Massachusetts Institute of Technology

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-Photo by James Coyne

# Killian To Succeed Vannevar Bush As Honorary Corporation Chairman

By Robert M. Byers

Dr. James Rhyne Killian, Jr., has been elected Honorary Chairman of the MIT Corporation effective July 1, succeeding Dr. Vannevar Bush who requested the change in designation as a tribute to Dr. Killian, following his retirement as Corporation Chairman on June 30.

The election came at a recent meeting of the governing board of MIT when Dr. Bush, now 81 and Honorary Chairman since 1959, announced that while he will remain active in MIT affairs as a Life Member of the Corporation, he desired to relinquish the title of Honorary Chairman in order that it might be conferred upon Dr. Killian.

Dr. Killian, who will be 67 on July 24, also will continue to participate fully in the affairs of the Institute he has served for nearly half a century. He will retire from the position of Chairman of the Corporation on June 30, but remain active as a Life Member and Honorary Chairman and as Chairman of the 150-member Corporation Development Committee. He will be succeeded as Corporation Chairman by President, Howard W. Johnson, and the Institute's Provost, Dr. Jerome B. Wiesner, will become president. Mr. Johnson earlier was elected a Special Faculty Professor by the Faculty in recognition of his leadership of the Institute over the past five years.

Dr. Bush is famed as a scientist, as an engineer and as a statesman for science and the nation.

In the 1920s while a professor of electrical engineering at MIT, Dr. Bush became a leading authority on electric power generation and transmission at a time when electrification was in a period of burgeoning expansion.

Problems of network stability and analysis in connection with transmission systems led Dr. Bush in the 1920s and 1930s, first as a professor at MIT and later as MIT's Dean of Engineering and Vice President, into the pioneering

research that laid the groundwork for the modern computer. He and others at MIT collaborated in developing some of the earliest computing machines.

In 1938, Dr. Bush became President of the Carnegie Institution, Washington, D.C., and, with war approaching, became science advisor to the late President Franklin D. Roosevelt. In 1940, at President Roosevelt's request, he organized and headed the National Defense Research Committee. In 1941, again at the request of the President, Dr. Bush organized and directed the Office of Scientific Research and Development, formed to mobilize the nation's scientific efforts for war. He headed this historic effort under President Harry S. Truman until the end of 1947.

Dr. Bush also influenced postwar science and engineering. At the request of President Roosevelt, he considered the question of how wartime experience in the organization of science could be applied in time of peace. His report, published in 1945 under the title of Science, the Endless Frontier, prepared with the aid of a host of national leaders in science and engineering, contained the outline the nation has used to encourage and support scientific advance and led to the creation of the National Science Foundation. Another book, Modern Arms and Free Men, was a Book-of-the-Month Club selection in 1949.

Dr. Bush retired as President of Carnegie in 1955 and from 1956 to 1959, when Dr. Killian, then President of MIT, served as science advisor to the late President Dwight D. Eisenhower, Dr. Bush served as Chairman of the MIT Corporation. With Dr. Killian's return, Dr. Bush was elected Honorary Chairman and Dr. Killian was elected as his successor as Chairman of the Cor-

Dr. Bush was graduated from Tufts University in 1913 and received his doctor of engineering

degree jointly from Harvard and MIT in 1916. After work in industry and government in World War I, he returned to MIT as Associate Professor of Electric Power Transmission in 1919, was made a Professor in 1923 and Dean and Vice President in 1932. His collected essays were published in 1967 under the title, Science Is Not Enough, and his memoirs, A Piece of the Action, were published last

Dr. Killian has been a leading spokesman for educational innovation in the nation's schools, for strengthening engineering education, and for greater support for basic research. A native of Blacksburg, S.C., he transferred to MIT from what is now Duke University in 1923 as a member of the Class of 1926. He graduated from MIT in 1926 and remained as a member of the staff. He became executive assistant to the late MIT President Karl Taylor Compton in 1939, and succeeded Dr. Compton as President in 1949.

The School of Humanities and Social Science, the School of Industrial Management, the Center for International Studies and Lincoln Laboratory all were established under Dr. Killian's presidency. Under Dr. Killian's leadership, MIT's financial resources have steadily increased to meet both current commitments and long-term goals which Dr. Killian helped form.

During the 1950s and 1960s, Dr. Killian served numerous government agencies and commissions. Besides being (Continued on page 5.)

### **ERRATUM**

Professor Robert M. Fano was appointed associate head of the Department of Electrical Engineering for computer science and engineering, not communications science and engineering as reported in last week's issue of Tech Talk

# Institute Groups Honor Killians At Series Of Receptions, Dinners

By Linda Omohundro

The retirement of Dr. James R. Killian, Jr., has moved the entire MIT community to pay special tribute to its most distinguished

One such tribute took place on the evening of June 3 when more than 120 present and former members of the Corporation and their wives gathered together for a formal dinner honoring Dr. and Mrs. Killian. Secretary of the Corporation, John J. Wilson, presented the Killians a sterling silver tray inscribed with the names of the 140 living persons who have been members of the Corporation since Dr. Killian was elected tenth president of MIT in

Speaking to the guests, Dr. Killian described the occasion as "characteristic of the cordial good will and sense of fellowship that mark this institution." He commended the Corporation members for their contributions to MIT-continuity, stability, strong representation of the public leadership interest, commitment.

Dr. Killian credited MIT's people--students, faculty, Corporation, alumni-for setting

The text of Dr. Killian's remarks to the alumni appears on pages 4 and 5.

the high goals and infusing the qualities which have made the Institute great. Two particular qualities have impressed Dr. Killian strongly during his 45 years at MIT: "The first of these is the quality of tension and exhilarating challenge that leads a man in this environment to stretch beyond his initial reach, to do better than his best....A second quality lies in the fact that MIT is an original....It has generated an innovative spirit that bestirs in each of us a sense of individuality and pride that arises naturally from association with something unique and first-rate."

In concluding his remarks to the Corporation gathering, Dr. Killian said, "It has been a privilege beyond price for the two of us to have spent our working life in this fellowship of the first-rate which is MIT. We are glad we traveled this way, and we depart from present responsibilities, to quote from Iolanthe 'in a true frenzy of love and devotion.' "

The following afternoon, June 4, the Silver and Quarter Century Clubs hosted a champagne reception for the Killians in McDermott Court. Hundreds of members of the community attended this event. Dr. Killian noted in his remarks that it was "the first time in the history of the Institute that we have brought together this particular combination of people."

Three other MIT presidentsformer President Julius A. Stratton, President Howard W. Johnson, and President-elect

Jerome B. Wiesner-were among the guests honoring their retiring colleague.

Speaking to the community, President Johnson said, "If there is any one member of this community who, more surely than any other, has put his stamp on the spirit and character of MIT, it is Jim Killian....During the 45 years since his graduation from the Institute, he has tirelessly served the interest of MIT-its students, alumni, its faculty, its staff, its employees." He also commented on the special sense of unity which has flourished at MIT during Dr. Killian's administration: "You've known him also as a friend and a colleague--loyal, supportive, unfailingly aware of the value of your work and of your contributions to the Institute."

Dr. Wiesner, who will become MIT's 13th president, told the audience about Dr. Killian's future plans. "This is a happy and a sad occasion. Happy because we are honoring Dr. and Mrs. Killian, two people with whom many of us have had life long associations and for whom we have tremendous affection and love; and sad as we realize that their involvements with the Institute will be less direct, although not totally severed in the future.

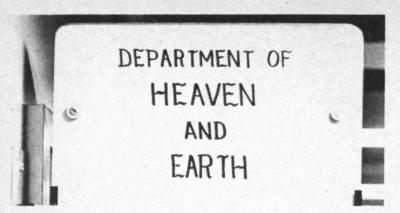
"Dr. Killian will be remaining associated with the Corporation. He is going to be chairman of our Development Committee and this morning, in a magnanimous gesture, Dr. Vannevar Bush resigned his position as Honorary Chairman of the Corporation and offered it to Dr. Killian, who was so elected by the Corporation. We are very pleased that he will have that association too."

Dr. Stratton welcomed Dr. Killian to the rank of the emeriti and described some of the attributes for which Dr. Killian is most appreciated--leadership, affectiveness, wisdom, solid principles, sensitivity, openmindedness, sense of justice, quiet wit, "and most importantly...his faith in science and technology and their implications for all mankind."

Choosing just one quality to describe his colleague, Dr. Stratton said, "...That one overriding quality would be his unfailing commitment to all that is good for MIT... Of him we have demanded much; he has given more."

Following Dr. Stratton's comments, Miss Ruth Dawson presented Dr. Killian an inscribed scroll on behalf of the Silver and Quarter Century Clubs. The inscription contained the words of (Continued on page 4.)

Tech Talk will not be published next week. Weekly publication will resume with the issue of June 30.



Atouch of whimsy denotes the Department of Earth and Planetary Sciences.

-Photo by Margo Foote

# Banquet At Walker Honors 98 Retiring Institute Personnel

Nearly a hundred employees, faculty and staff members who will retire July 1 attended a banquet in their honor on June 8 in Walker Memorial

Former President Julius A. Stratton was unable to serve as toastmaster, as had been scheduled. President Howard W. Johnson, who replaced him as toastmaster, explained that Dr. Stratton was in the hospital for minor surgery.

Mr. Johnson dedicated the evening "to the great men and women who have served so well, so long and for so many people, for the purpose of education at MIT." He pointed out that the 98 retirees "have contributed a total of 1,945 years of service." He went on to emphasize the ideals of "caring for the institution" that were the theme of his address at this year's commencement exercises.

President-elect Jerome B. Wiesner then began his remarks with a short tribute to retiring Corporation Chairman James R. Killian, Jr., who is retiring "after about a hundred years of service. I always assumed he'd still be around when I left," he said.

Dr. Wiesner also expressed the Institute's gratitude to its retiring members as he said, "You know that you have left your mark on the institution."

Dr. Paul E. Gray, Chancellorelect, associated several of the retirees with points during his own career at MIT. He spoke of a history "marked not by happenings or ideas but by peoplepeople who care for the place, people who really matter."

When Mr. Johnson returned to the rostrum, he asked "MIT's standard bearers" to stand. The families, guests and members of the Silver and Quarter Century Clubs present gave them an enthusiastic round of applause.

After the banquet, each retiring member received a special certificate of recognition "in honor of service to MIT."

Those honored at the banquet were:

Elizabeth E. Alberts, Mathematics, 11 years. Gustaf A. Anderson, Physical Plant, 13 years. Lawrence B. Anderson, Dean of the School of Architecture and Planning, 38 years.

Harold M. Armistead, Draper Laboratory, 16 years. Julia F. Ashe, Comptroller's Office, 15 years. Milton Barrette, Lincoln Laboratory, 12 years. Stanley H. Beatteay, Physical Plant, 14 years. Constance D. Boyd, MIT Press, 28 years. Raymond E. Boyd, Civil Engineering, 35 years. Walter Boynton, Electronic Systems Laboratory, 26 years. Jeremiah Brennan, Research Laboratory of Electronics, 20 years. Ethel M. Brown, Mathematics, 14 years. William W. Brown, Physical Plant, 16 years. Italo N. Brusa, Dining Service, 20 years. Edwin J. Bryan, Lincoln Laboratory, 16 years. Harold Burbidge, Lincoln Laboratory, 11 years. Ralph L. Carleton, Libraries, 5 years. Agatha S. Cataldo, Medical Department, 14 years. John W. Chamberlain, Medical Department, 31 years. Catherine B. Chisholm, Campus Patrol, 22 years. Edwin J. Clarke, Lincoln Laboratory, 17 years. Frank H. Conant, Graphic Arts, 45 years. Thomas Connolly, Draper Laboratory, 10 years.

Thomas Connolly, Draper Laboratory, 10 years.

Anna K. Corrigan, Meteorology, 23 years.

Delphis M. Cotreau, Physical Plant, 14 years.

John J. Crowe, Division of Sponsored Research, 17 years.

Ernest B. Dane, Jr., Draper Laboratory, 28 years.

Neil Doherty, Campus Housing Service, 22 years.

James P. Donahue, Division of Sponsored Research, 29 years.

Doris S. Evans, Alumni Association, 34 years.

Henry H. Ferguson, Dining Service, 19 years.

Charles Fernald, Laboratory for Nuclear Science, 19 years.

Josephine Fitzgerald, Medical Department, 28 years.

George E. Ford, Lincoln Laboratory, 10 years.

Ethel Franzese, Draper Laboratory, 15 years.

E. Lee Gamble, Professor of Chemistry, 38 years.

Henry J. Garfield, Division of Sponsored Research, 16 years.

Robert E. Goudey, Lincoln Laboratory, 15 years.

Truman S. Gray, Professor of Electrical Engineering, 44 years.

Charles E. Hamilton, Physical Plant, 22 years. Harriet Hardy, Medical Department, 21 years.

Robert J. Hayes, Lincoln Laboratory, 17 years. Wavel Hewitt, Campus Housing Service, 29 years. Madeleine Heyman, Meteorology, 29 years.

Constance Houghton, Technology Community Association, 35 years. Helen F. Howard, Sloan School of Management, 15 years.

Dorothy Hughes, Student Aid Office, 18 years. John D. Jamieson, Campus Housing Service, 28 years.

Elinor I. Jennings, Draper Laboratory, 8 years. Harry S. Johnson, Campus Housing Service, 25 years.

Harold J. Kennedy, Comptroller's Office, 7 years.

James R. Killian, Jr., Chairman of the Corporation, 45 years.

Addison F. Kiner, Campus Housing Service, 25 years.

Addison F. Kiner, Campus Housing Service, 25 years. Gladys Kwiatkowska, Dining Service, 7 years.



Graphic Arts messenger Ted Sandberg delightedly shows certificate at retirement dinner.

-Photo by Bob Lyon

Euclide J. Lacombe, Lincoln Laboratory, 18 years. Harold F. Laird, Physical Plant, 21 years. Silas W. Lynch, Division of Sponsored Research, 17 years. Robert MacGillivray, Division of Sponsored Research, 28 years. Frank J. Manalio, Draper Laboratory, 14 years. George K. McClarity, Medical Department, 8 years. Edward L. McGinley, Campus Patrol, 8 years. John W. McGuire, Draper Laboratory, 8 years. Thomas E. McKenna, Physical Plant, 20 years. Roderick A. Matheson, Ocean Engineering, 15 years. Roman Mykolaiewycz, Division of Sponsored Research, 7 years. Sidney Nelson, Lincoln Laboratory, 12 years. John T. R. Nickerson, Professor of Nutrition and Food Science, 23 years. Peter Olson, Lincoln Laboratory, 19 years. Carl M. F. Peterson, Physical Plant, 42 years. Margaret H. Peterson, Draper Laboratory, 28 years. Joseph Plamondon, Physical Plant, 12 years. Ira Preston, Physical Plant, 25 years. Richard Reavis, Campus Housing Service, 25 years. Edward Reese, Physics, 25 years. Alfred Richter, Draper Laboratory, 17 years. Giuseppe Rizza, Dining Service, 15 years. Alfred P. Rogers, Division of Sponsored Research, 23 years. Victor Saganey, Dining Service, 33 years. Theodore R. Sandberg, Graphic Arts, 6 years. John L. Sargeant, Laboratory for Nuclear Science, 27 years. Domenic Scarinci, Draper Laboratory, 8 years. Earl W. Schley, Lincoln Laboratory, 18 years. Harriet E. Schwenk, Neuro Sciences Research Program, 13 years. Paul V. Shaffer, Draper Laboratory, 27 years. Elizabeth L. Shaw, Aeronautics and Astronautics, 25 years. Lawrence A. Shelvey, Physical Plant, 27 years. Frank Sherry, Laboratory of Nuclear Science, 19 years. Olive R. Smith, Auditor's Office, 23 years. William B. Smith, Laboratory for Nuclear Science, 29 years. Leon Stoczkowski, Dining Service, 9 years. Kathryn Stone, Lincoln Laboratory, 16 years. Helen L. Thomas, Research Laboratory of Electronics, 16 years. Harry P. Walker, Physical Plant, 15 years. Oscar E. Wallin, Aeronautics and Astronautics, 24 years. Theresa R. Walsh, Metallurgy and Materials Science, 15 years. Priscilla A. Wright, Comptroller's Office, 9 years. Charlotte Yorston, Physical Plant, 19 years. Robert Zenoby, Draper Laboratory, 15 years.

## Haymarket Photo Exhibition Opens

Last year the MIT Press published Haymarket, a book of pictures and words capturing the feeling of Boston's famous open-air market by a young photographer, Wendy Snyder.

Last week, an exhibit of photographs and text from the book opened at Boston City Hall, appropriately enough, in a gallery overlooking the Haymarket area. The exhibit will continue through the end of June.

Wendy assembled the book over a three-year period during which she visited the market frequently with her camera and a tape recorder. Once she even borrowed a pushcart to see what life was like from the peddler's point of view. The resulting book is a vivid account of the relationship of the market people and their environment.

A former student of Minor White in the Institute's Creative Photography Lab, Wendy has also exhibited her works in its Gallery. Other exhibits have been at the Addison Gallery of American Art and at the John-Ester Gallery at Abbot Academy in Andover where she teaches.



Wendy Snyder, left, greets guest at Boston City Hall opening.

--Photo by Margo Foote

### TECH TALK

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# New Phone System To Improve Service

MIT's complex telephone network will be streamlined and consolidated into a CENTREX telephone system in August 1972, according Morton Berlan, Communications Officer. The CEN-TREX system for MIT has been under discussion and design since

Under the CENTREX arrangement, the Institute will have a new telephone number--253-1000. It won't be necessary, however, to call 253-1000 from outside telephones to reach an extension here. CENTREX will open all office extensions to calls from outside, bypassing the MIT switchboard operator who now routes all incoming calls. Outside callers will be able to reach extension 2222, for example, simply by dialing 253-2222.

In the change the Draper Lab will also acquire its own CEN-TREX system. Its switchboard number will be 258-1000, and Draper extensions will be accessible from outside just as the Institute's will be.

Internal calls within MIT and Draper will be easy. To call from one MIT extension to another will require dialing five digits. For example, dialing MIT extension 2222 will only require dialing 3-2222. The same procedure will apply in dialing from one Draper extension to another. Dialing from within MIT to Draper and vice versa will require the dialing of 121 followed by five digits.

All direct lines from MIT to distant points such as Lincoln Laboratory, which now are threedigit codes beginning with 8, will be changed to three-digit codes beginning with 1. For example, the code to Lincoln, which is now 811, will become 111.

Several options will be available when CENTREX is adopted, including Touchtone telephones. Another optional feature will enable a person who wants to redirect incoming calls to another extension when his office is unattended to do so on a programmed basis.

To accommodate CENTREX. the telephone company will have to install lines from its new central office building near Kendall-Square to the campus. This will require the construction of extensive underground ducts. Any sizable delay in this work could affect the projected August 1972 date of completion.

# Athletic Fee Raised

The cost of athletic cards for faculty, alumni, staff and employees will go up next month, Professor Ross Smith, Athletic Director, has announced.

As of July 1, faculty, staff and employees will pay \$25 for one year's use of the athletic facilities, an increase of ten dollars over last year's fee. The cost to alumni will jump from \$40 to \$60. Because of this year's tuition increase the student fee will still be \$3.



-Photo by Margo Foote

# Library's Bernie Is Students' Friend

Pipe smoker, inspector of little green book bags, one-time hostage in a prison break and father confessor-Bernie Hughes is all these things, and more. With his salt-and-pepper goatee, Bernie is a familiar sight behind the desk at the Student Center Library from 3 to 11 pm weekdays.

Bernie came to MIT when the Student Center opened in 1966. Before that, he studied at Tufts and taught English at Northeastern. From there be became the chief of uniformed officers at the Suffolk County Jail across the river on Charles Street.

Of his experience as a prison hostage, Bernie says, "I'd only been out of the hospital for a day and a half when this fellow came up to me with a gun and said, 'Open the guard door or I'll blow your brains out.' All I could think of at the time was 'Wow, this is just like it happens on TV.'

"The gun was loaded, too. While my back was turned, the guy fired a shot into the ground. Then he and a friend escaped in a taxi, but they were picked up again a few days later. A ballistics expert dug the bullet out of the floor later on, and we also found out how the gun had been smuggled in.

"Maybe the whole thing upset me more than I thought it did. For a lot of reasons the job was getting to be too much for me--I was even developing an ulcer. So, after 25 years there, I took an early retirement and came to MIT."

Bernie likes his new job a lot more. "I enjoy the kids," he says. "They're really great. I'm friendly with just about all of them. You wouldn't believe some of the things they tell me--things they wouldn't tell their own folks."

He spends time at home swimming in the summer and ice skating in the winter. He also keeps trim by exercising on a stationary bicycle and lifting weights.

Bernie's most distinguishing trademark to the students is the pipe he's always smoking. "I'm not a connoisseur or collector," he says, "but pipe smoking is my one

# Standing Faculty Committees Named

The appointments of the new officers and standing committees of the faculty took effect June 15. The membership of the committees is as follows:

Committee on Academic	
Performance	
Ernest G. Cravalho,	
Chairman	19
Dean for Student Affairs*	
Registrar*	
Medical Director*	

Director of Student Financial Aid\* Chairman of the Freshman Advisory Council\* 1972

1973

1973

1974

1974

1974

W. Gilbert Strang Robert D. Logcher D. Quinn Mills Arthur C. Smith John B. Southard Steven R. Tannenbaum\*\*

Prescott A. Smith, **Executive Officer** 

#### Committee on Curricula Richard L. de Neufville, Chairman

Associate Provost\* Registrar\* Chairman of the Freshman

Advisory Council\* Undergraduate Planning Professor\* Peter Elias 1972 Albert R. Gurney, Jr. 1973 Jeffrey I. Steinfeld 1973

Ralph A. Gakenheimer Jeremy F. Shapiro Rainer Weiss\*\* Robert H. Cook

Committee on Discipline Thomas B. Sheridan,

**Executive Officer** 

Chairman 1972 Dean for Student Affairs\* Elias P. Gyftopoulos 1972 Mason Haire 1973 Alar Toomre 1973 Louis D. Braida 1974 John W. Devanney, III 1974 Daniel J. Kleitman\*

Committee on Educational Policy Hartley Rogers, Jr., Chairman\* Roy Kaplow, Deputy Chairman\* Provost\*

Associate Provost\* Undergraduate Planning

Professor\* Stanley Backer 1972 George B. Flint 1972 Robert L. Halfman 1972 Daniel M. Holland 1972 Daniel S. Kemp 1972 Daniel J. Kleitman 1972 Douglas S. Luther 1972 Peter A. Messeri 1972 Michael L. Telson 1972 Rainer Weiss 1972 Suzanne Berger 1973 Alvin W. Drake 1973 Travis R. Merritt 1973 Lisa R Peattie 1973 Norman C. Rasmussen 1973 Steven R. Tannenbaum 1973

Committee on Graduate School Policy Dean of the Graduate School,

Chairman\* Associate Dean of the Graduate School, Secretary\* Assistant Dean of the Graduate

School\* **Executive Officer of the Graduate** 

1972

1972

1972

1972

School\* Director of Admissions\* Associate Chairman of the

Faculty\* James M. Austin Judson R. Baron Julian Beinart

Sylvain Bromberger 1972 Philip L. De Bruyn 1972 David J. Epstein 1972 J. Harvey Evans 1972 Morris Halle 1972 Francis B. Hildebrand 1972 John T. Howard 1972 George F. Koster 1972 1972 Charles C. Ladd Richard C. Lord 1972 Salvador E. Luria 1972 Theodore R. Madden 1972 Donald G. Marquis 1972 Lucian W. Pye 1972 Norman C. Rasmussen 1972 Whitman A. Richards 1972 Warren M. Rohsenow 1972 Peter Temin 1972

# Committee on Industrial Liaison

Glein C. Williams,	
Chairman	1973
Donald C. Carroll	1972
Nicholas P. Negroponte	1972
Sanford A. Miller	1973
Regis M. N. Pelloux	1974
Richard D. Thornton	1974

## Committee on Libraries

Glenn C. Williams

Gerald N. Wogan

**Executive Board:** Henry A. Millon, Chairman 1975 Director of Libraries\* Associate Director of Libraries\* Bruce Mazlish 1972 Roy Kaplow# 1973 C. Gardner Swain 1973 Thomas J. Allen# 1975

Advisory Board: Michael B. Bever William F. Bottiglia Herbert S. Bridge Boruch A. Brody Evsey D. Domar Richard M. Dudley John D. Fedor Merrill F. Garrett Raymond H. Grenier Allan F. Henry Daniel M. Holland Stanley H. Hyman Norman Jones Charles Kingsley, Jr. Theodore P. Labuza William H. Pinson, Jr. William L. Porter Ronald F. Probstein Robert C. Reid Jose M. Roesset

Eugene B. Skolnikoff

Harold Y. Wachman

Victor P. Starr

Ronald F. Probstein

Committee on Nominations# William T. Martin.

Chairman 1974 Richard L. Cartwright 1972 John M. Deutch 1972 Stephen D. Senturia 1972 Sheila Widnall 1973 Robert M. Solow 1974

## Committee on Outside

<b>Professional Activities</b>	
Thomas M. Hill, Chairman	1972
Robley D. Evans	1972
Robert W. Mann	1973
John M. Deutch	1974
Robert J. Hansen	1974

# Committee on Staff.

Committee on Stair-	
Administration	
Staff:	
David C. White, Chairman	1974
Robert J. Kolenkow	1972
Lynn W. Gelhar	1973
John B. Heywood	1973
Edward H. Bowman	1974
William M. Rand	1974

#### Administration:# Robert A. Alberty

Alfred A. H. Keil Albert G. Hill William F. Pounds Walter A. Rosenblith Constantine B. Simonides

#### Committee on Student Environment

John C. Graves, Chairman	1973
Dean for Student Affairs*	
Associate Dean for Student	
Affairs*	
Louis L. Bucciarelli, Jr.	1972
Martin Deutsch	1972
Russell C. Jones	1973
Joel A. Huberman	1974
Richard C. Tremaglio	1974
Stanley Backer**	

### Committee on Undergraduate

B	
Admissions and Financial	Aid
Leon Trilling, Chairman	1972
Director of Admissions*	
Director of Student Financial	Aid*
Registrar*	
Arthur D. Kaledin	1972
Frank S. Jones	1973
Milton L. Lavin	1973
Mildred S. Dresselhaus	1974
August F. Witt	1974
Alvin W. Drake**	

\* ex officio

\*\* Appointed from the Committee on Educational Policy

# Presidential appointment



Four Presidents and five first ladies: left to right, President-elect Jerome B. Wiesner, President Howard W. Johnson, former President James R. Killian, Jr., and President Emeritus Julius A. Stratton. Below, Mrs. Wiesner, Mrs. Johnson, Mrs. Stratton, Mrs. Killian and Mrs. Karl T. Compton, widow of MIT's ninth President.

-Photos by Bob Lyon

# Recent Honors To Dr., Mrs. Killian

(Continued from page 1.)

an old Irish blessing, a favorite of Dr. Killian's.

After accepting the scroll, Dr. Killian expressed his appreciation for the encouragement and support of the employee group at MIT. He cited Nick Carter, master of ceremonies at the reception and representative of the Quarter Century Club, for standing "as a symbol of the extraordinary loyalty of our people at MIT." And he thanked those who planned the happy gathering.

Dr. Killian continued by expressing his confidence and enthusiasm in the future of the Institute, emphasizing his belief that the ongoing leadership of Mr. Johnson, Dr. Wiesner and Dr. Gray "will provide a wonderful new chapter for MIT."

In closing, Dr. Killian spoke again about the people who work at MIT: "I think one of the things that makes MIT great is the fact that there is a willingness of all people to work together with mutual forbearance, with a willingness to resolve difficult problems by common efforts, and with a purpose, a common cause-that being the advancement of the institution. Those of you who represent the employees of the Institute have shared in this kind of spirit...and no institution can be great without this kind of love and affection."

Then on Monday, June 7, at the close of the Homecoming Seminar, alumni from classes as far back as 1921 assembled to pay tribute to

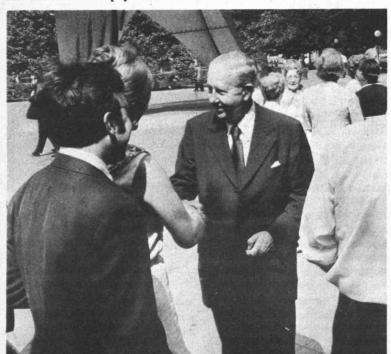
Dr. Killian. David A. Shepard, '26, a life member of the Corporation and close friend and classmate of Dr. Killian's, told the audience about their student days at "Tech". He recalled their working on the staff of The Tech and the severity of the Great Court, which was then paved with gravel.

Mr. Shepard described the inauguration ceremonies in April, 1949, at which Dr. Killian was invested as the first MIT alumnus to become president of the Institute. At that time some 40,000 living alumni sent him a salute and good wishes for his new job. "Now, 22 years later, a larger group of living alumni, over 55,000, salute him with thanks."

On behalf of the Alumni Association, Mr. Shepard presented Mr. Killian a handsome book containing a bibliography of his writings and speeches. A special preface for the book was written by Professor John Burchard, dean emeritus of the School of Humanities and Social Science

Following the Alumni Assembly in Kresge, a reception was held for Dr. and Mrs. Killian in the duPont Gymnasium.

Dr. and Mrs. Killian have previously been honored by MIT alumni groups in Dallas, San Francisco, Mexico City, Philadelphia, Chicago and New York City. Earlier this spring the New York Alumni Center sponsored a festival of music at Carnegie Hall and Lincoln Center as a tribute to the Killians.



Dr. Killian meets members of the community at the Quarter Century and Silver Clubs' reception in his honor.

--Photo by Bob Lyon



# Killian Speaks To Homecoming Alumni

Fellow alumni and guests:

You have heard some tall stories from this tall man over here, but they were sweet to hear. At an emotional time such as this, it is hard to find the right words to respond, but I hope you understand what is in my heart.

I can't imagine all of the speeches and articles of mine that might be listed in this book; I am afraid to look at it as a matter of fact for fear that I may be appalled by my prolixity. But I am deeply grateful to John Burchard and all of those who worked on preparing this bibliography. I shall cherish it as a handsome and lovely book, typography being one of my avocations.

Let me now say a few words about the extraordinary experience my wife and I have had in the last six months, thanks to the planning of a committee of Alumni Association past presidents. We have been to eight different alumni occasions since last February. All told we have seen over 5,000 alumni and their guests, a fair sampling of our total alumni body. And this has been a truly wonderful experience. The warmth, the sense of fellowship, the sense of sharing in the responsibilities of this institution, the sense of caring that Howard Johnson talked about this morning that we have found everywhere we have been, have testified to the wonderful quality of world-wide academic this community; and it is wonderful to have had this sampling, this opportunity to get a real grassroots feeling for what the greatness of this institution is, what its alumni have accomplished, what they mean in terms of the welfare of this country, their mastery in their fields, their contribution to so many different walks of life, the way that they have augmented the quality of American life. We have had a chance to sense this, as I say, in a grass-roots way, and I delight in the opportunity of expressing our sense of appreciation and gratitude to this group meeting

here. Somewhere someone said (was it the late Ogden Nash?) "Isn't it a joy to be a fossil." It is a joy in a sense, but there is also a sadness in the recognition that one becomes a fossil, that one gives up arduous duties, gives up the flood of contacts one has been having in a situation where life is exciting and the pressure is high. There is an inescapable sadness. But that sadness is certainly tempered and eased for Liz and me by the prodigal good will that we have found in all the meetings that we have been to-the Corporation dinner, the meetings of alumni, the Quarter Century-Silver Club reception, and this gathering today. So I thank you with all my heart.

Indebtedness to Associates

I would also like to pay some tributes, this being my last opportunity and occasion. One of the strengths of this institution has been the effective relationship of our Alumni Association to the administration of the Institute and all of its work. I think this has been wonderfully shown in the last year under the administrative leadership of Paul Keyser as President of the Alumni Association. As you know, the President of tne Association serves on the Corporation. In this particular year of service, he served on the Committee on the Presidency. He served on CJAC and other committees. He has made a tremendous contribution to the government of this institution. Also, the staff of the Alumni Association have served Howard Johnson and me constantly and effectively. I think you as alumni, as members of the Alumni Association, can appropriately feel that you are well represented and well led.

I am grateful to all of those who participated in the panel discussions and dealt so effectively with the topic that I feel to be of great importance. I especially am grateful to Professor Skolnikoff for

the preparatory work he did in

arranging for these discussions. I feel an indebtedness to scores of associates throughout the Institute, but on this farewell occasion I want to express personal indebtedness to some of my immediate colleagues who have shared the work of the Office of the Chairman of the? Corporation, people who have added to my reach over the years with so much high competence and dedication to the Institute. I speak first of Vincent Fulmer, Vice President and Secretary of the Institute. In the conduct of the Corporation's business he has been essential and he has been a major factor in augmenting the Institute's resources. He and his associates in the Development Office warrant our gratitude and acclaim.

### Recalls Inaugural

Second, is Walter Milne, who has been so much more than my assistant, although his help to me has been constant and selfless. Walter has also been an effective ambassador of the Institute to the citizens of Cambridge and has contributed immensely to the discharge of our community responsibilities. The one man in the last several years who has made the greatest contribution to improving our community relations has been Walter Milne.

And third, I speak of a colleague to whom I owe an everlasting debt of gratitude, Elizabeth Pigott, my Administrative Assistant and Secretary, whose professional skills, sound judgment, and deep loyalty to the Institute have been and continue to be indispensable resources to me and to the Institute.

Dave mentioned that twenty-two years ago we had an inauguration, and I went back just the other day to see what I said on the occasion. Let me by way of closing quote a few paragraphs in that inaugural address because I think they relate to the Alumni Day program and the panel discussions we have had

June 17 through June 25, 1971



this morning and afternoon. I said at that time that one of my pleasant recreations was mountain hiking, the climbing of the gentler, more ladylike mountains that one can find in New England "Today," said I, "as I stand at the base camp of the Institute's presidency, a rugged mountain but shining, I remember the observation that in mountain climbing, every step is a debate between what you are and what you might become." How much I understand that now. This bracing challenge of the mountain climber heightens my appreciation for the gracious welcome and good wishes that I received at that time and now receive again. And then I went on, "I am sure, however, that you will forgive me a special privilege if I boast about M.I.T. I am proud to express my faith in its mission and in its future. I am proud of my colleagues on the Corporation, on the Faculty, and among the alumni. My pride in each of these is but a measure of my respect and my affection for its students, those who are here now in the fullness of their youth and those who once were here and now are working alumni...All these, together, have been weavers of brilliant strands of spirit, of high achievement and high ideals, which make up the rich fabric of this institution."

Reviews Contributions
"To return to my mountain
metaphor, no one remains at
Technology very long without
sensing altitude, the invigorating
winds which blow from all
quarters, the energizing sunshine
of discussion and discovery, the
long view."

"And now," asked I at that time, "what of the future? The development of an institution," I suggested, "is like the printing of a colored print. The first printing lays down the design, as did Rogers for M.I.T. Successive printings create new values, increase the depth, fill in the colors. How may we continue to enrich the design of our institutes of technology so that they may reflect the changing values and needs of our free society?" "We are faced, I suggest, with three imperatives: First we must continue the creative contributions which science and engineering can make to modern life."

I say that now again. "Second, we must educate for professional and social responsibility."

I say that now again. "And third, we must maintain the freedom and independence of our institutions." I would say that again.

Then I went on finally to say that I review these fundamental contributions of science to national and international welfare to emphasize that we need more and not less science and technology if we are to meet the problems of our society. "All the silly talk about a science holiday is as dangerous as the talk some years ago about economic maturity. Science and technology, under enlightened direction, are essential to the health, prosperity and security of our country. In addition, both of them give you and me more freedom to be socially responsible citizens, to be good neighbors, to pursue the good life, to seek ways of making it unnecessary ever again to divert science away from its normal peaceful objectives." And again I would reiterate that in what I say to you in this swan song.

#### Thanks Fellow Alumni

Finally, I recall the words of Vannevar Bush in his beautiful essay, "The Builders." It concludes with words that express appropriately my own sentiments on this occasion.

"There are also the old men," he said, "whose days of vigorous building are done, whose eyes are too dim to see the design of the arch or the needed form of its keystone, but who have built a wall here and there, and lived long in the edifice, who have learned to love it and who have even grasped a suggestion of its ultimate meaning; and who sit in the shade and encourage the young men."

That is what I would like to do in the months and years ahead: to sit in the shade and encourage young men. Thank you very much ladies and gentlemen.

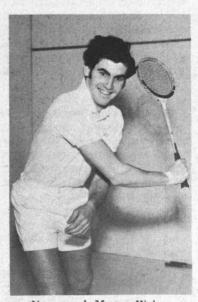
## **Bush Steps Down**

(Continued from page 1.)

Presidential science advisor from 1957 to 1959, he was an original member of the President's Science Advisory Committee and was chairman of the President's Foreign Intelligence Advisory Board. He was chairman of the Carnegie Commission Educational Television and is a member of the board of directors of the Corporation for Public Broadcasting which Congress established following the Carnegie Commission study. In 1969 he was appointed by the President and confirmed by the Senate as a member of the General Advisory Committee of the U.S. Arms Control and Disarmament Agency.

Meantime, earlier this week, President Johnson, who succeeds Mr. Killian on July 1, was elected to be one of two new Vice Chairmen of the Board of Directors of Federated Department Stores, Inc. Mr. Johnson will have responsibility for Federated's central staff and will devote major attention to corporate strategy. Mr. Johnson will make his home in Wellesley, Mass., however, and will give first priority, as Chairman of the MIT Corporation, to Institute affairs.

Dr. Killian last week moved into new offices in 9-235 (Ext. 1515). New offices presently are being readied for Mr. Johnson in Building 5. For several weeks after July 1, Mr. Johnson will occupy the Provost's office, Room 3-234 until his new offices are ready. Dr. Wiesner will occupy the office at 3-208 where Dr. Killian formerly was located and Dr. Paul E. Gray, elected Chancellor at the time Dr. Wiesner was elected President, will use the office now occupied by Mr. Johnson at 3-208. Dr. Wiesner and Dr. Gray will use the same common reception area formerly shared by Dr. Killian and Mr. Johnson.



New coach Manny Weiss.

# Weiss To Coach Two Frosh Teams

Professor Ross Smith, Athletic Director, has announced the appointment of Manny Weiss, '70, as coach of freshman tennis and squash.

Mr. Weiss, who was graduated from MIT earlier this month, becomes the first Tech graduate to serve full-time on the physical education staff. He succeeds Kirk Randall, who is leaving MIT to become manager and squash professional at the Union Boat Club of Boston.

In addition to Mr. Weiss's new coaching duties, he will also teach physical education classes in squash and tennis. Captain of the 1970 tennis team, he was a member of one of the squad's best doubles

### Reports Available

The Information Office (Room 7-111) now has these publications available:

Knowledge and Values, a transcript of a seven-session colloquium sponsored by the Commission on MIT Education,

A series of brochures containing helpful information for tourists, including Boston, a guide to restaurants, shops, accommodations and services put out by the Avis Company.

### New TT To Continue

Tech Talk's six-week experiment in newspaper format officially ended with last week's issue, but is being extended through the summer. Initial reaction to the new format has been mixed, ranging from "It is much more convenient to have all of the news and information in one place," to "basically unimpressive to look at." Two things are certain, however; publishing Tech Talk this way is more flexible and economical.

During the summer we will continue to experiment with various ways of presenting community news and announcements in an effort to develop a style and identity for the paper. We hope you will continue to tell us what you like and dislike as we go along.

There will be no paper next week. *Tech Talk* will resume publication on June 30.

# Seminars and Lectures

Monday, June 21 Comparison of Steady State One Dimensional Cumulus Models with Observations+

Joseph Levine, Department of Oceanography, Florida State. 4 pm. Room 54-1311.

### MIT Club Notes

Baker House SPAZ Jogging Club++ Jogging around BU and Harvard

Bridges.
Daily 10:45 pm. Baker House,
Second Floor West.

Outing Club+

Thursday, June 17; Monday, June 21; Thursday, June 24; 5 pm. Student Center, Room 473.

Nautical Association ++
Basic Sailing Shore School
Repeated every Wednesday
throughout the summer, 5:15 pm.
MIT Sailing Pavilion.

Science Fiction Society+ Friday, June 18; Friday, June 25; 5 m. Spofford Room, 1-236.

Pot Luck Coffee House+ Friday, June 18; Saturday, June 19; Friday, June 25; 8:30 pm. Student Center, Mezzanine Lounge.

MIT-DL Duplicate Bridge Club++ Tuesday, June 22, 6 pm. Student Center, Room 473.

### Movies

Love in Simla + SANGAM film starring Joy Mukherji and Sadhna. Sunday, June 20, 3: 30 pm. Room 26-100.

Members \$1.25; non-members \$1.75, for more information call 491-0080.

Gopi+ SANGAM film starring Dilip Kumar and Sairabano.

Saturday, June 26; Sunday, June 27, 3:30 pm. Room 26-100.
Members \$1.25; non-members \$1.75, for more information call 491-0080.

## Dance

Modern Dance Classes++ Intermediate-Advanced

Thursday, June 17; Thursday, June 24, 5:30 pm. McCormick Gym.

Israeli Folk Dancing+

Every Thursday; party last week of each month.

7:30 - 11 pm. Student Center, Room 407.

Basics taught from 7:30 - 8:30 pm

Friday Afternoon Dance Break+ MIT Folk Dance Club

International Folk Dancing on the Oval lawn in front of Krege Auditorium. Every Friday, 12 - 1 pm.

Dance Development Class++ Friday, June 18; Monday, June 21; Wednesday, June 23; Friday, June 25, 5:15 pm. McCormick Gym.

International Folk Dancing+ MIT Folk Dance Club Sunday, June 20, 7:30 pm. Student Center, Sala de Puerto Rico.

Balkan Dancing+ MIT Folk Dance Club Basic, Intermediate, Advanced Every Tuesday; party first week of

7:30 pm. Student Center, Room 407. For more information call Jane Weiman, 876-5609.

each month.

Square Dance Club+ Tuesday, June 22, 8 pm. Student Center, Room 491. For information call x6213.

### **Exhibitions**

Seymour Lipton: Recent Sculp-

20 sculptures from the past five years, of nickel, silver or bronze on Monel metal. Sponsored by the MIT Committee on the Visual Arts, courtesy of Marlborough Gallery, NY. Drawings by Seymour Lipton are on exhibit in the Hayden Lobby.

1-5 pm daily through the summer. Hayden Gallery and Courtyard, through September 19.

Steamboat Design+

Details of Robert Fulton's steamboat "North River" and other early American steamboats. Hart Nautical MuseumBuilding 5, First Floor, through the summer.

Deep-Ocean Mining+
Material from Sea Grant Project
Office.

Office. Hart Nautical Museum, Building 5, First Floor, through the summer.

Main Corridor Exhibitions+
Presented by students and departments.

Buildings 7, 3, 4, 8.

### Athletics

Summer Rugby+ Thursday, June 17; Tuesday, June 22; Thursday, June 24, 5 pm. Briggs Field.

# Religious Services and Activities

Christian Bible Discussion Group+

For details contact Professor Schimmel, x6739. Thursday, June 17; Thursday,

Thursday, June 17; Thursday, June 24, 12:15 pm. Room 20B-031.

Roman Catholic Mass Sunday, June 20, 11 am. MIT Chapel.

Islamic Society Prayers Every Friday, 12 noon. Student Center, Room 473.

### Don't Forget

Graduate Record Examinations will be administered on Saturday, June 19. For more information drop by E19-455.

The Institute of International Education has opened the 1972-73 competition for grants for graduate study or research abroad. Full grants are available to 29 countries and travel grants are available to 12 countries. Grants offered by foreign governments, universities, and private donors of 14 countries are also administered by IIE. Information and application packets can be obtained from the Foreign Study Office, 10-303, x5243. Dean Hazen will be available to discuss the programs and advise prospective applicants. applications deadline for processed through MIT is Friday, October 8, 1971.

Finally, The Muddy Charles Pub, 110+ Walker Memorial, has longer, more thirst quenching hours, weekdays, 11 am - 7:30 pm. Drop by and join your friends.

+Open to the Public ++Open to the MIT Community Only +++Open to Members Only

+++Open to Members Only ++++Freshmen interested in departmental program encouraged to attend.

Send notices for the week of June 24 through July 2 to Calendar Editor, Room 5-122, Ext. 1766, by noon on Friday, June 18.

# Course XIII Receives New Name To Reflect Expanded Objectives

The name of the Department of Naval Architecture and Marine Engineering, the oldest academic department of its kind in the US, has been changed to the Department of Ocean Engineering to reflect expanding programs in teaching and research and growing interrelationships with other engineering disciplines.

Dr. Alfred A. H. Keil, professor and head of the department, who will become dean of the School of Engineering July 1, said faculty and students increasingly in recent years have found their interests expanding into the broad areas of ocean use and ocean environment.

"The spectrum of engineering activities for any field of engineering encompasses not only the relevant engineering sciences, but also advancing technology and systems analyses-including the impact of modern computer technology-as well as the application of this background in the derivation of concepts, the design of equipment and systems, and the production process," Dr. Keil said.

"The fact that MIT has a strong graduate school of Naval Architecture and Marine Engineering made it possible to get an ocean engineering curriculum of sufficient breadth of coverage established as long ago as September 1967.

"The broadened educational program is not only of benefit to the students of ocean engineering, but also to many other students who take ocean engineering subjects as electives.

The new name, Dr. Keil said, does not signify a diminishing of interest in the traditional concerns of naval architects and marine design engineers--ship construction, which is part of the department, Dr. Keil said, will continue to be a leader in ship design, ship hydrodynamics, ship structural research, propeller and propulsion systems ship development and sailing yacht design.

"In short, the broadening of the department's responsibilities to include all man-made systems relating to the oceans implies no slackening in MIT's ship-related programs," Dr. Keil said. "Rather, the department's long-standing expertise in marine vehicles and selected engineering sciences forms a solid foundation upon which to build an even stronger base for its efforts.

"The goal of the department's educational programs, whether they lead to ocean engineering or naval architecture degrees, is to develop young men who are ready to conceive, initiate, carry through and ultimately direct large-scale engineering projects having to do with the oceans."

The department's first series of graduate degree programs in ocean engineering began three and a half years ago. The department also has a five-year program leading to the simultaneous award

of bachelor and master of science degrees in naval architecture, marine engineering, shipping and ship building management. A joint MIT-Woods Hole Oceanographic Institute advanced degree program in ocean engineering was added in 1969.

Change to reflect expanding interest is not new for the department.

The department itself was formed in 1893 by the late Professor Cecil H. Peabody of the mechanical engineering department whose own interests in steam power had drawn him into what was then the emerging technology of marine steam propulsion.

Twenty years later, professors in the department-notably Jerome Clark Hunsaker-found their own interests expanding from vehicles designed for the medium of water to vehicles designed for the medium of air and they began teaching-in the naval architecture marine engineering department--the nation's first academic courses in aeronauticl engineering. This eventually led to the formation of what is now the Department of Aeronautics and Astronautics.

The department has long been pre-eminent in the teaching of ship design and construction. Since 1901 the U. S. Navy has sent graduates of its academy to MIT for three years of postgraduate study and an MIT alumnus has been the chief architect for virtually every ship of the line the Navy has built over the past half century.

One of the latest developments to come from the department was a doctoral thesis which later led to the design of the ice-breaking bow of the supertanker, Manhattan, built to explore an all-weather water passage to the oil fields on the north coast of Alaska.

MIT's interdepartmental Sea Grant Program, supported by the National Oceanographic and Atmospheric Agency under its National Sea Grant Program, grew out of the Department of Ocean Engineering. Under this program, headed by Dr. Keil, interdisciplinary groups from throughout the Institute are engaged in a variety of research programs having to do with ocean use and coastal zone development.

# Computer at ESL Reads News Wires

For the past six weeks Tech Talk has been testing a new automatic information retrieval system developed by Professor J. Francis Reintjes and his staff at the Electronic Systems Laboratory.

The system uses a computer to read wire service news directly from teletype machines and print those that are of interest to the client. The Tech Talk staff ranked each Associated Press and United Press International story by its relevance to the newspaper and to

the Institute. Using these rankings, key words and phrases were given numerical weights varying from zero to 12. For example, words such as "MIT," "Howard Johnson," and "Harvard" were valued at 12. Others such as "Apollo" and "NASA" had lower ratings.

These rankings were used to create a profile of interest that matched *Tech Talk's*. When the computer read the wires, it used this profile, adding the weights of every word in a story to arrive at an estimate of the story's importance. The computer printed all stories with weights of 12 or more, while it ignored those with less than 12.

When the system began operating correctly ESL was able to deliver a condensed wire containing only stories of interest to Tech Talk. Naturally the system still had problems. A number of stories of marginal interest about the recent tax legislation in Massachusetts were included because they repeated the key word "tax" so often. The computer also included all stories about Tricia Nixon and her wedding plans because it could not differentiate between the President and his daughter. ESL could have solved these problems, but only by reducing the total number of stories selected, including some important stories.

According to Bob Polansky of ESL, the system can be used not only to select stories, but also to monitor the wire services and alert editors of breaking news. In actual operations, newspapers would have a remote terminal on line to the computer and could alter weights and instructions at any time

ESL is doing this and other related research under sponsorship of the American Newspaper Publishers Association. Using data from the experiment with *Tech Talk* they will publish a report on the system, which has a variety of potential applications within the publishing industry.

# Draper Lab Gets First Vice President

Brigadier General Robert A. Duffy (USAF), who will retire July 31 as Vice Commander of the Air Force Space and Missile Systems Organization in El Segundo, California, has been appointed to the newly-created post of Vice President of the Draper Laboratory, following his retirement.

Announcement of the appointment was made jointly by Dr. Albert G. Hill, chairman of the board of directors of the Laboratory, and Dr. Charles S. Draper, founder and president of the Laboratory.

The Draper Laboratory became an independent division of MIT with its own board of directors a year ago after the Institute decided to divest the Laboratory over a period of time.

In a letter to the Laboratory's 1,800 employees, Dr. Hill and Dr. Draper said General Duffy has a distinguished record of "proven

competence as a leader of large technical organizations."

"General Duffy not only will strengthen the Laboratory's abilities in the areas it has traditionally worked but also will enthusiastically endorse and energetically assist in efforts to apply its talents in pioneering technology to the problems newly perceived as critical to our society," they said.

General Duffy, 49, entered the Army Air Corps in 1939, was commissioned in 1942 and served as a group ordnance officer in Italy in World War II. He served at the Air Proving Ground, Eglin Air Force Base, and subsequently received the S. B. degree in aeronautical engineering from Georgia Institute of Technology in 1951. From 1952 to 1953, he was a special student at MIT working with Dr. Draper and his associates on early guidance systems when the Draper Laboratory was a part of the Department of Aeronautical Engineering. General Duffy then completed a year of industry training with General Motors Corporation, and graduated from the Air Command and Staff School.

From 1958 to 1963, General Duffy was assigned to the Guidance and Control Directorate of the Air Force Ballistic Missile Division and from 1963 to 1967 he served in the Office of the Director of Defense Research and Engineering in the Department of Defense. He became Deputy for Re-entry Systems in the Space and Missile Systems Organization in 1967 and became Vice Commander of SAMSO in August, 1970.

In 1964, General Duffy was awarded the Thurlow Award of the Institute of Navigation for his work on the application of inertial guidance equipment to military vehicles. His decorations include the Legion of Merit. He is married to the former Elizabeth Reed Orr and they have a son and three daughters.

# MIT Examines Own Environment

Physical Plant has undertaken a continuing program of studies to determine proper methods of pollution prevention and control at the Institute. According to Philip A. Stoddard, vice president for operations, this program is to ensure compliance with existing state and federal regulations as well as to investigate new ideas for solving ecological problems.

During the past two years Physical Plant has studied the use of phosphates and emission of sulfur oxides. Solid waste compactors also have been examined for use around the campus.

Deputy Director of Physical Plant Donald Whiston is in charge of the program and will receive suggestions and assistance from the community in hopes of improving our environment. Professor David G. Wilson of mechanical engineering, well-known in the field of recycling wastes, is an advisor to the program.

## Summer Session Starts This Week

Summer school at MIT once again has gotten into full swing.

Two separate groups of subjects are available. Regular students can take Summer Session subjects which are also taught during the fall and spring terms. In addition, the Institute offers Special Summer Programs for employees in industry who want to get up to date in a particular field, such as the popular "Engineering Aspects of Heat Disposal From Power Generation."

Most of the 2,100 students who stay at MIT for summer courses are graduate students doing research for their theses. About 100 students on co-operative programs must do their studying during the summer, which is actually a regular term for them. Tuition for the Summer Session is comparable to that during the regular school year.

The Special Summer Programs, on the other hand, fill their classes with professional men and women. Each class runs from 9am to 5pm for a week or two in concentrated study fashion. The tuition, which is usually paid by the employee's firm, averages about \$340 for a one week subject and \$550 for one that lasts two weeks.

Enrollment for the Summer Session, which began Monday and will last until August 26 is about the same as it always has been. The Special Programs, which are held at staggered intervals throughout the summer, have suffered a 20% drop in participation, however. "This follows the economic situation very well," says Professor James Austin, director of the Summer Session.

# Greenspan Calls For Pre-Paid Transit

By Ty Rabe

Professor Harvey Greenspan is waging a one-man campaign for pre-paid public transportation.

He contends that a graduated prepayment for transportation, collected along with income taxes, would be cheaper for everyone.

Dr. Greenspan, professor of applied mathematics, began his campaign in a letter published in the New York Times last winter. Since then he has continued his effort with more letters, speeches to civic groups and other organizations, interviews with the press and consultations with government officials.

"The cost of public transportation should be paid by everyone who uses it or should be using it," Professor Greenspan says. "Simply put, this means that the fare system is discarded and replaced by a modest general tax on all who draw their incomes from within the city.

Dr. Greenspan strongly criticizes the present quality of urban life. He calls conditions in America's core cities so bad that "the most stringent measures are appropriate now" if cities are to be saved and made liveable. Along with most urban experts, he attributes the principal difficulties

to the high number of automobiles and believes that the only long range solution is a reversal of the trend towards "an intolerable volume of vehicular traffic."

The existing alternative to the private automobile, Dr. Greenspan says, is completely inadequate. He calls the prevailing system of direct payment for public transportation by means of a fare collection "inefficient and outdated ... sustained by large yearly subsidies to cover increasing deficits."

As an example, Dr. Greenspan cites Boston's own Massachusetts Bay Transit Authority system. The MBTA, he says, costs \$130 million a year. Fares, which average 35 cents, yield only \$58 million, and state aid adds \$16 million. The remaining \$56 million deficit this year must be raised by an adjusted property tax assessment in each of the 79 participating cities and towns. In addition to the assessment, everyone who rides the MBTA must pay a fare, which costs the working commuter in Boston \$175 a year.

On the other hand, a graduated prepayment for transportation collected along with income taxes and levied against those who live or work in the central city would, in the case of Boston, range from \$130 to \$200 per year per person, in many cases less than the average now paid in fares. The revenue from this source alone would be \$140 million, or \$10 million above present estimated costs. Other funds from state aid, related business taxes, transfers from highway funds, and especially savings from more efficient transit operations, would swell this surplus. Fare-related costs such as accounting and charge-making presently make up between 10 percent and 30 percent of the entire MBTA budget.

"Flushed with money, needed improvements could undertaken at once, or planned with some assurance. These would incluce increased parking facilities, new radial and belt rapid transit routes, expanded service on all lines, new equipment purchase, better maintenance and even salary increases as warranted."

Dr. Greenspan points out that fewer than half of the 800,000 job holders in the central city of Boston use public transportation. Those who do must pay both fare and property assessment, while those who do not must pay the assessment with no visible benefit returned. A prepayment tax would be better because it would encourage the owners of private vehicles to use public transportation and at the same time it would allow improvement of the mass transit system so that such a switch is both possible and attractive. The tax payer at last would receive something tangible for his money--free transportation for all.

In addition to decreased traffic congestion, the no-fare system also provides many secondary benefits. 'Travel within the city would be unrestricted and never a financial liability to anyone, including the

poor and unemployed. All segments of society could partake fully in the activities and opportunities of city life and. . . . a major step is achieved in the revitalization of the central city. Moreover, an increase in business activity and tourism would provide new economic growth."

Dr. Greenspan likens critics of the no-fare system to "people who set up wooden soldiers and then knock them down." There is, he says, simply no reliable method for predicting the problems which the proposed change might face. All objections to the switch are guesswork, with as many reasons to be discarded as to be believed. On the other hand, raising fares, which remains the transit expert's favorite remedy for transit ills, has consistently failed to help

"Fares have been raised regularly for 25 years, and the problem grows worse without interruption. A fare increase means fewer passengers and consequently more cars and traffic, and in this respect the limit of toleration has been reached."

Dr. Greenspan feels little sympathy for commuters who drive into the city from distant suburbs. They have, he says, been receiving a subsidy themselves, the real subsidy involved in suburban highway construction.

"It has been estimated that the cost of urban expressways, which decimated whole neighborhoods, amounts to a public subsidy of six cents per mile per commuter. Thus every time a commuter drives 15 miles to or from work in the city, it costs the public 90 cents more than the revenue received from gasoline and other automobile taxes.'

Dr. Greenspan does not consider himself an expert on public transportation.

"This is not a professional interest for me. I'm simply a person who has lived in a city for many years and has watched it deteriorate. I'm not interested myself in further theoretical study or analysis of the problem. What is really required is a demonstration project involving a mass transit system based on pre-payment. Such a project could provide convincing evidence that no-fare transportation is the first step toward a vast improvement of city

### Here And There

-- Dr. Frederick C. Frick, project manager of educational technology at Lincoln Lab, recently received an alumni citation from DePauw University in Greencastle, Indiana. Graduated from DePauw in 1938, he was recognized for "outstanding achievements and services which reflect honor upon DePauw University."

--Formation of a summer softball league for the entire community is under way. Games will be played weekdays, except Fridays, at 5:30pm. Interested teams and prospective umpires should call Charlie Goodwin, Ext. 6894, or Rick Gentilman, Ext. 4625.

# Phi Beta Kappa Has First Initiation

MIT's new Phi Beta Kappa chapter initiated its first undergraduate members June 1 at a formal ceremony.

Professor William Bottiglia, president of the recently-formed chapter, and Institute Vice President Vincent Fulmer, chapter treasurer, welcomed the new members with brief speeches.

At a banquet afterward at the Faculty Club Professor Charles Kindleberger gave a light-hearted talk on academic elites, with a mention of "real Phi Beta Kappas and ones from the University of Pennsylvania," where he himself was one during his undergraduate career.

In keeping with the Phi Beta Kappa tradition of having a guest poet, Professor Barry Spacks read several of his poems. He acknowledged Professor Kindleberger's remarks by saying that he, too, had joined Phi Beta Kappa while a student at Penn. He then dedicated one of his poems, "The Cells," to the new members.

The new student members of Phi Beta Kappa are:

> James R. Adamson, '71 Arjang A. Assad, '72 David A. Berghofer, '71 Nihat A. Berker, '71 Robert H. Berman, G Michael R. Betteley, '71 Michael J. Borowitz, '71 Peter E. Brumme, '71 David B. Chandler, '71 Siu A. Chin, '71 Patrick W. Chye, '71 Barney M. Cohen, '71 Thomas M. Cormier, '71 Mrs. Raisa R. Deber, '71 Mark Drazen, G David S. Eichler, '71 Romek Figa, '71 Joel D. Fox, '71 Peter A. Gerritson, '71 Arthur Greenberg, '71 Walter L. Griffith, Jr., G William D. Hahn, '71 Dale B. Haidvogel, '71 John J. Halperin, '71 Glenn A. Handler, '71 Richard J. Hawryluk, '71 Stephen L. Hauser, '71 Dennis E. Hourcade, '71 Jonathan E. Ingersoll, Jr., '71 Harlan E. Ives, '71 Charles A. Kaufmann, '71 Howard H. Kay, '71 Julian H. Krolik, '71 David W. Kurtz, '71 Raymond M. Kwasnick, '71 Jeffrey C. Lagarias, G Cordon E. Legge '71 Dennis E. Hourcade, '71 Gordon E. Legge, '71 Alan M. Levine, '71 James T. Lin, '71 Michio Masujima, '71 Demetrios Matsakis, '71 Francis L. Miller, '71 Jay L. Miller, '71 James S. Nagel, '71 Mark S. Pasternack, "71 Laurence Peters, '71 Daniel L. Pratt. Donald S. Raila, '71 William H. Rastetter, '71 Christopher L. Reedy, G Oljan O. Repic, '71 John A. Richardson, '71 Glenn B. Robbins, '71 Miss Shelley H. Rogers, '71 Lawrence D. Rosenblum, '7 Donald B. Rosenfield, G Gerald M. Rubin, '71 David A. Salstein, '71 Neal R. Satten, '71 Ned R. Sauthoff, '71 Robert L. Savoy, '71 Michael V. Sawyer, '71 Stuart J. Schwartz, G Joel I. Seiferas, G Joel I. Seiferas, G Arthur R. Sohval, '71 Paul J. Sugarman, '71 Paul J. Superak, '71 Harold M. Ting, G Mrs. Martha A. Umbreit, '71 Charles W. Werner, '73 Jonathan W. Wexler, '71 Bruce C. Wheeler, '71 Robert L. Woerner, G

Robert L. Woerner, G



Maureen Crosby, left, and Barbara Gauvin, right, fitting Betty Ann in her bridesmaid's dress. -- Photo by Margo Foote

# Little Sister Keeps Barbara Busy

The Institute is always alive with activity, but in the summer months the hustle and bustle slows down to a moderate pace for most of us. One very active "bustler" is Barbara Gauvin and she's going to be busier than ever this summer.

Barbara is secretary to the dean of the School of Engineering, Dr. Paul E. Gray, who will become chancellor in July. During the five years Barbara has worked for Dr. Gray, her job has become increasingly busy, not to mention interesting. She has worked with him in the Dean's Office, the Provost's Office and the Engineering School. A veteran at moving and setting up a new office, Barbara is now planning the move to the President's

Just working for an energetic nan like Dr. Gray would be enough to keep most secretaries thoroughly busy but for Barbara there is more. Outside the office she is making preparations for her wedding in August and thinking about decorating her new apartment. Until recently she was taking two night courses at Northeastern. And, since last September she has been active in Boston's Big Sister Association.

Barbara's "little sister" is 13year-old Betty Ann Sim. Once a week the two get together for dinner, a movie or concert, a picnic, a folk mass at church, a trip to the country, or just an ice cream cone and friendly talk.

"The most important part of the Big Sister program is the relationship itself." By taking Betty Ann to new places and doing different

things, by just spending time with her and showing a genuine interest, Barbara has introduced her to the kind of world a 13 year old should know. "The oldest of nine children, Betty Ann is a big help to her mother, but she has many other interests--maxi dresses, embroidering, picnics and baking

Betty Ann is particularly excited about Barbara's wedding. She is going to be a junior bridesmaid-complete with long gown and flowers. After the wedding Barbara will still get together with her little sister because she feels that continuation of their relationship is very important, for both of them.

The Big Sister Association is an active and very successful organization, but, according to Barbara, there is a long waiting list of little sisters and young women are needed desperately for the program. Orientation meetings are held for newcomers as well as those interested in learning more about the program. After a big sister is accepted there are general meetings, discussions with social workers and activities for the big and little sisters.

Barbara's summer promises to be a busy one, but that's the way she likes it.

Ads may be telephoned to Ext. 2707 or mailed to Room 5-122. Ads must include full name and extension or room number. Ads are limited to one per person per issue and may not be repeated in successive issues. The ad deadline if 5pm, Wednesday.

# For Sale, Etc.

Taylor No.735 jump chr-walker, \$8; Graco Swing-A-Matic, \$6; Kantwet No.320T travel crib \$9: lk new x5520 Line

Pwr rotary lawn mover \$15. x302 Draper 7 or

Alert, affec, delightful black m kitten, about 7 mos old, nds home. x2261 or 876-8149.

Tent (umbrella, windows) sleeps up to 8, 6 (w) matt, can stand inside, \$35. Call 643-3369 betw

Beat up but functional 24" elec range - free.

Westinghs sunlamp, \$5, used only 4 times, purchase price \$10.95. Alice, x4897.

Gas Roper range, dbl lower oven, thermostat on 1 burner, 4 yrs old, \$40. Call 924-

Walnut BR set: dresser \$50, chest \$40, bed frame w head pc & Sear's gd matt \$100, or total \$180; walnut din tble & 6 chrs \$40; walnut dsk \$50; sofa bed \$35; rug w dust pad, 9x11 green, \$20; baby crib w matt \$15. x7487 or 491-4993

Transistorized Jerrold TV UHF converter, not wrking, \$1. Melvin Alpert, x4192.

Wedding gwn & hdpc., sz 7, new cond, pd \$235, best offer. Call 522-2965 evgs.

Moving: sew mach console \$60; kit clock \$4: aqua cozy slippers, sz 8, \$3; wall plaques \$2; wigs: blond human hair, frosted, nyr worn \$25; blck short tapered back, nvr worn \$20, Lady Buxton french purse \$5; empress pearl pendant on gold chain \$20; 14k gold mini rose pin w 1/4 k diamond in ctr \$20; ast paperbacks. Call 269-6598 evgs.

Outboard, 12hp, water cooled, (forward, reverse) ideal second motor for fishing or children, has keyed feature limiting spd. Bob,

Keystone K1010 camera, br new cond, w carrying case, \$25. x7410 Linc.

Beautiful 23" TV stereo, FMradio & rcrd player, \$75. Call 395-7265.

M Siamese kittens, 1 sealpt, 2 bluept, w papers.

Moving must sell new Sears dishwhr, orig price \$175, used only 2 mos, best offer, may be seen in Somervl. Call 625-4682 evgs. DR set, cherry mahog, 42"x60" tbl w exten

leaves, 6 chrs, buffet, gd cond, \$100, x5820. AKC reg gold retriever pups. Call 352-2469.

Oil tank, 250 gal, newly Glass Armor lined, \$30.

Antiq brass dbl bed, exc cond, \$100 or best; handmade 3' diameter 1thr bean-bag cushion. \$70 or best. Marshall, x141 Haystack or 862-

DR set, 4 chrs, china cabinet, \$150 or best; coffeetbl \$35: all lawn finish, can be antiqued. Call 894-3167

Sansui 350A, \$150: 2 rectilinear XI's, \$60 ea: Dual 1215, \$70, sys 4 mos old, list new \$460, wl sell altogether for \$300. Dennis, x185 Draper 7.

Tent, 9'x9' inside frame umbrella, floor \$30; stroller, Peterson, w "rumble seat" \$18; trntbl, Bogen-Presto, 8 yrs old, \$15. Call 489-

Kittens, fuzzy, free to gd homes, 2 left, 1 m blck 1 f calico, ready now. Steve, x5124 or 332-7743.

GE elec clothesdry \$60; Sears humidifier lrgest sz \$65; dalmation pups, AKC, ready to Call 8624

Sony port rerdr. almost new, \$35; 4 shock absorbers, xtra hvy duty, br new, reas offer.

Studio couch opens to bed, green \$40. Call 935-

Port Hoover washr & Maytag dryer (no installation req) 8 mos old, \$175, x4178 or 868-

Furn: LR, BR, & K furn; carpets, etc. Call 868-

Lattice type shutters, 4 prs, not louvered, \$4pr: coffee grinder \$6.50; pr boy's blck roller skates, sz 8, \$3.50; Girl's long brwn switch braid, new \$1.50; dk blonde stretch wig, curly, lk new, gd for beach, \$4; clothes, once expensive, sz 8-13, 50 cents to \$1.75. x2728 or 646-5928 evgs.

Tires: 2 new, 6.50x13 tubeless blckwalls, 4 ply; 2 used, 6.50x13 tubeless blckwalls, 4 ply, (500 mi); 2 used, 6.50x13 studded tubeless topline snows, (500 mi) mtd on rims, wl fit '60 - '67 Valiant & Dodge Dart. H. Pichler, x5792 Linc.

Alum siding, 1400 sq ft, color harvest gold, complete package channel & J molding, alum foil insulation, alum nails, & caulking compound, asking \$600. Dick, x5575. Violins, 2, full sz, w cases & bows, \$60 & \$125.

Long haired guinea pigs, Peruvian; also aquariums & fish. Call 354-5540 late evgs.

Dunham hiking boots w Vifram soles, used twice, \$20 new \$30, wl bargain, sz: approx woman's 10, man's 9. Peetie, x2851.

Gas Hardwick heating stove, 4 burner, 10 yrs old, best offer. Judy, x5380

Free blck & wht console TV, RCA, nds wrk: stroller \$4. Raymond, x7074 or 489-2625

Michelin tires, 4, exc cond, sz 145x15 for VW. Renault etc. also Sears Die Hard battery & 12v radio. Jim Hecht, 354-1803.

Hermes elec typwrtr, mod No.10, finest of its kind, new cond, full sz w case, \$240. Jere, 492-

Furn: Teak, Danish coffeetbl \$30; danish style sofa \$35; easy chr \$20; Danish rocking chr \$35; sml tbl w 1 drawer \$5; dbl matt \$15; bassinet \$8. Salomonsen, 776-3835.

Camera, Aires 35 mm SLR, f 2.8 lens, \$50. Dave, 491-0493 evgs.

Kittens, 3 blck tailless f, 1 blck m, & ast, v gentle,  $\frac{1}{2}$  Manx, 6 wks. Jane, x5640.

Sealpt Siamese kittens, 8 wks old, 5f, 2 m, affec, box trained, w shots, \$20. Suzanne or

Royal port typwrtr \$15. Pete, x5272.

Lrg dbl bed; adjust auto roof rack; bkcases rug; pressure cooker; pole lamp. Marsh, 623 8322 am or evgs.

Nikkormat FT body. Paul, 2480.

Moving: must sell lovely Ivers & Pond mahog. upright piano w bench, \$79, nds tuning. Mary,

Sofa bed \$60; uphol rcking chr \$40; uphol chr \$30: exc cond. x6298 or 491-0868.

Bbytender \$10; stroller \$15; crib-matt \$5; metal high chr \$5; infant seat \$2. Call 272-6965

Dbl bed \$45; bureau \$30; armchr \$20; dsk \$10; sofa bed \$10; guitar \$10; typwrtr & misc hshold items. Kathy, x7170 or 492-1879.

Moving: garage sale, June 25, 26, 27, rain or shine, new & used items, excep qual; sml elec appliances, hshold items, furn, sporting gds, clothing, infant & adult. Call 484-8325, Belmont,

Auto percolator, 9 cup; Sunbeam hairdryer.

Hvy hiking boots, Austrian, sz 81/2 - 9, lk new,

## Vehicles

'57 Classic T-Bird, rebuilt motor, new clutch assembly, new tires, carb, distrib, batt, brks, exhausts, 2 tops, nds body wrk, \$650, wl haggle

'60 Austin-Healy Mach 1, new top, batt, xtra parts, etc. \$250. Kal, x7333.

'61 VW sedan. x163 Draper 7

'61 Chevy Belaire, high performance car, 327 eng, completely new interior, tri-pwr, headers & many access, \$800 firm. x358 Linc or 667-7994

'63 Falcon Squire wgn, 6 cyl, manual, R&H, gd running cond, sticker, \$150. x5739 Linc or 862

'64 Tempest LeMans 2 dr hrdtop, 6 cyl, auto, pwr st, AM radio, buckets, gd rubber, ex cond, \$350 or best boffer. Michael Drooker, x6762.

'64 VW sunrf, rebuilt eng, 4 new tires, new batt

'65 Olds F85, auto, 6 cyl, 4 dr sedan, 1 owner, 2nd car, gd cond, \$550 or best offer. Irv, x5781

'65 VW, eng exc cond, body gd cond, \$550. x4394

'65 Karmann Ghia, v gd cond, air cond, \$600; '70 Harley Davidson 125cc Rapido Sport, 600 mi new \$695, wl sell \$300. Call 491-0592.

'66 Karmann Ghia coupe, beautiful cond, best offer over \$1000. Bob, 492-3148 evgs. '67 Ford Galaxie, conv. pwr brks & st. \$1250 or

best. Call 484-4994. '67 Saab V4, 44K, mech exec, few dents, must

sell, lving country end of June \$700 or best. Klaas van Hulst, x5522 or 5570.

'67 Pontiac LeMans 2 dr hrdtop, V-8, auto, pwr st, snows on xtra whls, trailer hitch, ski rack, exc cond, best offer. Scott, 4336 or 933-2030.

'68 VW sunrf, gd cond. Call 899-1385

'68 Corvair conv. 18K, \$500 or best. Bill, x4936.

'69 Chevy Nova II. 2 dr hrdtop, auto, R&H, exc cond, snows on xtra whls, \$1695. J. Gross,

'69 Chevelle Malibu, all pwr, air cond, perf eng

'70 VW, perf cond. \$1650. Ann. x1501 or 452-9844.

Custom-built Ford camper, ideal for winter or summer, exc cond. many xtras, inc refrig, freezer, running water, aux heater, etc., a steal at \$2000. Call 661-1626.

'67 Bultaco Metralla 250cc nds kick starter but runs well. Rich, x6650 or 623-3463.

'70 Hodaka Ace trail bike, only 600 mi, \$350. Dave, x276 Draper 7.

Alcort Sunfish fibergls boat w dacron sails & trailer, both exc cond, \$450. Call 894-1334 evgs.

16' fibergls run about w 35hp elec start Mercury & trailer, \$995; 8' hydroplane w 15hp Johnson, \$125 or best offer. Ed, x3993 or 922-

17' fibergls sloop sleeps 2, dacron sails, stainless steel & alum rigging, trailer & motor inc, v gd cond, \$1500. Morgan, x4530.

20' Chris Craft Caravelle mahog spdboat, '63, 185hp inboard, canvas top & side curtains, all xtra gear inc. Call 745-6827 evgs.

### Housing

Camb, Concord Ave, 1st floor of 2 fam house, 2BR, LR, DR, den, back porch over backyard, \$200 not inc util, avail 7-1. Call 864-1241 evgs or

Spacious sunny rm avail immed, linens inc, West Somervl. Call 623-6282.

Two gd sz rms for rent in Belmont farm house, quiet & green, 1 block to T, \$100 and \$75. Kate,

Chelmsford house for rent, nr Carlisle line, 3BR tri-level, dishwshr, frpl, lrg fam rm, lovely wooded 34 acre lot, nice neighbrhd, avail 9-1, references req' \$315-mo. x7516 Linc

Lex 1 yr rental, furn lrg older house, 4-5 BR, 2½ B, 1 acre ground, nr Ctr, avail 8-15, fam pref, \$450-mo. x4244 or 648-9543.

rm cape, 4BR, 1 full B, 1/2 B upstairs, lrg LR w frpl, panel fam rm w frpl, laundry in basement, 90 ft stone wall frontage, ½ acre wooded lot, attached breezeway & gar, school bus stop frnt of house, 5 min walk to bus to Harv Sq. \$41,9. Call 862-2115.

41/2 rms, elec K, air cond, swim pool, prking, \$225-mo. x7073 or 899-8059.

Summer sublet, 3 rms of 4 BR apt, furn, \$150mo-ea. Peter, x5383.

Arl, 2BR unfurn apt sublet on 7-1, w option to renew in Sept, for MIT affil people only, \$220-mo heated, air cond, ww carpet, disp, playground. Alice, x4723.

Bigelow St studio apt sublet w option to lease in Sept, avail 7-1. Lucy, 4791.

Boston sublet nr Fenway, NU & T, 1BR, lrg elec K, mod B, LR, gar disp, laundry in bldg, rent was \$175, wl neg for summer, avail 7-1. Bill, x6813 or 427-5277 evgs.

Brookline nr Beacon & Wash, sublet w option, 4 BR. LR. DR. K. porch, \$360. Call 566-2531

Central Sq area sublet, unfurn, 2BR, mod apt, \$230 or negotiable. Sue, x5997 or 547-3298 evgs.

Charles St, Boston apt sublet, July & Aug, lrg 1BR, nr subway, \$145-mo. Call 742-1354.

Park Dr nr Jersey St. 1BR apt sublease 6-25, \$175. Call 261-2038 evgs.

Westgate, July & Aug furn sublet, 1BR, LR, K, B. 14th fl. gd view, cool side, \$150-mo. x7904 or 492-7555 evgs.

priv beach, completely furn, 3BR, seas rental pref, x4152 or 862-8894.

Cape Cod cottage, 2BR, v clean, \$110 wk. John,

Edgartown summer rental, Martha's Vineyrd, 5BR cottage on Main St, completely renov, wash & dry, elec ht, avail June & July, \$280-wk for 2 or more wk periods. G. L. Brownell, 864-

Lk Winnipesaukee, pool, prov beach, 3-4BR, \$125-150 wk. Call 277-8605 evgs.

## Wanted

Apt in Eastgate for summer. Sue, 868-0297.

Used 3 spd woman's or man's bike. Joe, x4117.

Linc summer employee nds daily ride from W Newton area to Linc & return, share expenses. Sal D'Aversa, x5888 Linc.

Woman's bicycle, any cond. Mark, x7177.

Fem rmmate for lux apt, \$95-mo, Harv Sq.

Male rm mate to share house in Newtnyl w 2 to 3 others, own BR, frpl, sundeck, dish & disp. Jim, x518 Draper 7.

To rent, waterfrnt cottage in Maine, NH or Vt, 1 wk in Aug, must sleep 7, can pay \$125-135 wk. Bob Cronin, x597 Draper 11.

Piano rolls & elec player piano. Call 944-3860

Male rmmate, own BR, in 2BR 2 fl apt in Inman Sq. \$70-mo. Ken Maser, x5171.

Back pack, by foreign student touring US, borrow, rent or buy, cheap. Call 729-7310.

Bicycle rack for VW. Bob Goeke, x1910.

Daily ride to-from Boston to arrive at MIT by 10 am., wl pay. Skip, x6153

'64-'67 Buick Spec V-6 eng or complete auto for parts. Gill, x7201 Line.

Used elec freezer in gd cond. x4062.

Camping equip, tent for 4, sleeping bags, etc. Andrew, x6705 or 643-7185 evgs.

Fem summer rmmate to share lrg spacious furn, v attrac apt, just off Harv Sq, own lrg BR, for July & Aug or longer. Joan, x3368 or x5268.

Basement laundry sink. Bob Bressler, x1448

Brass bed: v lrg DR tbl; pref oak & extensions to 12 ft; giant sz oak dsk; 4 draw file; rcking chr. Robert Goldberg, x1420 or 332-5585. Fem rmmate for 2BR Marlborough St apt, avail immed, \$65-mo, conv loc. x3915 or 266-

Fem rmmates, 23+, wrking, for 5BR apt, own rm, huge K, dish & disp, LR, 2B, avail now, \$75-mo inc ht. Anne, x7084.

Fem rmmate, 3BR apt, furn, \$53-mo, 10 min from Harv and Cent Sqs. Call 354-4497.

Male rmmate for exc renov apt, MIT owned, rent \$60-mo, own BR, Cent Sq area, Magazine St, avail 6-20 w option for Sept. Mike, x4655 or

Fem rmmate to share 4 BR Camb apt, 7-1 to 9-1, own BR, furn, \$87.50-mo. Barbara, x3610 or 492-6826 evgs.

VW bus in rough shape, nd not be running, but fixable, v cheap. Mike, x4145 or 266-4194.

Car seat for 1-2 vr. old. Call 267-2019.

### Miscellaneous

I am selling all furn why not take over 2BR apt in Somervl too? Avail 9-1. Call 623-3789.

Vis prof nds 3 or 4BR unfurn house or apt w e, 7-71 to 9-72, pref Newton area. x5623.

WI do typing. Julie, x4203.

MIT cpl nds 1 wkend alone per mo, would lik to exchange child care, boy 4, girl 2½, w similar cpl. Steve or Chris, 876-6562. Any typing, Cindi, x4213.

WI teach Spanish to groups or indiv. Liz, x6724.

June till end of Aug. Call 491-4195 or 776-4151. House sitter avail, protect your home during vacations. John Head, 254-3096 evgs.

sp fem grad students wl house sit rest of

# Lost and Found

Lost: gold dangle earring on 6-3 somewhere on MIT campus, reward. Mary, x4310.

The Office of Personnel Relations is seeking a Counsellor for the Employee Training Program whose principal responsibility will be to assist new employees in onthe-job performance and resolving job related concerns. Applicant should have experience in counselling with inner city people and programs. Teaching experience is desirable but not required.

If interested please call extension 4278.