable TV programming June 7 through 20.

Club Notes

Beginning sailing instruction**—every Wednesday 5:15pm at MIT Sailing Pavilion.

MIT Bridge Club**—ACBL duplicate open pairs game Thursdays, 7pm, Rm W20-473. Info: 494-8593. Admission .25.

The MIT Early Music Society**—activities for the summer include three or four short concerts. Anyone interested in playing or singing contact Susan Petrick, x3-5743; 492-2377, or David Dreyfuss, x3-7487. Rehearsals will begin immediately so call soon.

Hobby Shop**—Mon-Fri, 10am-6pm, Rm W30-031. Fees: \$10/term for students, \$15/term for community. Info: x3-4343.

Summer series racing**—Racing skipper rating required, Tuesdays and Thursdays 5:15pm. Novice racing, provisional rating required, Mondays 5:15pm throughout the summer.

T'ai Chi at MIT**—Meetings Thursdays, 4:15-6:15pm, Rm W20-407, throughout summer. Prof. E. Liu, director. All welcome.

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.

Civil Engineering
An opportunity for a student programmer to do troubleshooting of a large FORTRAN IV program which compiles and manages all data for a Demand-Responsive Transportation System in Rochester, N.Y. The student would be working with a research team in the Transportation Systems Division of the civil engineering department. Considerable programming experience required. Pay available. Contact John Montgomery, x3-7492, or 494-8779.

Coastal Engineering Field Study
A project beginning the summer of '78 is available, studying the effectiveness of a low-cost erosion device. The student will assist in sediment analysis of sand, beach profiling, data reduction, and the development of computer plotting programs. This project will require 10-20 hours per week this summer and around 10 hours per week during the coming academic year. Contact Andrew Gutman at Sea Grant, x3-7041. Pay available.

Development of Binocular Vision and Visual Motor Coordination in Humans
New techniques for measurement of binocularity and hand-eye coordination in infants and young children will be developed. A student interested in joining this work should be able to assist in the construction of test apparatus and to work with young children. Ability to do simple carpentry, electronics, and programming is also required. Pay available for the summer. Contact Prof. Alan Hein, E10-210, x3-5759.

Religious Activities

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

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Mr. Cabot

Mr. Terrell

Mr. George

Mr. Pei

Mr. Patterson

Mr. Vetter

Mr. Hotte

Mr. Proctor

Dr. Wick

Mr. Hughes

Corporation Elects, Re-Elects Ten Members at Meeting

Ten persons were elected or re-elected Monday (June 5) to the MIT Corporation. Announcement of the elections was made by Howard W. Johnson, Chairman of the Corporation.

The 95-member Corporation is MIT's governing body, or board of trustees. The 10 were elected or re-elected at the quarterly meeting of the Corporation held Monday on the occasion of MIT's Commencement Exercises.

Louis W. Cabot of Boston, chair-

man of the board of the Cabot Corporation, and Richard L. Terrell of Birmingham, Mich., vice chairman of the board of directors of the General Motors Corporation, were elected Life Members of the Corporation. Both had been serving as Members since 1974 and are active in the Committees of the Corporation.

Mr. Terrell is chairman of the National Business Committee of the five-year MIT Leadership Campaign to marshal \$225 million

in new private resources for the Institute.

Mr. Cabot served earlier as a Corporation Member in 1963-68. Mr. Cabot is the third successive generation in his family to be a Life Member. His father, Thomas D. Cabot, is a Life Member Emeritus, and his grandfather, the late Godfrey L. Cabot, also was a Life Member.

W.H. Krome George of Pittsburgh, Pa., chairman and chief executive officer of the Aluminum Company of America, and the noted architect, I.M. Pei, New York City, were elected members for five-year terms. Each served earlier five-year terms, 1972-77. Both were graduated from MIT in 1940. Mr. Pei is playing a leading role in the Leadership Campaign efforts to secure major funds for the advancement of the arts at MIT.

Ellmore C. Patterson, chairman of the executive committee of the

Morgan Guaranty Trust Co., New York City, and Edward O. Vetter, former executive vice president of Texas Instruments Incorporated, Dallas, Texas, and Undersecretary of Commerce under President Gerald R. Ford, were re-elected to five-year terms. They were first elected members in 1973. Mr. Vetter is a 1942 graduate of MIT and is co-chairman of MIT's Leadership Campaign along with Mr. Johnson, Paul F. Hellmuth of Boston, William B. Murphy of Bala Cynwyd, Pa., and J. Kenneth Jamieson of Houston, Texas.

Four newly-elected Corporation Members are:

Paul Hotte, vice president (investor relations) of the P.R. Mallory & Co., Inc., Indianapolis, Ind., also a 1942 graduate of MIT. He has been vice president of the MIT Alumni Assn., a member of several visiting committees and long an active alumni leader in the mid-west area and nationally.

Stanley M. Proctor, founder and president of Stanley M. Proctor Co., Cleveland, O., a 1943 graduate of MIT. He, too, has long been an active leader in alumni affairs, both in the Cleveland area and nationally.

Dr. Emily L. Wick, dean of the faculty and professor of chemistry at Mount Holyoke College, South Hadley, Mass. She received the PhD degree from MIT in 1951 in

chemistry. A food chemist, she taught in the Department of Nutrition and Food Science at MIT until 1973 when she was appointed dean at Mount Holyoke. She joins four other women presently serving on the Corporation.

Brian G.R. Hughes, a 1977 graduate of MIT in mechanical engineering and presently a student at the Harvard Graduate School of Business Administration. A native of Carp, Ontario, Canada, he becomes the second Canadian presently serving on the Corporation. The other is Canadian Deputy Prime Minister Allan J. Mac Eachen, a member of the MIT Class of 1953.

Mr. Hotte, Mr. Proctor and Dr. Wick were nominated to the Corporation by the National Selection Committee of the 65,000-member MIT Alumni Assn. Mr. Hughes was nominated by members of the Classes of 1976, 1977 and 1978.

Also joining the Corporation for the coming year will be Joe F. Moore of Houston, Texas, president and co-founder of Bonner & Moore Associates, Inc., international consulting firm to the petroleum and petrochemical industries and a 1952 MIT graduate who earlier this year was named 1978-79 president of the Alumni Assn. The Alumni Assn. president at MIT serves as a Member of the Corporation *ex officio*.

Pariser Appointed to New Sea Grant Education Post

Ernst R. Pariser, senior research scientist in the MIT Department of Nutrition and Food Science, has been appointed associate director for education coordination in the MIT Sea Grant Program.

Announcement of the appointment was made by MIT Provost Walter A. Rosenblith.

As director of the education focus of the Sea Grant Program, Mr. Pariser will develop MIT Sea Grant's growing program emphasis on marine and aquatic education. Education, one of three Congressionally mandated major program foci, is receiving increased Congressional support and encouragement, an orientation that the national and local Sea Grant offices feel may reflect the nation's growing awareness of the importance of the nation's water resources. The education effort will be one element along with the research and advisory elements that comprise the balanced Sea Grant College Program.

In his new capacity, Mr. Pariser, who has served as associate director for advisory services in the Sea Grant Program since he joined the staff in 1972, will work closely with MIT faculty and with public school authorities and education institutions outside MIT, to develop coordinated marine science curricula for grades kindergarten through high school and continuing through the college level.

"The appointment of Ray Pariser as associate director for education coordination marks an important step toward the realization of the Sea Grant Program long range goals," said Professor Rosenblith.

During the first two years of the program's increased emphasis on marine education, Mr. Pariser, in addition to overseeing training and education projects presently ongoing at MIT, hopes to stimulate the MIT faculty interest in marine education, and to assist them in developing marine-oriented education programs. One such project, being considered by faculty members of the Departments of Nutrition and Food Science and of Ocean Engineering, is a course in Aquaculture Management and Engineering.

The intent of marine education efforts for grades kindergarten through 12 is to try to introduce students to the phenomena of the aquatic environment and to the interrelation of water with human affairs. Sea Grant is assisting the Sea Lab, at Fort Rodman, Mass., in developing instructional materials for use in the New Bedford public school system, and eventually on a nationwide scale. Sea Lab, part of the New Bedford public school system, is a six-week summer program for students in grades 4 through 9, who are interested in learning about water and the oceans.

Sea Grant is also active in the creation of an inter-institutional undergraduate course in marine

studies, coordinated by a Marine Education Consortium, comprised of colleges and universities in the Boston area. The resulting marine education course, now being designed, may be offered at the New England Aquarium by instructors from participating institutions.

The MIT Sea Grant Program also assists private and public schools, such as the Mario Umana Harbor School of Science and Technology in East Boston, a greater Boston magnet school which MIT is assisting in curriculum development.

Dean A. Horn, director of the MIT Sea Grant Program, said Mr. Pariser's appointment represents one more advance in the development and strengthening of MIT's Sea Grant College Program. Since MIT joined the network of Sea Grant institutions in 1970, the program has played a vital role in encouraging Institute faculty and students to concentrate their research skills on solving practical problems related to ocean use.

"With Ray Pariser's years of experience in education, and his innovative and inquisitive approach to helping students of all ages understand scientific concepts, I feel he will do much to advance and fortify the program's education efforts," Mr. Horn said.

Mr. Pariser earned his BA in 1940, and his MA in 1944, both from Cambridge University, England. He worked as production manager of Turyag, A.O., in Izmir, Turkey, and also as research associate in MIT's Department of Food Technology, as director and vice president of Cardinal Proteins, Ltd., Halifax, Nova Scotia, and as chief scientist and director of engineering for Marine Resources of AVCO Corporation in New York.

He was also research chemist and private assistant to Dr. Chaim Weizmann (who was later Israel's first president) in his private laboratory in London. Mr. Pariser was program leader of the Fish Protein Concentrate Program, a research project whose history is described in a book he recently authored, *Fish Protein Concentrate: Panacea for Protein Malnutrition?* The book, which appeared in May, is published by MIT Press. He also wrote "Americans and the World of Water," in the *World of Water*, published for the national Sea Grant Program as part of its broad education effort.

For the past 18 months, Mr. Pariser was chairman of the Post-Harvest Food Loss Study sponsored by the National Academy of Science. He worked with Institute Professor Emeritus Jerrold A. Zacharias in the early 1970s to implement the Unified Science Study Program for university freshmen. He also taught and developed an undergraduate course in basic science at the Detroit Institute of Technology.

His recent research activities include a project to devise a simple, reliable method for determining cholesterol levels in fish.

Sea Grant to Move

The MIT Sea Grant College Program, which has been housed in offices in Buildings 1 and 5, is moving this week to Building E38-302 on the corner of Carlton and Main Streets. Telephone extensions will remain the same and will be connected in both places while the move is in progress.

Blum Appointed In Development

The appointment of D. Steven Blum as assistant staff writer in Proposals and Publications, Resource Planning, has been announced by Deborah J. Cohen, manager of Proposals and Publications.

Mr. Blum will help to prepare material used in support of the \$225 million Leadership Campaign, including the writing and editing of publications detailing specific campaign goals, proposals to prospective private contributors and preparation of brochures, newsletters and reports in connection with the Institute's overall development objectives.



Mr. Blum

Mr. Blum holds the BA degree in political science from Antioch College and the MA in politics from Brandeis University, where he has been enrolled in the doctoral program in the Department of Politics since September, 1974. Before enrolling at Brandeis, he was editor of *Campaign Practices Reports*, a Washington newsletter covering election law reform.

Mr. Blum and his wife, the former Jennifer Bamber, a graduate student in Mediterranean Studies at Brandeis, live in Boston.

Radcliffe Institute Appoints Perry

Dr. Ruth Perry, assistant professor of literature in the Department of Humanities, has been selected as one of 35 scholars and artists named Fellows and Research Associates of the Radcliffe Institute for 1978-79.

Dr. Perry, who will be a Fellow, will work on a biography of Mary Astell, the first English feminist who lived from 1666-1731.

MIT, Harvard Public Health To Join UNU Food Program

(Continued from page 1)

nomics, epidemiology, and tropical health. In addition, many foreign students who study at the school return to their home countries with knowledge in these fields.

Co-directors of the work to be carried out by the MIT-Harvard IFNP Program under the UNU agreement are Dr. Nevin Scrimshaw, Institute Professor and head of the MIT Department of Nutrition and Food Science, and Dr. Joe D. Wray, acting chairman of the Department of Population Sciences at the Harvard School of Public Health and also visiting lecturer in the MIT Department of Nutrition and Food Science. Dr. Scrimshaw is also senior adviser to the rector of UNU for the World Hunger Program. Coordinator for the agreement program is Dr. Barbara Underwood, associate professor of nutrition and food science at MIT.

Under terms of the agreement, the MIT-Harvard IFNP Program—working with cooperating departments at both institutions—will give UNU advanced study fellows training for research in food and nutrition policy and planning or in the evaluation of human nutritional needs. In addition, it will conduct applied, mission-oriented research in the priority areas of the World Hunger Program, and join in providing advisory and communications services to the UNU, with the goal of establishing a global network of institutions concerned with world hunger.

All UNU fellows are selected by site visits through institutions in their own countries on the basis of demonstrated competence and ability to apply their training on return to their homelands.

Teams organized by INP at MIT have worked on nutrition policy and planning projects in several nations. These projects include the development and distribution in Thailand of a new high-protein food product to treat widespread malnutrition among small children, and assistance to Chile in the development of a high-protein mix-

ture made from local products as a substitute for costly imported milk powder. The Program has also made a major study for the government of Indonesia to develop an integrated national nutrition program. Most recently the program has had staff members and graduate students working with the Planning Commission of Pakistan.

In these projects, the MIT Program has had the cooperation of individuals at Harvard University. James Austin, professor of agribusiness and marketing at the Harvard Business School, was a member of the Thailand team and was a co-director of a cooperative study of the relationship between US food policies and international food needs carried out by INP at MIT, the Harvard Business School, and the Harvard School of Public Health.

At Harvard, Dr. Peter Timmer, professor of economics of food agriculture at HSPH, has been working with the government of Indonesia to advise on an agricultural policy that will diversify crops away from dependence on rice and towards a broader food and nutrition policy. Dr. Wray has worked worldwide with major national and international agencies and institutions on problems and programs in health, nutrition and pediatrics, and was also a member of MIT's Indonesia study team.

At MIT, Dr. Lance J. Taylor, professor of economics with joint appointments in the Departments of Economics and Nutrition and Food Science, is a leading authority on the role of nutrition in international economic development. Dr. Underwood has had extensive experience with research and applied nutrition programs in Asia and the Middle East.

Thus the MIT-Harvard IFNP, which is guided by a joint steering committee, brings together the complementary strengths and foreign field experience of faculty and staff at both institutions.

THE INSTITUTE CALENDAR X3-3270

June 7
through
June 18

Seminars and Lectures

Thursday, June 8

Towards A Unified Theory for Neurolinguistics* — Dr. John C. Marshall, Catholic University, Nijmegen. Workshop on Cognitive Science Seminar, 8pm, Rm 9-150.

Friday, June 9

The Metallic Conductivity of 1-Dimensional Organic Materials* — Dr. Philip Seiden, IBM Research Lab, Yorktown Heights, NY, 4pm, NW14, 2nd floor conference room. Coffee and tea, 3:45pm.

Monday, June 12

Minisymposium on Antibiotic Biosynthesis and Bioconversions* — Dr. Margita Blumaurova and Dr. Zdenek Hostalek, Czechoslovak Academy of Science; Dr. Kozo Nagaoka, Meiji Seika Kaisha Ltd.; 1pm, Rm 10-105.

Wiesner Stresses Caring In Commencement Address

(Continued from page 1)

President Wiesner said, between popular hopes for greater affluence and security and a growing popular fear that society and its major institutions will not be able to meet their obligations.

"There remains, nonetheless, a continuing effort to expand our capabilities to satisfy our expectations, matched, ironically, by continuing antagonism toward institutions that must lead the way, both government and large business."

He said growing suspicion of and resistance to the institutions of business, universities, and government are a reaction to large size, impersonality and overregulation.

President Wiesner told the graduating class that the essential first step in resolving the contradictions that beset society is that they, as individuals, care—for themselves, for other people, for institutions intended to serve people.

He said an "appreciation of the values of others with whom you associate, especially those whose ideas, background, cultures, or color are different from yours, is an essential element of a healthy environment and a successful resolution of many of our nation's current difficulties."

Following the awarding of degrees, James L. Bidigare, Jr., of Grosse Pointe Woods, Mich., president of the Class of 1978, presented brief remarks and the class gift. The text of his remarks is printed on page 5.

Taking part in this year's MIT Commencement was Wellesley College President Barbara W. Newell. This year marks the 10th anniversary of the MIT-Wellesley Exchange Program under which students at one school may take courses for credit at the other. Scores of students participate and many of those graduating from MIT Monday earned some of their credits at Wellesley.

In another highlight of this year's Commencement, Dr. Paul Fye, president of the Woods Hole Oceanographic Institution on Cape Cod, participated in bestowing doctoral degrees on 10 graduate students who completed the MIT-WHOI joint degree program. This year also marks the 10th anniversary of that program.

Also at Commencement Monday, doctor of philosophy degrees in linguistics were conferred on two native American Indians—Paul R. Platero, 34, of Canoncito, N.M., and LaVerne Masayesva Jeanne, 31, of Hotevilla, Ariz., believed to be the first American In-

dians to receive doctorates in linguistics through the intense and scholarly study of their own Indian languages. Mr. Platero is a Navajo, Mrs. Jeanne a Hopi.

Immediately prior to Commencement Monday morning, the MIT Corporation, or board of trustees, elected two of its Members, Louis W. Cabot of Boston, chairman of the board of the Cabot Corporation, and Richard L. Terrell of Birmingham, Mich., vice chairman of the board of directors of the General Motors Corporation, to Life Memberships. They had been serving five-year terms.

Eight others were elected or re-elected to five-year terms. Those re-elected were Ellmore C. Patterson, chairman of the executive committee of the Morgan Guaranty Trust Co., New York City, and Edward O. Vetter, former executive vice president of Texas Instruments Incorporated, Dallas, Tex. W.H. Krome George, chairman and chief executive officer of the Aluminum Company of America, and architect I.M. Pei of New York City, who served earlier terms, were elected to new terms. Newly-elected were Paul Hotte, vice president, P.R. Mallory & Co., Indianapolis, Ind., Stanley M. Proctor, president, Stanley M. Proctor Co., Cleveland, O., Dr. Emily L. Wick, dean of the faculty at Mount Holyoke College, South Hadley, Mass., and Brian G.R. Hughes of Carp, Ontario, Canada. Mr. Hughes is a 1977 graduate of MIT and was nominated by the Classes of 1976, 1977 and 1978.

This year marked the last one that MIT will hold its Commencement Exercises indoors. Next year, weather permitting, the exercises will be held in MIT's Killian Court with the MIT Great Dome in the background. The move is being made to accommodate larger audiences.

Eagleson Chairs GARP Meeting

Dr. Peter S. Eagleson, professor of civil engineering, recently returned from a meeting of the working group of the Global Atmospheric Research Program (GARP) held at the Royal Irish Academy in Dublin.

Professor Eagleson is chairman of the group which is studying land surface processes as part of an overall program to develop models of the atmosphere and oceans. Such models would be used to improve predictions of weather and climate variations and to assess possible human influence on climate.

Thursday, June 15

A New Approach to the Deformation of Bulk Polymers* — Prof. R. Gaylord, University of Illinois, Special Polymer Seminar, 2pm, Rm 8-314.

Community Meetings

Wives' Group** — Wed, June 7: Wives' Group Members will discuss, "International Differences in Childrearing," 3-5pm, West Lounge, Student Center. Babysitting provided.

MIT Faculty Club** — Exhibition of works by Boston artist Irene Morey, in oils, acrylics, pastels and conte crayons. Portraits, still lifes, landscapes and florals. On view daily, through June 30.

Technology Wives Organization Weekly Exercise Class** — An hour of serious exercise led by professional Marilyn de Kleer. Every Monday, through August 28, 8pm, Exercise Room, 2nd floor, DuPont Gym. Info: Call Marilyn de Kleer 494-9056.

Faculty Club*** — Grecian buffet, Tuesday, June 13.

The "Tech" Lodge** — Regular communication of Richard C. MacLaurin Lodge A.F. & M. Wed. June 21, 7:15pm, Masonic Temple, 1950 Mass. Ave., Cambridge. Master Masons Welcomed.

Student Art Association** — Summer art classes, registration closes June 9. Classes in Drawing, Photography, Claywork, Calligraphy, plus use of facilities from June 12 — August 18, Student Center, Rm 429. Fees from \$10 to \$50.

Exhibitions

Georgy Kepes, The MIT Years: '45-'77* — Organized and sponsored by the Committee on the Visual Arts with the assistance of the Compton Gallery Committee. Through Fri, June 9, Hayden Gallery, Sun-Fri, 10-4pm and Hayden Corridor Gallery, open daily, 160 Memorial Drive, Compton Gallery, Mon-Fri, 9-5pm, Building 10, 1st Floor, MIT. Info: 253-4400.

Environmental Light & Color* — Sponsored by Rotch Library, student work of R. Preusser and N. Bichajian. Mon-Fri through June 12, 9-5pm, Rotch Library Visual Collections, Rm 7-304.

MIT Historical Collections* — Permanent exhibition Mon-Fri, 9am-5pm, Bldg N52, 2nd floor. Katharine Dexter McCormick, '04; Vannevar Bush, '16; Bldg 4 corridor. The New Technology Exhibit 2nd floor balcony of Lobby 7. Energy Exhibit, Bldg E40, 1st floor. Solar Energy, Bldg 8 main corridor. Center for Space Research, Astrophysics Exhibit, main corridor, Bldg 4. Bldg 6 Dedication Exhibit.

Hart Nautical Museum* — Permanent exhibit of rigged merchant and naval ship models, half models of yachts and engine models. Open daily in Bldg 5, 1st floor.

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

Musical Caricatures* — Music Library, Rm 14E-109. Numerous cartoons of various aspects of music, especially pictures of famous composers and conductors.

Athletics

1978 Spring Graduate Soccer Home Schedule* — Sat, June 10, Polaroid, 2pm, Soccer Field A. Sat June 12, Soccer Field A, 2pm, Cup Quarter Finals.

Dance

MIT Dance Workshop* — Classes taught by Celia Schneider. Modern Dance technique for beginning and intermediate level dancers with some work on improvisation. June 13-Aug 14, 5:30-7pm T Club Lounge, du Pont Gymnasium. \$3.00 per class.

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 14 through June 25 to Calendar Editor, Rm 5-133, x3-3270, before Noon, Friday June 9.



A PLAQUE COMMEMORATING the original home of MIT on Boylston Street in Boston's Copley Square was unveiled this week by Abram T. Collier (left), chairman of the board of the New England Mutual Life Insurance Company, which now occupies the site, and MIT Chancellor Paul E. Gray. The original Rogers Building, named for MIT founder William Barton Rogers, was planned to house all activities of

the young university, but soon was outgrown. Eventually MIT occupied a dozen buildings in the Copley Square area. It moved to Cambridge in 1916 when no further expansion in the Back Bay was possible. The MIT Department of Architecture continued to occupy the Rogers Building until 1938 when it was razed for the construction of the New England Life Building (at 501 Boylston St.). —Photo by Calvin Campbell

Two Women are Named Luce Scholars

Two MIT students—Flora N. Katz, who received a PhD at Commencement Monday, and Debra S. Knopman—are among 15 winners throughout the nation in the 1978 Luce Scholars competition.

As Luce Scholars, they will spend about 10 months in the Far East working in their professional fields. The purpose of the program, sponsored by the Henry Luce Foundation, is to offer a select group of young Americans an experience in Asia designed to broaden their professional perspectives and to sharpen their perceptions of Asia, of America and of themselves.

MIT has had winners in each of the four years it has submitted nominees. It will be selecting nominees for the 1979 program next fall. Inquiries should be addressed to Professor Eugene B. Skolnikoff (E53-473), the director of the Center for International Studies, which administers the

program here.

The 1978 Luce Scholars were selected from nominations submitted by a group of 60 cooperating universities and colleges. The scholars will attend orientation sessions at Princeton University and in San Francisco, and again in Hong Kong, before fanning out across Asia to take up assignments tailored to their career interests.

Flora Katz, of Great Neck, N.Y., received the PhD in molecular biology at commencement exercises on Monday (June 5). She received her BA in biology from Kenyon College in 1972. She is a member of Phi Beta Kappa, and received an American Heart Association Undergraduate Research Scholarship, the Maxwell Elliot Power Prize (in Biology) and a Thomas J. Watson Foundation Fellowship. In February, she presented a paper on her research at a Molecular Biology Conference on Carbohydrates at Keystone, Colo.

Debra S. Knopman, of Philadelphia, Pa., will receive the SM in civil engineering in September. She received her BA in chemistry from Wellesley College in 1975, and it was Wellesley that nominated her as a Luce Scholar.

Previous MIT Luce Scholars were Michael J. Freiling in 1977, James R. Richardson IV in 1976 and Julie A. Moir in 1975.

Cambridge Names Gil to Health Post

Peter P. Gil, associate dean at the Sloan School of Management, has been appointed to the Health Policy Board of the City of Cambridge for a three-year term. The board oversees all of the city's health services.

Dean Gil, a Cambridge resident, will serve on a subcommittee overseeing Cambridge City Hospital.

More Caring Needed to Improve Human Condition

(Following is the text of the address presented by Dr. Jerome B. Wiesner, president of MIT, at MIT's 112th commencement, Monday, June 5, in Rockwell Cage.)

By JEROME B. WIESNER

Good morning, welcome to this 112th Commencement of the Massachusetts Institute of Technology, and congratulations, too, to all of you—students, parents, grandparents, faculty, wives, husbands, children, girlfriends, boyfriends, and former teachers who are here to see their favorite students finish up. Thanks, too, to our Corporation Members who counsel, nurture and protect the MIT faculty and administration and proudly share this moment with us.

This is one of those very rare moments, when the sun and moon and earth all line up—when everyone involved is happy—with the possible exception of those members of the faculty who are losing their student colleagues just about the time they have become extraordinarily good companions and partners—and even they share the pride of achievement.

I know that there are two especially happy and proud groups with us today—and deservedly so—parents of the graduates for whom this gathering marks the culmination of a lifetime of dreaming and working and hoping and often worrying—and a second group, devoted spouses, for whom this is the long-awaited moment, the opportunity to live a less work-bound life, when husbands or wives will once again be the happy, carefree, interesting (and available) companions they married.

I would like the students and faculty and corporation members to rise and join me in a salute—a round of applause—to these special people.

My talk this morning is a response to suggestions made by some members of the Class on subjects they wanted me to talk about. Three themes emerged most frequently in these conversations. First, a strong wish to celebrate this occasion in personal terms, not only as one of accomplishment but as a way to emphasize the warm friendships and strong bonds that have grown up among you. These bonds will give you joy and support all of your life if you follow the patterns of past alumni.

The second issue that was raised frequently also had to do with people, but it had to do with the friends *not* made, with a belief that as a community we are insensitive to the need of many of our members—particularly students and young faculty—for friendship, understanding, encouragement and support. I heard a concern too about stresses between groups on the campus, about a growing polarization of foreign students from different countries and a deep distress that positive dialogue between black and white students has been almost non-existent and frequently at serious odds.

These two themes, I believe, are actually two facets of the same deep and vital human emotion: *caring*—caring for social groups, caring for institutions.

The third issue students have talked to me about, not surprisingly, is the role of their professions in the welfare of our nation and the world—I call this caring, too—a reflection of the universal hopes and concerns for the role of science and technology; caring about pursuing your lives in constructive pursuits.

I am confident that you have acquired enough knowledge to begin your professional career. The graduation ceremony is traditionally called commencement, because the society, and in particular the university, expresses its confidence that you are now ready to take your place as full-fledged participants in the affairs of the world. Professional expertise is essential, of course, but it is just a start—most of you have learned much more than that. Here is what I mean.

How to think clearly. How to

work hard—(I know from some of your complaints that you have at least been challenged to work hard). To have the courage of your convictions. I hasten to say that I have considerable evidence that at least some of you have learned not only to have the courage of your convictions but how to express them forcefully. I hope that you have found that *creative activity can be very satisfying*. I know also—as I have already said—that many of you have discovered that *creating warm personal relationships—in work, in play and especially in helping others—can be a source of continuing personal satisfaction*.

Perhaps most important of all, I hope that you have acquired a *substantial degree of humility in the use of your knowledge and your power*. If the MIT experience of learning by involvement, by doing, has been successful, you must realize how often what you thought you understood turned out to be half right or occasionally totally wrong, and how easy it is to make mistakes as you strive to solve a problem, and how fragmentary is our understanding of many vital problems which still remain. Incidentally, a bit of modesty might even disarm future non-MIT colleagues—frequently people who don't know us tend to be a little in awe of MIT. They sometimes seem to expect us to talk in code or sounds like R2D2 in *Star Wars*. You will find that many people hold a schizophrenic view of your work, without much understanding of it. They will look to you, perhaps too trustingly, for the technical miracles needed to keep society healthy and move it ahead and, at the same time, they will hold you responsible for all the developments they are frightened of. So, in addition to continuing to learn, you have a major communication job cut out for you.

These have always been the expectations for the MIT experience. But these questions are much more in the air today than they were a couple of decades ago and will doubtless be a major and continuing concern for you and your non-technical peers. We live in a time of extraordinary turmoil, in which there is much fear and suspicion and real danger, and in which confrontation has become too much the normal style of dialogue. Issues move swiftly to the courts, bypassing traditional discussion and compromise, common understanding, and trust. Differences are accentuated and common goals and common humanity are difficult to keep in sight, making many people feel estranged from

both their colleagues and their institutions. To counteract this dangerous trend, each of us needs to make a special effort at understanding and caring.

A recent pool of the mood of American citizens made by Daniel Yankelovich and Associates gave me some comfort because it put our MIT situation in a broader context. The pollsters found that the majority of Americans, young and old, believe themselves to be living in a time when the rules by which they live are changing drastically, fundamentally, based upon a whole set of new expectations, new relationships and new moralities. Many are concerned that these changes are occurring too rapidly and painfully, but nonetheless they want them. These new rules apply to both individuals and institutions—governmental, business and public service. Central to the new rules of the game, the poll showed, is an emphasis on individualism and a greater expectation of fairness, characterized by a desire to have more control of one's own destiny in a world which seems at the same time to demand more conformity. This showed me that the issues that trouble us here at MIT are a reflection of those that concern the society at large, and therefore I took some comfort in the poll's revelations. It's not only that "misery loves company" but perhaps the high-level of unease is not our fault alone. Furthermore, I believe that we can take some assurance from knowing that as an institution and as individuals we have been contributing knowledge and guidance that will slowly but surely help formulate appropriate new rules of the game.

The poll also showed an almost universally deep suspicion of all institutions—universities, corporations, and governments—with an especial fear of the growing pervasiveness of government. I happen to believe that this fear of government is a most healthy sign, for—historically, governments have posed the greatest threat to individual freedom. We are experiencing a reaction against size and impersonality and regulation. It is interesting to note that persons of all political viewpoints are coming together on this issue.

The desire for more freedom of choice is in conflict with another major demand of the times for more security. This leads to an increasingly dependent relationship between individuals and the institutions with which they are associated, as well as government—somewhat like life-long parental relationships. Perhaps that's why there is a growing tension between them. This desire for security, a no-risk society, results in major contradictions between hopes and expectations on the one hand and the kind of innovative, risk-taking attitude that has made it possible for our country to come this far. If our country is not able to fulfill our expectations and needs, in the energy area, for example, it won't be for the lack of natural resources or technical possibilities, but rather because we have become too dependent upon seeking solutions through confrontation and regulation instead of problem-solving initiatives. The nation's ability to satisfy our expectations is being inhibited, ironically, by continuing antagonism toward the institutions that must lead the way, including

universities and business.

The antagonisms and the accompanying stresses we face are to be expected because the push for new rules of the game stems from the fears and hopes of many individuals and groups having inter-related but often conflicting objectives that must somehow be reconciled. I like to think that this is the noise of a society at work, experimenting, improving itself. Inevitably, progress must involve much trial and error and compromise. Experience is already showing that some aspects of the new rules of the game are in conflict with the conditions for an effective evolutionary sound process and will have to be modified. We see signs of this in the reexamination of educational programs, the effort to reconcile environmental regulations and energy needs and the attempts to understand how tax laws and regulations have slowed down the innovative process. This is all part of learning. I am reasonably confident that we will overcome the problems that look so formidable today, but we will certainly face new and equally challenging difficulties even as we overcome the present ones. A dynamic society will inevitably produce uncertainty and stress.

We can all speed up this process both by the work we do and by trying to make our part of the world more humane by replacing suspicion with understanding and self-centeredness with friendship. Institutions are people, and caring people make supportive institutions. It is important, in seeking to deal with our current uncertainties, to care for the democracy itself, which by its very fundamental ideals, provides the basis for our present efforts to make a better world.

What's more, caring is contagious—positive feedback will really work here. While I was thinking about this, I made a simple calculation to illustrate my point. It is perhaps a fantasy; the result was obviously farfetched, but it made me think a little harder about the idea of helping and I think it worth telling you about.

I tried to see what a little additional caring, a modicum of extra consideration, could do in a place like MIT. There are roughly 16,000 people at the Institute. If each of us added one per cent of consideration to our interactions with everyone else, the effect measured in total happiness would be astounding. Can you calculate $(1.01)^{16,000}$? My pocket calculator blinked violently when I tried it but finally produced 1.386×10^{69} . Fortunately, all 16,000 of us don't interact with each other every day or we couldn't stand the goodwill! What does a *one per cent* increase in caring amount to? It could mean an extra half-hour a week devoted to a needy community or group activity or just spending the time in small bits of a few seconds or minutes cheering someone's day. I know, of course, that many people at MIT already spend much more than a half-hour per week in this way. I am just trying to show what could happen if we *all* gave caring a priority.

Perhaps I may seem too optimistic to you this morning, considering all of the critical issues we are confronting at this time, but I happen to believe that we can make the world a better place—you should know, too, that much of my optimism comes from knowing you. We are in the midst of a major re-do of our society, seeking to improve the many things that are less than optimum. This is a process that will be heavily dependent upon the role of science and technology, extraordinarily good management and sensitivity to the human condition. This is wonderful challenge and exciting opportunity. Go to it, good luck, and best wishes.

Thank you.



THREE PRESIDENTS—Paul M. Fye, president of the Woods Hole Oceanographic Institution, and Barbara W. Newell, president of Wellesley College, join MIT President Jerome B. Wiesner at Monday's commencement exercises. This is the 10th anniversary of both the MIT-Woods Hole Joint Program in Oceanographic Engineering and the MIT-Wellesley Exchange Program.

'78 President Bidigare Sums Up

(Following are brief remarks made by James L. Bidigare, Jr., president of the Class of 1978 at the conclusion of MIT's Commencement Exercises on Monday.)

By JAMES L. BIDIGARE, JR.

With our families and friends here, we've all been trying to convey the MIT experience of the past four years. This is probably one of the most difficult tasks we students have faced here at the Institute. You really have to have gone through MIT to appreciate what a degree from here means.

It's been driven home that the experience has been "intense," to say the least! While most of us have had our confidence shaken and tested, we are coming out of here knowing we can handle pretty much anything, especially proven by our getting through four years of MIT, and that's a great assurance for the future.

Over these past four years of our lives, friendships have developed, some of which will last forever. Only in the last few months have we realized what we'll be leaving. We won't miss the problem sets and other pressures of MIT all too much, I'm sure, but we will miss the best part of MIT—the people, each other. Whether it be living group, department, activity or

sport, there is some group of people that you could call your own! Something like that will be hard to re-create once we have left. We'll all take on the responsibility of maintaining the friendships we've made, no matter where we find ourselves—at work or in school in any part of the world. We will make even more ties with our classmates after we leave today.

The exactness of science and the analytical aspects of engineering have made us fairly down-to-earth people. There is a genuine element of concern and generosity among members of this class, which has never ceased to amaze me. Usually, all it takes is someone to ask, and you volunteer to help, offer to listen, try to help people grow as they should at this time in life. The commitments many of you made to activities, sports, or living groups, even in the midst of the academic pressure, show a real desire to initiate change, to effect improvements, to grow.

A commitment to make MIT a more positive experience for all students is slowly replacing the apathy that followed the activism of the sixties. You in the Class of 1978 have been part of this turnaround, helping with your enthusiasm and initiative.

When we all leave today, I think that we will carry something with us even more important than a degree; we will have the knowledge that MIT has been left with something from us—a renewed spirit for its students.

President Wiesner, the Class of 1978 exhibited their generosity in another way, with reinstitution of the Senior Class Gift. A gift has not been presented in recent years, and hopefully classes following ours will emulate our desire to contribute to the quality of the MIT environment—even after most of its members are gone. I present to you this citation, along with the names of all those who've contributed to the gift. The citation reads:

"We, the members of the Class of 1978, on the Fifth day of June, 1978, present to the Massachusetts Institute of Technology our Senior Class Gift of Eight Hundred Fifty dollars. The funds, donated by members of the Class, will be matched by the MIT Challenge 78 Program and are to be used for improvements in the Lobby of the William Barton Rogers Building—in the hope of making it an even better place for members of the MIT Community to rest, meet with friends and enjoy entertainment."

CLASSIFIED ADS X3-3270

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 Institute extension. Persons who have no extensions or who wish to list only home telephones may submit ads by coming in person to the Tech Talk office, Rm 5-113, and presenting Institute identification. Ads may be telephoned to x3-3270 or mailed to Rm 5-113. **Deadline is noon Friday before publication.**

For Sale, Etc.

A/Cs, Wstgshse 6000 BTU almost new \$125. GE 5000 BTU \$50. Douglas x438 Lincoln.

Nikon action finder for F & F2, brand new \$175. Call x3-7221.

5 cu ft freezer, 1 yr old, xlent cond, \$100/TV ant, mast, etc. 6 mos old, best. Call dl5-8240

Raleigh Mountie 20" boy's bicycle, red, in gd cond. \$25. Call Doug x3-3516.

Gen. orig Coop "Tech is Hell" banner, red & gray felt. \$6. Gerald x3-4726.

Exquis mantlepieces, one cherry, one oak. Cheap, xlent cond. call 864-6379 eves.

9x12 rust colored rug \$20. Singer swng mach \$50. Lg 3-dr dresser \$40. Leslie x3-2674.

Quietkool a/c, 115v, 8a, \$100. Call x3-7902.

Sears Craftsman tools, hvy dty scissors type auto jack, 7" sander/plshr, torque wrenches, misc engine tools. Rsnble. Call Jim x3-6624.

Tires, G78-14, 7.75-14 wsw, good \$10. Ford 14" 5-hole wheels \$4 or best. Baritone horn mint cond, saxophone. Nichols x314 Lincoln.

Nice coffee table and lamp table \$40, vy nice comf desk chr \$10, gd single mattress \$7. Call 776-6823.

Big foam pillows \$4, 2 foam pillows \$2/ea, 2 new blankets \$7/ea, blanket \$2, single bed sprd \$5, pressure ckr \$12, new Sears car seat \$20, iron \$10, high chr \$12, scale \$5, ltle kids car \$10, Sharp calculator orig \$70, \$25. Call Ali 494-0182.

Fedders window a/c, 15k BTU/H, 220v, xlent cond, \$225. Call Barb x3-7747.

Maytag auto washer, gd cond, Whirlpool elec dryer, new element, \$50 or best. Dick Laton x7447 Lincoln.

3-spd M Phillips bicycle. 23" frn, compl overhauled. \$30. Call x3-2322 or 491-3094.

Sm fncy mahog dsk, coffee tbls, lamps, chrs, sofa. Reas. x5117.

D78-14 cust pwr cush glass belted Gdvr whtvl. Gd to xlent tread, \$12. F78-14 Slvrtnw glass belted Gdchr. Gd to xlent tread, badly scraped sidewl, OK for spare, \$3. Irving x5781 Lincoln.

Genesis II spkrs, 10" 2-way pass rd Oak cabs. Wl handle 80+ wts/chan, less than yr old, lftme warr, 2 pr. \$285/pr. Criterion 100B spkrs 10" wfr, ported, wl handle 40+ wts/chan, 2 pr, \$85/pr. Call Alan dl5-9540 Dorm.

Harpichord made from Zuckerman kit. Gd cond. \$120. Call Dennis x3-3201.

Cstm-md leather vest. Orig \$45, asking \$25. Susan x3-4701.

Dk red sisal rug 12x15 \$45, lift out baby carr \$15. Call 489-3161.

Radio Shack brnd nw, hi pwr, 40-chan, controlled carrier CB, Model TRC205, 5 w, \$169.95, 2 units \$110 ea. Don x8-3337 Draper.

RCA 12" BW TV gd recept \$30, 24" BW TV nds repr \$15, 9x15" orgn/rust rug gd cond orig \$120 now \$60, 3-shif bkese \$15, solid B&H door lock \$10, 9x12" brwn rug badly stained \$15. Call Brian dl5-6177 or 494-8661 lv mess.

W 3-spd 26" bike. \$40. Dennis x3-4101.

Tappan 30" gas rnge avoc, 8 yr xlent cond \$75. Girl's 20" bike v g \$30. Heathkit amp AA-1214, 1 yr old \$90. George x7115 Lincoln.

Beaut lmps \$15 ea, lthr lnge chr \$25, typing tble \$25, drftng bnd and stool \$30, framed mirror 2x5' \$35, fnsd wd shelving 50c/ft w/cement blks, misc other furn & elec gadgets \$5-10. Call 267-7397.

3 gal redwd stain, \$1 ea, 2 gal Lucite ltx wall pt, lt yel \$4 ea, 1 qt Lucite semigloss, lt yel \$3. Betty x401 Lincoln.

VW eng rebt by VW of America \$125. Boy's bike \$50. Charlie x3-4629, Rm 4-405.

Aquarium, 20 gal, hood, lt, fltr, pump, htr, plants, mny access, was \$150 now best over \$50. 3-spd racer bike, Armstrong, \$50. Call x3-6784.

Cstm mde drapes, deep brgndy antique sat, 90" longx18" wide, like new, orig \$100, now \$50. Call Jeannie 8-2577 Draper.

Bthrm vanity w frnca top, 35"x21", w sink & hdwre, vy gd cond \$40. Paul x3-4608.

Swimming pool, 10' dia, w/ filter \$50. A/C 10,000 BTU \$100, Regency HR-2 trnscvr 2m fm \$125, baby carr \$40. Dan x7777 Lincoln.

Vehicles

'71 Chevy Vega, runs gd, \$300 or best. Call J. May x8-2843 Draper.

'71 Mustang fstbk, dependable, ps, auto, 8 cyl \$650. Call 664-6639 after 6.

'71 Ford Galaxie 500 2-dr htdpt. 400 CID eng, auto, ps/pb, gd as new, 1 owner, 64k. \$1175 or best. Sarah x3-3372.

'72 Bronco, xlent cond w/mny xtras. Asking \$2500. Brian, x8-3311 Draper.

'73 Porsche 914-2.0 yellow & black, AM/FM, mags, all opts, ziebart. New tune up, brks, htr boxes, muff, 36 mpg, mint cond, \$4400 or best. Tom Lynch x3-2555 eves dl5-8472.

'73 Dodge Crnt Crstwd wagon, 9 pass, new radials, battery, muffler, immac, purch new w/trailer tow pkg never used, '75 318 V8, 30K, asking \$2900. Nick x5331 Lincoln or 395-4531.

'73 Buick Cent burg red, ps/pb, ac, 54k, vy gd cond, ask \$2200. Call 623-5486.

'74 Vega, 33k, auto, snos, \$1050. Herbert x3-5040 or x5-9715 Dorm.

'74 Ford Mustang red, xlent gas mige, 4-spd, just tuned, new exhaust, brakes, snos, Pioneer stereo. Grt cond in & out \$3300. Call Nancy x3-7283.

'75 Volvo 244DL, dk blu, auto, am/fm stereo, nw tires, shocks, brakes, xlent cond, \$3800 Call Dr. O'Pray x3-1505.

'76 Pinto Runabout 2.3L, 4-spd, am/fm stereo, sunfr, vy gd cond, 24K, \$2600. Call x5511 Lincoln or 369-8134.

'77 Merc Mnrch, tan w/brn vinyl top, ps/pb, 250 CID 6 cyl eng radials, 19K, xlent cond, asking \$3950. Call 3-2772.

'77 1/2 Subaru DL 2-dr sed, 10k, xlent cond, must sell. \$3100 or best. Call Bruce x3-7995.

'75 Honda CL360 w/crsh bar, lug rk, cobra lck, Bell helmet, \$750. Doug x3-6534, lv mess.

Honda CB200T, bought in 1977, xlent cond only 300 mi, \$650. Also oval orange rug for sale, 9x12, \$20. Call 492-9193 after 6pm.

'65 Yellowstone Cavalier Camping Trailer; self-contained; sleeps 6, exc cond, \$1600 or best, incl huge side canopy, car side, back-up mirrors. Call Roberta, x3-3833.

Sailboat, catamaran, AquaCat. 12 ft, fast, 3 yrs old, xlent cond. Call Greg eves 734-7954.

Sailboat, 17', 1 1/2 yrs old, fiberglass, dacron sis, jib, main, reacher, alum spars, nw trlr and anchor. \$2300 firm, x3-2458.

Sailboat, 14 ft Javelin w/motor & trailer. \$1350. Call x3-7282.

Housing

E Camb, 2 br apt in historic hse 10 min walk from campus, avail July 1, 2-yr lse. \$225/mo + utils. Call x3-7644 or 868-0577.

Wht Mts on Saco Riv NH, mod chalet, 3 br, fp, slps 10. Near Attitash alpine slide. Avail July, \$5-50/mo. Call x3-2868.

Chatham, 2 br & 3 br hses, walk to beaches, heated. \$225. Call x8-2675 Draper.

Lincoln, 2 br mod hse for rent July &/or Aug. Call x3-2308.

Belmont sublet, 2 br, L, DR, K & stdy. Furnished. Avail Jun 25 thru Aug 31. Res nrhnd, backyard for barbeques, near T trolley bus to Harvard Sq. \$270/mo incl all utils. Call eves 489-2442.

Newbury St btw Gloucester & Fairfield, sublet 1 br apt, June thru Aug w/option to renew. \$215/mo incl heat. Call 266-3494 eves.

West Dennis, Cape Cod, 2 br vac hme, 5 min to bch, open Jun 30-Jul 8, \$190. Call Jerry x5841 Lincoln.

Back Bay summer sublet, 1 br in 4 br apt, June 12 thru Sept, dates flexible, \$118/mo incl utils. Call Dave x3-2669.

Dorchester, Ashmont Hill, eleg Vict apt, 1st fl Vict hse. Lg yd, 5 rms, 2 tiled fp, sm nat wdwrk, hdwd flrs, many unique features. 2 blocks to red line (Ashmont). \$310/mo incl all utils. Avail Jul 1. Call 288-8619.

Vermont, Jay Peak, svrl parcels of land 10 to 45 acres, \$650-\$990/acre. Brks, mdws, wds, grt views, town road, 7 mi ski slopes. Property map avail. Call x3-3326.

Duxbury, charming antique cape for sale, bordering salt marshes. 2 br, DR LR w/fp, gar, garden. Call George x8-1811 Draper.

Lexington, Col Garrison brk frnt, 8 sunny spacious rms + brzwy & sunrm off DR, lge kit, 3 or 4 brs, 2 fp, 2 car gar, nr conservation land & schls, conv to 128 & 2. Almost an acre. \$79,900. Call Paul x3-2988.

Needham, 3 br hse avail June 15-Aug 31. Call x3-1849.

Cambridge, 81 Webster Ave. 1 rm apt with lg kit. Furnished. Call K17-6958.

Eaton Center, NH nr No Conway, 3br Aframe slps 8. Lake, canoeing, riding. Avail Jun 15, \$225/wk, \$1500/season. Call 734-0193 after 6.

Stoddard NH lkfrnt summ cott rental. Scr prch, furn, all convs. Earl x8-1130 Draper.

Oceanfrnt prop over lk ft of bold open ocean w/sandy bch in Lubec Me. 27.8 acres w/inter frsh wtr pond. For details call x3-7156 or 526-7775.

Arlington, Sublet June 15 w/opt, ranch-tp hse, 3 BR, LR, K DR, B, lge yrd. \$375/mo + utils. Call 646-0108.

Lex, Meriam Hill by owner, rnch w/fp LR, 2 BR + 2 finished rms, 1 w/fp lwr lev, DR, 1 B, pleas wdcd lot, principals only, \$65,500, Prof Golet x3-5824.

Summer sublet, studio, cin & sunny, conv to Kmre Sq & Mass Ave, avail July 15 w/opt for Sept. \$120/mo. Also furn for sale. Call Lucien x3-6330.

Somerville, sublet lux apt, conv to MIT, vy quiet, ww, d&d, ac, \$300/mo. Lease avail 9/1 \$325 no fee. Call Knute x3-8022.

Smylvle Davis Sq, 2 M, 1 F nd rmmte for summ, avail immed, poss fall opt, 8 rm apt, piano, back yard, drwry, near T, bus to Kendall, \$100/mo. Rick x3-2634 or Mark x3-3374. Eves 628-4130.

Cambr, Cent Sq, attrac 2nd fl rm & ktte, nicely furn, incl ht & utls, on T busline. Call x3-3864.

Cambr, sgl fam hse Kirkland St, 90s. Also gar space for rent on Kirkland St. Arlene x3-6779.

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Cambr, Cent Sq, attrac 2nd fl rm & ktte, nicely furn, incl ht & utls, on T busline. Call x3-3864.

Newton Corner, summ rmmte wntd for 6-pers hse, easy drive MIT, pkg, nice area. Avail 6/1, poss fall opt. \$110/mo. Brian x3-3549.

Cmbrdgrpt, 2 rmmtes wntd, M or F, 28 and over, to share 2-fam hse w/1 F & 6 yr old child. Sublet or indef, \$100 ea, split utls, share food. Easy pkg. Sally x3-7582.

Furn rm avail July, Aug in nice 3 br apt, Cent Sq area, 10 min wlk MIT. Attic, sun rf, pkg. \$72/mo incl utls. Robert x3-6894.

Lost and Found

Found May 24, pen, cor Bldg 2, Marilyn x3-2538.

Miscellaneous

Driving van or trlr to Berkeley area? I need items moved and wl help defray expenses. Call 494-0364 eves.

Prof typist, 10 yrs exp all fields. Call x3-3807.

Certified Scuba Diver looking for others to start Divers Pool, wl share expenses & knowledge. For details call 924-1697.

MIT jr and co now contracting for summer house painting. Prof work at student rates. Refs avail. Call David, 666-5580.

Typing of any sort, tech/non-tech. Quick effc serv on IBM electric. Call Judy x3-2686 after 12.

Will type theses, mss, reports, fast & acc. IBM self crctg selectr. Call x3-4528.

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 the Special Assistant for Women and Work (10-215) and Minority Affairs (10-211), and in the Personnel Office, (E19-239).

Persons who are NOT MIT employees should call the Personnel Office on extension 3-4251.

Information on openings at Lincoln Laboratory (Lexington, Ma.) is available in the Personnel Office.

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 3-1596
(Secretary — Tertia Perkins)

Virginia Bishop 3-1591
Richard Cerrato 3-4266
Ken Hewitt 3-4267
(Secretary — Paulette Chiles)

Sally Hansen 3-4275
Lewis Redding 3-2928
Kathleen Rick 3-4269
(Secretary — Jenni Leibman)

Admin. Staff, Design Dept. Manager in the MIT Press will have responsibility for all aspects of the Press design service: art direction book design, supervision of design staff, scheduling of new titles. Applicants should have strong background in contemporary design philosophies and production, as well as supervisory and management experience. A78-30 (6/7).

Admin. Staff, Journals Dept. Manager in the MIT Press to manage and supervise all functions of Journals Dept.: assessment, acquisition and development of new journals; coordination and supervision of editorial, production and design and circulation and marketing activities. Strong business, production and marketing skills required, as well as several years experience in journals publishing field. A78-29 (6/7).

Academic Staff, Technical Assistant, in the Biology Dept. to conduct experiments on the synthesis of viral cell membrane proteins and on *in vitro* protein synthesis. Master's degree in chemistry, biology, or biochemistry or equivalent experience required. Experience with techniques of protein and nucleic acid biochemistry or animal cell culture also required. C78-16 (5/31).

Admin. Staff, Applications Programmer, in the Information Processing Service Office, Administrative Computing Service to translate external program specifications into internal program specifications for new or modified programs; prepare program logic diagrams and data flow; program, test and debug computer programs; document new programs or changes in existing programs; assist users with problems and answer inquiries; attend classes and seminars to develop and maintain know-how in programming. Experience in computer programming and Associate's degree required. A78-24 (5/31).

Admin. Staff, Auditor, in the Audit Division to perform operational financial audits; develop audit programs and questionnaires; direct junior staff; write and present reports. At least 2 years' diversified experience in public accounting or internal auditing required. College degree preferred. A78-27 (5/31).

Academic Staff, Technical Instructor, in the Mechanical Engineering Dept. to instruct, advise and assist the teaching staff and students; assist in lab work related to various courses. A Bachelor's or Associate's degree in Mechanical Engineering or a related field is required. At least 5 years' experience with mechanical manufacturing systems and equipment, machine shop experience or related work is also required. An understanding of electronics is desirable. C78-12 (5/31).

Academic Staff, Technical Asst., in the Biology Dept. to assist in the biochemical and cytological experiments on a variety of organisms; manage a lab with several graduate students and postdoctoral fellows. Bachelor's degree in biology or biochemistry required. Some lab experience, preferably in biochemistry, also required. C78-11 (5/31).

Sponsored Research Staff, in the Center for Cancer Research, to work on an immunogenetics research program: prepare mouse lymphocyte populations; perform serological and biochemical procedures; maintain tissue culture lines; produce antisera in mice and rabbits. Bachelor's degree required. Experience in immunology or a related field is preferred. R78-112 (6/7).

Sponsored Research Staff, Programmer, in the Earth and Planetary Sciences Dept. to design and operate software systems to process data from planetary radar experiments. Ph.D. in physics, computer science of a related field required. At least 1 year's experience with FORTRAN and/or PL/I programming also required. R78-111 (6/7).

Sponsored Research Staff, Mineral Spectroscopist, temporary, in the Earth and Planetary Sciences Dept. to carry out and supervise measurements of high temperature Mossbauer, diffuse reflectance and electronic absorption spectroscopy of heated lunar minerals and rocks. Applicants must be trained in mineralogy, optical microscopy, X-ray diffraction, Mossbauer spectroscopy and theory of transition metal spectroscopy. A Bachelor's degree in geology is required and at least 1 year's experience in above field. Initial appointment is for 6 months; may be extended to 1 year. R78-114 (6/7).

Sponsored Research Staff in the Sloan School of Management to work on developing structure and estimating parameter values for production sector of Systems Dynamics National Model; Perform behavioral and statistical tests; develop data bases for production and other Model sectors. Academic background in systems dynamics, preferably at a Master's level required. At least 5 years industrial experience and background and experience in data analysis also required. R78-113 (6/7).

Sponsored Research Staff, Editor, part-time, in the Sea Grant College Program to edit a new publication "Reports on University Research in Ocean Engineering", encompassing research efforts of 5 or more leading universities, focusing on ocean engineering and very closely allied, relevant disciplines. Will work with others to formulate publication and editorial policy; recommend editorial material; perform background research; write articles; interview academic practitioners; oversee publication and distribution. Demonstrated capability in "hard" science or engineering writing/reporting is required. Degree in ocean engineering and marine related experience desirable. Degree in engineering or hard science field acceptable. Approximately 20 hrs./wk. R78-110 (5/31).

Sponsored Research Staff in the Center for Policy Alternatives to conduct research and policy analysis in environmental law, analysis in environmental law, occupational health and safety, regulatory policy, technology and public policy, technical innovation, industrial and economic development, manufacturing and the nature of the work and its environment, manpower training and educational policy. Will also participate in proposals preparation. Master's and/or Ph.D. in economics required. Background in law science, engineering, policy analysis or management preferred, as well as experience in federal or state regulatory agency. Ability to work in a team, under pressure and good writing and communication skills required. Please submit writing sample in one of the above noted areas with resume. R78-107 (5/31).

Sponsored Research Staff, Programmer, temporary, in the Research Laboratory of Electronics to write, debug and document PDP-11 assembly language programs. Bachelor's degree in engineering or a related field required. Competence in PDP-11 Macroassembly also required. Temporary 4-6 months. 40 hrs./wk. R78-108 (5/31).

Exempt, Engineering Asst., in the Laboratory for Nuclear Science, Bates Linear Accelerator, Middleton, MA, to assist in supervision of magnet system construction, electronic beam analysis equipment, program and analysis of control systems associated with the guidance of an electron beam. A Bachelor's degree in physics or its equivalent, plus a background in engineering sciences, physics, or math and familiarity with electronic analysis equipment required. E78-26 (6/7).

Exempt, Data Base Manager, in the Alumni Assoc. to perform data base administration with emphasis on user support including interface between user and data base, interface between dept. and computer facility, schedule input and retrieval. Will also control quality, data research and statistical analysis. Bachelor's degree, communication skills and ability to program in some high level language required. One to two years experience in computer related liaison or operations scheduling and training of clerical personnel in environment utilizing computers also required. E78-25 (5/31).

Exempt, Admin. Asst., in the Office of Dean, School of Humanities and Social Science will act as assistant to director of new Program in Science Technology and Society and to Associate Dean of School. Will write correspondence, reports; catalogue text; coordinate activities; arrange

laboratory supplies. Typing skill required. Background in music desirable. A knowledge of French, German or Italian is helpful. 11AM-3PM, M-F. B78-254 (5/31).

Editorial Asst. V at the MIT Press to assist in maintaining book schedules; handle proofs and check editing; write launch reports and attend launch meetings; maintain copyright registration; correspond with authors as required; maintain files and type correspondence as necessary. Good typing and English grammar skills and experience in editorial work required. College degree preferred. B78-261 (5/31).

Accounting Asst. V in the Comptroller's Accounting Office to perform internal cost audits; prepare monthly invoices and fiscal reports; assist in cash flow and forecast functions. Graduation from 2 year college or business school required. General business background with 2-3 years of accounting experience also required. B78-274 (6/7).

Admin. Asst. V in the Chemical Engineering Dept. to assist the Administrative Officer with fiscal, operational and administrative functions; maintain account files for all grants and contracts; review monthly account statements for accuracy; monitor research accounts; maintain files on government and industrial agencies and prepare budgets for research proposals in accordance with agency guidelines; process invoices for payment; maintain personnel and payroll records; assist in supervising day-to-day activities of Administrative Office. Excellent communication skills, capacity for a high volume of work of a detailed nature and ability to deal effectively with a wide variety of people required. Good typing skill and knowledge of or experience in accounting or bookkeeping also necessary. Familiarity with M.I.T. accounting procedures preferred. 40 hrs./wk. B78-258 (5/31).

Communications Console Operator III in Physical Plant's Administrative Service's section to operate the Facilities Management System Computer Console which monitors various aspects of the physical environment. Communicate with Control Center and with various shops using phones, pagers, radio transceivers; expedite all incoming calls as necessary, perform various clerical functions as required; process and expedite incoming and outgoing telephone calls; assist individuals in placing and transferring calls. High school graduation or equivalent, English language skill, ability to act appropriately to emergency conditions required. Comparable experience and familiarity with communications control systems terminology and equipment desirable. 35 hrs./wk. varied schedule, including weekend and evening shifts. B78-255 (5/31).

Sr. Clerk IV in the Comptrollers Accounting, Student Loan Office to perform duties related to collection of student loans: prepare and send correspondence; review account records for required information; search files and records to locate current borrower addresses; coordinate exit interview process for terminating students and assemble required records for Loan Office. Applicants should have ability to integrate data from many sources to carry out work, as well as ability to communicate effectively, and good typing and organization skills. B78-263 (6/7).

Sr. Clerk IV in the Academic Staff Records Office to type correspondence; file; maintain various statistics; verify employment and other related information for callers within and outside the Institute; prepare letters on IBM Memory Typewriter. Typing skill, ability to exercise discretion, to follow through and to handle detail with accuracy required. B78-266 (6/7).

Sr. Clerk IV in the Center for Space Research to maintain records; prepare and submit jobs for computer processing; produce plot of computer processing results from an automated plotting system; distribute and file computer processing results. A college degree, accuracy, dependability and willingness to learn required. Familiarity with digital computers a plus. B78-127 (4/5), B78-264 (6/7).

Clerk III in the Center for Advanced Engineering Study to be responsible for the distribution of videotapes, study guides and textbooks to outside clients; reviewing the quality of tape upon return to department; updating records on a computer and manually; act as liaison with videosevice group. Typing skill, ability to follow-up on details and willingness to learn customs regulations for domestic and foreign shipments required. Ability to handle changing priorities also necessary. 40 hrs./wk. B78-260 (5/31).

Nurse Aide III, in the Medical Dept. to maintain adequate supplies for patient care; assist nurses and physicians in delivery of patient care; order clinic supplies; stock offices, examining rooms and recovering and surgical rooms with stock daily; transport patients within building via wheelchair or stretcher; clean and autoclave instruments and equipment; prepare sterile supplies and repackaged medicines; chaperone during examinations and assist with routine procedures; perform related clerical and record keeping duties. Previous experience in a medical setting, preferably as an aide with concentration with supplies and equipment also required. 37 1/2 hrs./wk. B78-248 (5/31).

Sr. Clerk/Typist III, part-time, in the Upward Bound Program, Provost's Office, to type reports, questionnaires and correspondence; organize project materials and record keeping; answer phones; maintain office supplies; perform some reception duties; run errands in line with aforementioned duties. Good typing, editing and organizational skills required. 20 hrs./wk. B78-234 (5/31).

Sr. Clerk III in the Physical Plant to learn process of hourly time cards; compute hours on time cards; control and distribute payroll checks; type requisitions, personnel forms; maintain personnel records; occasionally assist other personnel; correct keypunch reports. May check and batch labor cards for keypunch. Good typing skill, ability to use calculator, bookkeeping skill and 2 years experience required. B78-242 (5/31).

Jr. Cashier II in the Food Service to perform accounting related duties in a student residence: process checks; prepare reports for the dining accounting office; maintain a modest cash fund. Applicants must be able to do detailed work with accuracy. Accounting/bookkeeping experience is desirable. Academic year position (Sept.-May) 40 hr./wk. B78-247 (5/31).

Hourly, Technician B, in the Chemistry Department to layout, wire and test prototype digital analog and radio frequency equipment; maintain an inventory of electronic components and instrument documentation; assist in lab or research work; operate experimental and technical equipment. Graduation from a 2 year day technical school or its equivalent in applicable experience required. H78-91 (6/7).

Hourly, Custodian, in Physical Plant to keep assigned areas clean, secure and in presentable condition and to perform other related duties as assigned by the supervisor. Applicants must be able to speak, understand and write in the English language. 11PM-7AM Mon.-Fri. H78-71, H78-72, H78-75, H78-76, H78-77, H78-78, H78-79, H78-80, H78-81, H78-82, H78-83, H78-84 (5/31).

Hourly, Asst. Animal Technician, in the Division of Laboratory Animal Medicine to perform duties involved in caring for different species of animals as assignments dictate; maintain proper levels of food and water; clean and wash cages; perform related miscellaneous housekeeping functions as required; monitor condition of animals and notify supervisor or others as situation warrants. Graduation from high school, ability to work with animals and to participate in formal training programs required. At least 1 year animal care experience preferred. Wednesday - Sunday work schedule (40 hrs./wk.). H78-69 (5/31).

Hourly, Technician A, in Materials Science and Engineering to assist faculty and students on ex-

perimental research. Work involves welding, metal working and processing of oxides. Knowledge of welding, brazing, wire drawing, metal extrusion, general machine work, as well as experience with rigging and heavy equipment required. Graduation from a 2 year day technical school, or its equivalent and at least 2 years applicable experience also necessary. H78-73 (5/31).

Hourly, Driver-Utility in the Research Laboratory of Electronics to drive, pick up and deliver items; transport people and deliver mail; clean and care for work area and assigned equipment. A high school graduate, unrestricted Mass. license, class 1 or 2, a good driving record and 3 years commercial driving experience required. Applicants must be 25 years of age or older and be able to pass special medical exam for drivers. H78-74 (5/31).

Hourly, Technician A, in the Research Lab or Electronics to operate and maintain ion etching, plasma etching, x-ray lithography, and other vacuum equipment; expose fine line patterns and gratings using photolithography, laser holographic lithography or x-ray lithography; operate and maintain substrate cleaning station; operate high power microscope for substrate examination. Graduation from a 2 year day technical school and/or demonstrated applicable expertise gained from experience required. Knowledge of basic vacuum practice and simple electric circuits, ability to handle electric crystals, familiarity with chemical handling procedures and capacity to learn to operate a wide range of lab equipment also required. H78-68 (5/31).

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:
A77-3, Systems Programmer, Info. Processing Serv. (2/16)
A77-62, Industrial Liaison Officer, Industrial Liaison Program (4/5)
A77-86, Systems Programmer, Info. Processing Serv. (1/11)
A78-14, Asst. Dir., MIT Associates Program (4/12)
A78-19, Sr. Systems Analyst, Info. Processing Serv. (5/3)
A78-20, Admin. Staff, Alumni Association (5/3)
A78-22, Admin. Staff, Student Financial Aid Office (5/10)
A78-23, Admin. Staff, Sales Rep., MIT Press (5/31)

BI-WEEKLY:
B77-655, Sec. IV, Chemical Engineering (11/16)
B77-696, Sec. IV, Personnel Office (12/7)
B77-755, Sec. IV, Earth & Planetary Science (1/11)
B78-4, Sec. IV, Civil Engineering (1/8)
B78-8, Sec. III-IV, Admissions Office (5/17)
B78-76, Sec. IV, Sec. IV, Nutrition & Food Science (3/8)
B78-87, Computer Operator IV, Admin. Computer Serv. (3/8)
B78-98, Sr. Keypunch, Operator III, Alumni Association (3/22)
B78-100, Sec. IV, National Magnet Lab. (5/31)
B78-113, Sec. IV, Vice President Res. (4/5)
B78-114, Sec. IV, Nutrition & Food Science (4/19)
B78-127, Sr. Clk. IV, Center for Space Research (4/12)
B78-129, Sec. IV, Biology (4/12)
B78-133, Sec. III, National Magnet Lab. (5/17)
B78-136, Sec. IV, Food Services (4/12)
B78-139, Sec. IV, Physics (4/12)
B78-143, Clk./Typist IV, Resource Planning Office (4/12)
B78-144, Sec. IV, Nutrition & Food Science (4/12)
B78-154, Sec. V, Lab. for Nuclear Science (4/19)
B78-157, Sec. IV, Math (4/19)
B78-160, Sec. IV, Center for Policy Alt. (4/19)
B78-161, Sec. IV, Chemical Engineering (4/19)
B78-165, Sr. Actg. Clk. IV, Sloan School (4/19)
B78-166, Sec. III-IV, Student Financial Aid Office (4/19)
B78-167, Sec. III-IV, Mechanical Engineering (4/26)
B78-168, Sec. IV, Chemical Engineering (4/26)
B78-178, Sec. IV, Provost's Office (4/26)
B78-185, Account Rep. V, Admin. Computer Serv. (4/26)
B78-191, Switchboard Operator/Receptionist III, Lab. for Nuclear Science (5/3)
B78-194, Sec. III-IV, High Voltage Res. Lab. (5/3)
B78-198, Admin. Asst. V, Sloan School of Mngmnt. (5/10)
B78-204, Sec. III-IV, Nuclear Engineering (5/10)
B78-206, Sr. Library Asst., Manuscript Processor V, Institute Archives (5/10)
B78-210, Computer Operator IV, Info. Processing Service (5/10)
B78-212, Sec. IV, Mathematics (5/10)
B78-215, Sec. IV-V, Urban Studies & Planning (5/10)
B78-219, Communications Console Operator III, Part-Time, Physical Plant (5/31)
B78-22, Sec. IV, Office of Personnel Development (5/31)
B78-225, Sec. III, Part-Time, Office of Personnel Development (5/31)
B78-226, Library Asst. III, Part-Time, Music Library (5/31)
B78-227, Medical Records Technician IV, Medical Dept. (5/31)
B78-228, Sec. IV-V, Artificial Intelligence Lab. (5/31)
B78-231, Technical Assistant IV, Center for Advanced Engineering (5/31)
B78-233, Sec. IV, Physical Plant (5/31)

ACADEMIC STAFF:
C78-5, Asst. Eng. Librarian, Eng. Lib. (4/5)
C78-6, Asst. Eng. Lib., Eng. Lib. (4/5)
C78-9, Asst. Science Librarian, Chemistry (4/19)
C78-13, Acad. Staff, Nurse Practitioner or Physician Asst., Medical Dept. (5/10)
C78-14, Acad. Staff, Librarian, Part-Time, Libraries Exchange & Gifts Dept. (5/10)
C78-15, Acad. Staff, Tech. Assoc., Biology Dept. (5/31)

EXEMPT:
E77-54, Eng. Asst., Center for Material Science (12/14)
E77-56, Estimator/Scheduler, Physical Plant (1/19)
E78-2, Audiologist, Medical (1/25)
E78-19, Eng. Asst., Earth & Planetary Science (5/3)
H77-89, HVAC Designer/Draftsman, Physical Plant (10/5)
H77-170, Waiter/Waitress, Endicott House, Dedham (2/15)
H77-206, Elec. Technician A, Energy Lab (4/5)
H78-23, Mach. A, Nutrition & Food Science (3/8)
H78-35, Tech. A, Energy Lab. (4/5)
H78-43, Tech. A, Lab. for Nuclear Science (4/19)
H78-57, Technician B, Physics (5/10)
H78-64, Hourly, Sr. Tech., National Magnet Lab. (5/31)

SPONSORED RESEARCH STAFF:
R77-53, Spons. Res. Staff, Res. Lab. of Elec. (4/12)
R77-73, Plasma Physicist, National Magnet Lab. (4/27)
R77-74, Plasma Physicist, National Magnet Lab. (4/27)
R77-79, Postdoc. Res., Physics, Lab. for Nuclear Science (5/4)
R77-80, Postdoc. Res., Physics, Lab. for Nuclear Science (4/5)
R77-91, Sr. Accelerator Physicist, Lab. for Nuclear Science (5/18)
R77-93, Design Engineer, National Magnet Lab. (11/9)
R77-95, Biophysicist, National Magnet Lab. (5/25)
R77-97, Chemical Engineering, Energy Lab. (6/1)

Miller Appointed In Mathematics

Dr. Gary L. Miller has been appointed assistant professor in applied mathematics in the Department of Mathematics beginning January 1, 1978, according to Dr. Kenneth M. Hoffman, head of the department.

Dr. Miller was most recently assistant professor at the University of Rochester. He has also taught at the University of Waterloo, Canada, and the University of California, Berkeley. He received the BA from California State College in Sonoma, Calif., in 1970, the MA from the University of California, Berkeley, in 1973, and the PhD from U.C., Berkeley, in 1975. Professor Miller's work deals with finding efficient algorithms for solving problems, or demonstrating that such algorithms don't exist. In particular, he has developed an efficient algorithm for testing the promality of integers that requires Reimann's hypothesis for the proof of correctness.

R77-105, Managing Director, Energy Lab. (6/22)
R77-112, Magnetic Field Coil Design, National Magnet Lab. (6/22)
R77-137, Experimental Physicist, Bates Linear Accelerator (8/31)
R77-161, Elec. Engineer, Mechanical Engineering (9/7)
R77-192, Computer Language Dev., Lab. for Computer Science (10/26)
R77-201, Prog./Data Analyst, Earth & Planetary Science (10/26)
R77-209, Res. Scientist, Energy Lab. (11/30)
R77-211, Comp. Systems Design, Lab. for Computer Science (12/7)
R77-212, Prog. Language Design, Lab. for Computer Science (12/7)
R77-213, Computer Software Design, Lab. for Computer Science (12/7)
R77-221, Neurochemist Res., Nutrition & Food Science (12/14)
R77-228, Plasma Physicist, Res. Lab. of Elec. (1/4)
R77-230, Computer Systems Designer, Lab. for Computer Science (1/11)
R78-2, Chief Operator, Lab. for Nuclear Science (1/18)
R78-8, Spons. Res. Staff, Sloan School (2/15)
R78-18, Theoretical Physicist, Lab. for Nuclear Science (2/22)
R78-19, Theoretical Physicist, Lab. for Nuclear Science (2/22)
R78-20, Theoretical Physicist, Lab. for Nuclear Science (2/22)
R78-21, Theoretical Physicist, Lab. for Nuclear Science (2/22)
R78-22, Theoretical Physicist, Lab. for Nuclear Science (2/22)
R78-28, Theoretical Physicist, Lab. for Nuclear Science (2/22)
R78-30, Program Counselor, MIT/Wellesley Upward Bound Program (2/22)
R78-44, Engineer, Earth & Planetary Science (3/8)
R78-55, Staff Scientist, Arteriosclerosis Center (4/5)
R78-58, Spons. Res. Staff, National Magnet Lab. (4/12)
R78-59, Res. Metallurgist, National Magnet Lab. (4/12)
R78-60, Combustion Engineer, Energy Lab. (4/12)
R78-61, Staff Engineer, Spons. Res. Staff, Res. Lab. of Elec. (5/31)
R78-62, Spons. Res. Staff, Center for Space Res. (4/12)
R78-64, Spons. Res. Staff, Earth & Planetary Science (4/12)
R78-68, International Energy Economist, Energy Lab. (4/12)
R78-69, Temporary Systems Programmer, Energy Lab. (4/12)
R78-70, Energy Analyst, Energy Lab. (4/12)
R78-72, Spons. Res. Staff/Computer Programmer, Energy Lab. (5/10)
R78-73, Spons. Res. Staff/Computer Programmer, Energy Lab. (5/10)
R78-79, Spons. Res. Staff, Mechanical Engineering (4/19)
R78-80, Spons. Res. Staff, Elec. Power Systems Engineering Lab. (4/19)
R78-81, Spons. Res. Staff, Lab. for Nuclear Science (4/19)
R78-82, Spons. Res. Staff, Lab. for Nuclear Science (4/19)
R78-83, Spons. Res. Staff, Lab. for Nuclear Science (4/19)
R78-84, Spons. Res. Staff, Lab. for Nuclear Science (4/19)
R78-85, Tech. Asst., Nutrition & Food Science (4/19)
R78-87, Systems Programmer, Lab. for Nuclear Science (4/26)
R78-89, Sr. Exp. Plasma Physicist, National Magnet Lab. (5/3)
R78-90, Programmer, Sloan School of Mngmnt. (5/10)
R78-91, Spons. Res. Staff, Center for Space Research (5/3)
R78-93, Res. Eng., Civil Engineering Dept. (5/10)
R78-96, Spons. Res. Staff, Center for Cancer Research (5/10)
R78-98, Spons. Res. Staff, Scientist/Engineer, Temporary, Full or Part-Time, Electronics Research Lab. (5/10)
R78-100, Spons. Res. Staff, Resident Admin. Officer, Provost's Office Technology Adaptation Program (5/31)
R78-101, Spons. Res. Staff, Lab. for Nuclear Science (5/31)
R78-102, Spons. Res. Staff, Lab. for Nuclear Science (5/31)
R78-103, Spons. Res. Staff, Lab. for Nuclear Science (5/31)
R78-105, Spons. Res. Staff, Physicist, Temporary, Lab. for Nuclear Science (5/31)
R78-106, Spons. Res. Staff, Cell Culture Center (5/31)

The following positions have been FILLED since the last issue of *Tech Talk*:
A78-13, Admin. Staff
B78-214, Sec. IV
B78-230, Sec. V
B78-187, Sec. IV
B77-611, Sec. IV
B78-16, Sr. Clk. III
B78-232, Clk. III
B78-82, Sec. III-IV
H78-60, Hourly
B78-221, Sec. IV
C78-10, Acad. Staff

The following positions are on HOLD pending final decision:
R78-45, Spons. Res. Staff
C78-8, Acad. Staff
B78-249, Sec. IV
B78-250, Sec. IV
B78-203, Sec. IV
R78-95, Spons. Res. Staff
H78-51, Hourly

Dance Workshop Plans Class Series

The MIT Dance Workshop will offer a weekly class for beginning and intermediate dancers on Tuesday evenings, 5:30-7pm, in the T-Club Lounge at MIT's duPont Gymnasium.

The classes will be held June 13-August 15 and will focus primarily on technique with some

CASE Cites MIT For Publications

The Council for the Advancement and Support of Education (CASE) has named MIT a Grand Award winner for the publications program prepared in support of the MIT Leadership Campaign.

CASE, in its annual competition, also gave four separate awards for visual design in print to the Alumni Association and to Technology Review, MIT's national journal of science and technology. In addition, Technology Review placed among the 10 best magazines published by US colleges and universities.

The \$500 Grand Award, sponsored by the Ford Motor Company, honored MIT for the Capital Campaign publications program created by the Office of Vice President for Resource Development and MIT Design Services.

The other awards to MIT included an Exceptional Achievement Award for illustrations that appeared in Technology Review. There were three Citation Awards—for a Technology Review cover in January, 1978; for a Technology Day mailing; and for a mailing in connection with a conference sponsored by the MIT Club of Chicago.

work in improvisation and composition. The classes will be open to the public at a charge of \$3.00 a class.

Celia Shneider, a member of the MIT Dance Workshop, will teach the classes in a style that she says, "will reflect my educational, performance and choreography background."

Ms. Shneider has received extensive training in modern dance, ballet, jazz, composition and improvisation. She is currently studying dance at the Boston Conservatory of Music's Dance Department and has taken classes with many notables in the field, including Ina Hahn, Ann Dooley, Murray Louis and Pepsi Bethel.

For the past two years, Ms. Shneider has also taught dance to children at the Winchester Children's Theater. For more information, you may contact her at x3-4737 or at 926-0929.

Postage Reminder

Postal rates have risen again. First class mail now costs 15¢ for the first ounce and 13¢ for additional ounces.

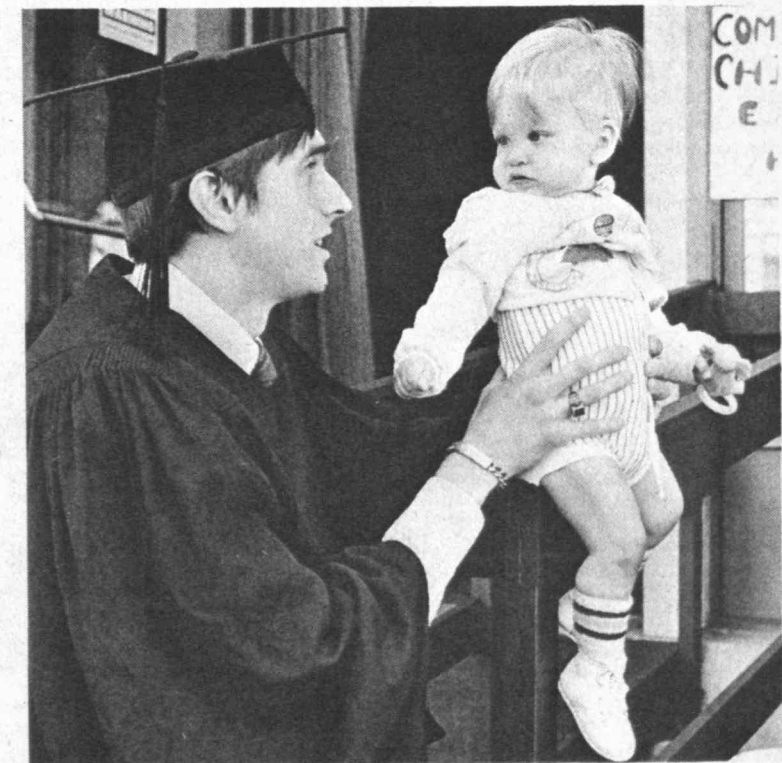
The nonprofit bulk rate also has risen from 2.1¢ per piece to 2.4¢, with an additional increase to 2.8¢ expected in July.

Bullowa Memorial

A memorial service for Dr. Margaret Bullowa, a research affiliate of the Research Laboratory of Electronics, will be held Monday, June 12, at 4pm in the MIT Chapel. Dr. Bullowa died May 18.



YOUNGER MEMBERS of the community often find commencement a bit wearying, so this year for the first time child care was arranged. Some 65 youngsters ranging in age from three weeks to 12 years were enrolled. Babies and toddlers were housed in the former McCormick dining room, pre-schoolers were entertained at the Eastgate Nursery School and older children went off to the Aquarium. Arriving at the McCormick drop-off point above are Toshioki Kataoka, who received the SM degree in ocean engineering, sons Staru, 7, and Hiroshi, 4, and Yuniko Kataoka. Below are 11-month-old Christopher Adams and his father, James W. Adams of Somerville, who received the SM degree in mechanical engineering.

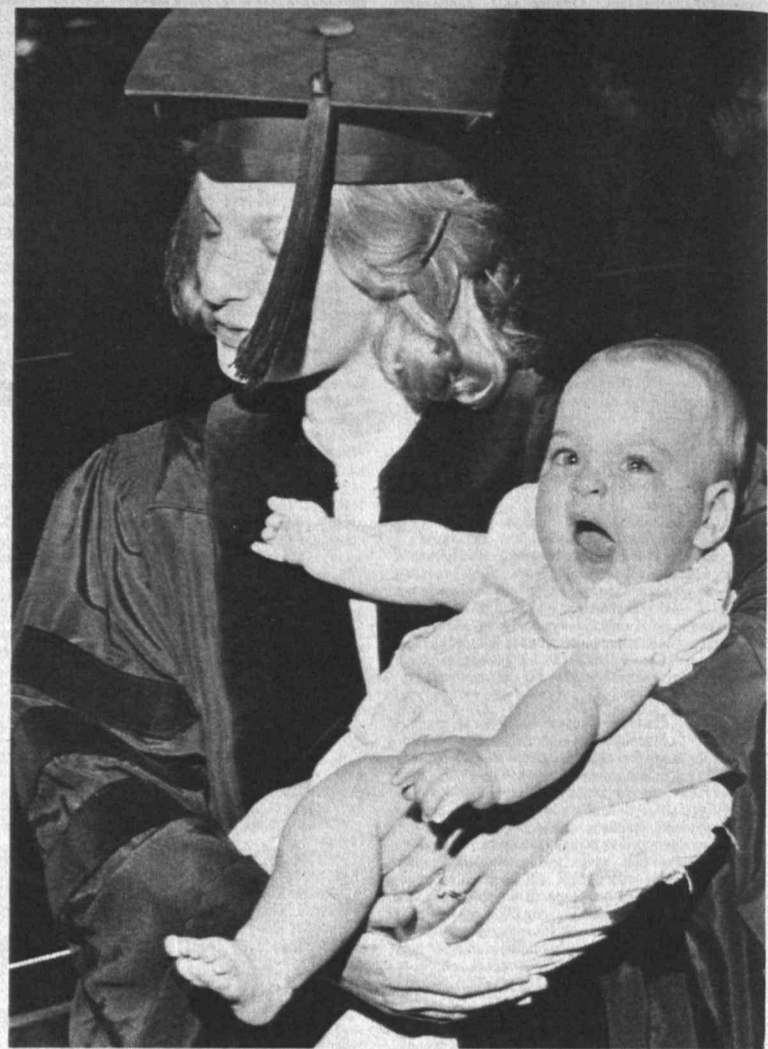


Faces of Commencement



HAPPY FATHERS from Lincoln Laboratory help their sons don cap and gown for Monday's Commencement. From left Buchanan Loesch and son Stacy, who received the SB in mechanical engineer-

ing, and Neal L. Rockowitz, who received the SB in biology, and his father, Murray Rockowitz, who came to commencement from Kwajalein Island in the South Pacific.



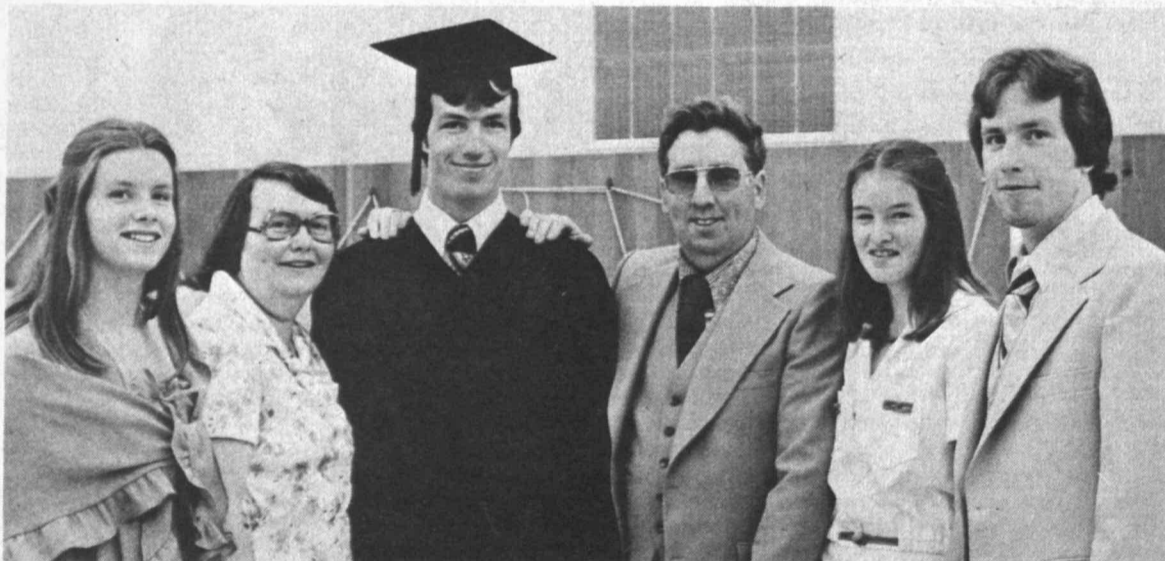
A mother with a famous MIT name—Swallow—holds her eight-months-old daughter, Lindsey Ellen Swallow, while waiting for the processional to begin at commencement exercises Monday. Mrs. Kathleen (Cline-dinst) Swallow of West Newbury, Mass., a chemistry teacher at Wellesley College, received the PhD in chemistry. Her husband, Dr. Stephen Swallow, a dentist, is a relative of Ellen Swallow Richards, MIT's first woman graduate. She was, he explained, "my father's first cousin's aunt."

Photos by Calvin Campbell



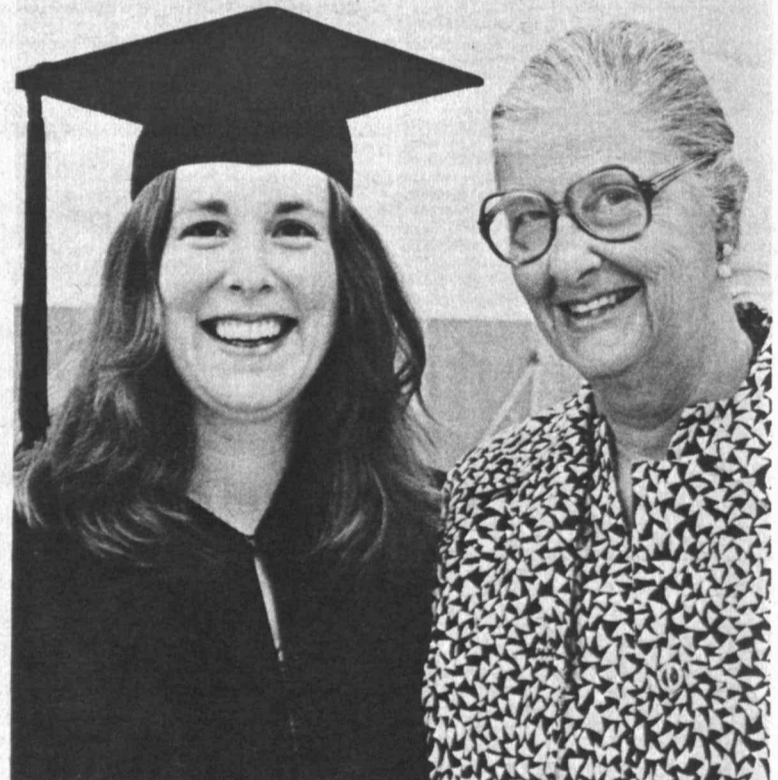
Ten of the graduates Monday received joint degrees from MIT and the Woods Hole Oceanographic Institution under a special program that was started 10 years ago. From the left are Kevin M. Ulmer of Murray Hill, N.J., John S. Tochke of Palisades Park, N.J., Kenneth B. Theriault of Watertown, Mass.,

Mary I. Scranton of Atlanta, Ga., Charles G. Paris of Williamsport, Pa., Steven J. Leverette of Miami, Fla., Gwen J. Krivi of Needham, Mass., Wilford D. Gardner of Salt Lake City, Utah, and Roger D. Flood of Natick, Mass. Not present was Edward P. Laine of Voluntown, Conn. All received PhD's in oceanography or biological oceanography.



PROUD PARENTS John and Sadie MacKinnon flank their son Richard who received the SB degree in electrical engineering at Monday's 112th commencement exercises. Mr. MacKinnon, of Sharon, is an air condi-

tioning mechanic in Physical Plant and has worked at MIT since 1962. Also on hand to congratulate their brother were, from the left, Theresa, Judy and Wayne. Brother Brian also attended but was unavailable when the photo was made.



RETURNING TO MIT with pleasure was Frances B. B. Sumner, right, who retired as humanities librarian last year, to see her daughter, Sarah A. Sumner, receive the SM degree in management.



AMONG MONDAY'S GRADUATES were five whose fathers are MIT faculty members. From the left they are Margaret Minsky and Marvin L. Minsky, Donner Professor of Science, Department of Electrical Engineering and Computer Science; John N. Little

and Professor John D.C. Little, Sloan School of Management; Francis C. Lee and Professor Francis F. Lee, Department of Electrical Engineering and Computer Science; Katherine R. Lyon and Professor Richard H. Lyon of the Department of Mechanical Engineering, and Kenneth I. Li and Professor Y.T. Li of the Department of Aeronautics and Astronautics.



PROUD MOMENT for Mrs. Lise Stein came Monday when her daughter Josephine received the SB degree in mechanical engineering. They are the widow and daughter of Joseph Stein, a senior editor at the MIT Press until his death in 1974.